Web Development and Database Administration

Level-III

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Acronym

FTP ---------- File Transfer Protocol

HTTP ---------- Hypertext Transfer Protocol

IIS ---------- Internet Information Services

SEO ---------- Search Engine Optimization

TCP/IP ---------- Transmission Control Protocol/Internet Protocol

URL ---------- Uniform Resource Locator

Introduction to the Module

Content writing is an art of writing specific content for a website that would drive tariff to it. This type of writing requires good writing and language skills. Basically, content writing can be any kind of writing that is read on internet like website writing, SEO copy writing, SEO writing and blogging etc.
In this module, we delve into three critical units Site Content Planning, Content Creation, and Content Upload to equip you with the skills necessary to excel in the dynamic world of digital content.

Module covers the units:

- Site content requirement
- Webpage Content creation
- Content upload

Learning Objective of the Module

- Understand content requirements
- Create compelling web content
- Optimize content for accessibility and visibility
- Edit content effectively
- Upload and manage web content

Module Instruction

For effective use these modules trainees are expected to follow the following module instruction:

1. Read the information written in each unit
2. Accomplish the Self-checks at the end of each unit
3. Perform Operation Sheets which were provided at the end of units
4. Do the “LAP test” giver at the end of each unit and
5. Read the identified reference book for Examples and exercise

Unit One: Site content requirement

This unit is developed to provide you the necessary information regarding the following content coverage and topics:

- Customer information needs identification
- Site purpose & functionality definition
- Content channels and format identification
- Template and style guide selection
- Relevant site content identification
- Site design alteration negotiation

This unit will also assist you to attain the learning outcomes stated in the cover page.

Specifically, upon completion of this learning guide, you will be able to:

- Understand customer information requirements.
- Confirm site purpose and functionality.
- Create client-centric content channels.
- Select appropriate template and style guides.
- Analyze content for audience, maintenance, and design.
- Navigate and negotiate site design alterations effectively.

1.1. Customer information needs identification

Customer needs are the motivating factors that lead someone to buy a product or use a service. Companies learn about customers' needs by identifying who their customers are. This includes defining a target audience and segmenting them based on demographics and other attributes. Once a business knows its target audience, they have a better view of the specific needs that drive them to buy.

The best way for a business to identify customer needs is to take an organized and systematic approach, often referred to as a customer needs analysis. A comprehensive customer needs analysis provides valuable insights into your target market. This information, coupled with brand positioning, allows companies to meet or exceed customer expectations.

Different organizations rely on various methods to conduct consumer research, including:

- **Customer Interviews**: Direct communication from customers provides the most reliable information compared to other methods of research. Businesses might ask specific questions of those who have used their products or service and get open-ended feedback.
- **Surveys**: This is another way to reach customers, but it involves using multiple-choice or ranked questions to acquire data that businesses use to understand customer needs.
- **Focus Groups:** Companies use a small group of people to drill into specific issues or products. Many businesses use focus groups to fine-tune information they have learned from more extensive interviews or surveys.
- **Social Listening:** Most of today's companies have some sort of social media presence. Social listening is the act of monitoring social media channels to track conversations about a product, brand, or competitor to gather useful data.

1.1.1. Audience analysis

Understanding the needs of your audience is fundamental in creating content that resonates with them. Here's how to identify customer information needs with respect to your audience:

- **Demographics**: Analyze the demographic characteristics of your target audience, such as age, gender, location, education level, and occupation. This data helps you tailor content to the specific characteristics of your audience.

Example: If your audience consists of young professionals, you might create content related to career growth, financial planning, and urban living.

- **Psychographics:** Dive deeper into your audience's psychographics, which include values, interests, lifestyles, and behaviors. This information helps you create content that aligns with their beliefs and preferences.

  Example: If your audience values sustainability and eco-friendly living, you can create content on green practices, sustainable products, and environmental conservation.

- **User Personas:** Develop user personas, which are fictional representations of your typical audience members. These personas encapsulate the characteristics and information needs of your audience.

  Example: One user persona could be "Tech-Savvy Tim," representing your audience's interest in the latest technology trends and gadgets.

- **Information Preferences:** Identify how your audience prefers to consume information. Determine if they favor written content, videos, podcasts, or interactive tools.

  Example: If your audience prefers visual content, you might create infographics, image galleries, or video tutorials.

1.1.2. Site functionality assessment

Understanding the functionality of your website is crucial for aligning content with user needs and site objectives. Here's how to identify customer information needs with respect to site functionality:

- **Analyzing the Purpose**: Determine the primary function of the website, such as e-commerce, information sharing, or social networking.
- **Primary Goals**: Clarify the primary objectives of your website. What do visitors intend to achieve on your site? Knowing these goals will guide the creation of content.
- **User Journey**: Map out the typical user journey on your website, from landing on the site to completing their intended actions. This helps in understanding their information needs at each stage.
- **User Needs**: Identify the specific needs that users aim to fulfill through your website. This could be information, entertainment, solutions to problems, or products and services.

- **Interactive Features**: Determine if your website offers interactive features, such as chat support, search functionality, user-generated content, or social sharing. These features shape user information needs.

1.1.3. Client Requirement

Understanding your client's requirements is crucial because it aligns your content strategy with the client's objectives. Here's how to identify customer information needs with respect to client requirements:

A. **Client Objectives**: Determine the client's primary objectives for the website. What do they aim to achieve through the website in terms of business goals or online presence?
B. **Branding and Messaging**: Comprehend the client's branding and messaging. What is the client's preferred tone, style, and core message to be conveyed through the content?
C. **Content Goals**: Define specific content goals that the client wishes to accomplish. These goals might include increasing brand visibility, driving leads, promoting specific products, or educating the audience.

1.2. Site purpose & functionality

This step involves thoroughly understanding and validating the purpose and functionality of the website. It's essential for ensuring that the content aligns with the client's goals and meets the needs of the target audience. Here's a detailed explanation:

1.2.1. Site Purpose

Before delving into the creation of website content, it is imperative to define the core objective that the website aims to achieve. Whether the goal is to facilitate e-commerce transactions, disseminate information through a blog, showcase a portfolio of work, or fulfill another purpose, a clear understanding of this primary objective serves as the guiding principle for content development. Following this, identifying the target audience becomes paramount. By delving into the demographics, preferences, and pain points of the intended users, content creators can tailor their material to resonate with and address the specific needs and interests of the audience. Finally, the content must align seamlessly with the established core objective, ensuring that every piece of information, imagery, or

interaction on the website contributes cohesively to the overarching purpose, thereby enhancing the effectiveness and impact of the online presence.

1.2.2. Site Functionality

- **User Experience**: Assess the user experience the website offers. Is it easy to navigate, and does it provide a pleasant and intuitive journey for users?
- **Technical Functionality**: Confirm that the website's technical functionalities work as intended. This includes features like search, contact forms, e-commerce checkout, and multimedia playback.
- **Content Management**: Ensure that the content management system (CMS) is capable of supporting the intended content. It should be easy for content creators to add, edit, and manage content.
- **Interactivity**: Determine the level of interactivity required. Are there features like comments, user-generated content, or interactive tools that need to be integrated?
- **Mobile Responsiveness**: Confirm that the website is optimized for mobile devices. It should adapt to various screen sizes and maintain usability on smartphones and tablets.
- **Security and Privacy**: Ensure that the website meets security and privacy standards. Protect user data and information from vulnerabilities and potential threats.
- **SEO and Performance**: Verify that the website is search engine optimized and optimized for performance. It should load quickly and be discoverable by search engines.

1.2.3. Relevance to Web Content Development

Confirming site purpose and functionality is essential because it:

- Provides a clear direction for content creation by aligning content with the website's core objective.
- Ensures that the content caters to the intended target audience, making it more effective in engaging and resonating with users.
- Validates that the website's technical and interactive features are in line with the requirements of the content strategy.
- Optimizes the website for an optimal user experience, which is crucial for retaining visitors and achieving the website's objectives.

- Promotes security and performance, which are fundamental for safeguarding user data and ensuring that the website operates smoothly.

  In web content development, the content strategy must be tightly integrated with the purpose and functionality of the website. This alignment ensures that the content not only serves the client's goals but also fulfills the needs and expectations of the target audience.

1.3. Content channels and format identification

In web content development, identifying the right content channels and formats is crucial for reaching and engaging your target audience effectively. Here's a detailed explanation:

1.3.1. Content Channels

Content channels refer to the platforms or mediums through which your content will be distributed and shared. It's essential to choose the right channels based on your audience's preferences and your content's purpose. It’s a good idea to produce various types of content to maximize your reach. Here are just a few:

A. Blog Posts

Blog posts are a great way to educate readers (and they often account for a lot of website content creation). Blog posts also help with brand awareness, search rankings, and customer loyalty.

B. Infographics

Infographics are visual representations of data points or narratives. Infographics do a good job of conveying complex or data-heavy information in a digestible way. They also help break up walls of text. And tend to be shared on social media and referenced by other sites.

C. Videos

Videos can be standalone pieces on YouTube or your website. But they can also enhance text content. Videos can be labeled with metadata, like tags and descriptions. But they can have limited searchability compared to text.

D. Podcasts

Podcasts create a deep connection with listeners through storytelling and discussions. They help build a loyal fan base. Starting a podcast doesn’t have to be daunting, either.

Identify topics that both you and your audience are passionate about. Then, plan your content ahead. Decide whether you will invite guests or run solo, how long should episodes be, and more.

After you record episodes, you can publish them on podcast directories like Apple Podcasts, Spotify, and Google Podcasts. You can also use listener feedback to improve.

E. Social Media Posts

Social media content enables brands to reach over 4.5 billion users. So, they can connect with different audiences and cater to their preferences. And comments, likes, shares, and direct messages offer an opportunity to interact with audiences and foster a sense of community.

One thing to keep in mind: Each platform has a specific type of content that performs well.

F. Interactive Content

Interactive content encourages users to engage with your content, which can translate to them spending more time on your site, following you on social media, and more. This can increase brand awareness and even help them move closer to making a purchase.

Interactive content pieces also add instant value. Think calculators, polls, and interactive maps. And other sites are likely to link to useful pieces of interactive content. One way to ideate interactive content is to think about your audience's needs. And how you can meet those needs in a way that static content can't.

1.3.2. Content Formats

Content formats refer to the way in which your content is presented. The choice of format depends on the type of content and the preferences of your audience. Some common content formats include:

A. Text: Written content is one of the most common formats, encompassing articles, blog posts, product descriptions, and more.

B. Images: Visual content, such as photographs, illustrations, infographics, and memes, is highly engaging and shareable.

C. Video: Video content can take the form of tutorials, vlogs, product demonstrations, interviews, or documentaries.

D. Audio: Audio content is often delivered in the form of podcasts, which are convenient for on-the-go consumption.

E. **Interactive**: Interactive content involves quizzes, surveys, calculators, and other tools that engage the audience.
F. **Infographics**: Infographics are visually appealing and effective for conveying complex data or statistics in a simple, digestible format.
G. **E-books and Whitepapers**: These longer-form content formats are valuable for in-depth information, research, or educational materials.

1.4. Template and style guide selection

1.4.1. Templates

Templates offer ready-made designs and functionalities that you can easily adapt to your needs. Instead of starting from scratch, you can quickly select a template that matches your vision and simply customize it. This eliminates the need to spend extensive time and resources on designing and coding a website from the ground up.

Types of Website Templates

A. Pre-designed Templates

Pre-designed templates are website templates that come with pre-designed layouts, color schemes, and overall visual styles. They are created by professional designers and are readily available for use. These templates provide a convenient solution for website builders who want a quick and hassle-free way to create a website.

One of the key advantages of pre-designed templates is their ease of use. They save time and effort by eliminating the need for designing a website from scratch. With pre-designed templates, you can simply choose a template that aligns with your desired style and layout and customize it with your own content.

B. Theme-based Templates

Theme-based templates are a type of website template that focuses on specific industries, niches, or styles. These templates are designed with a particular theme in mind, such as e-commerce, photography, blogs, or restaurants.

These templates come pre-designed with layouts, color schemes, fonts, and imagery that align with the chosen theme. They often include industry-specific functionalities and features, making it easier for users to build a website that caters to their specific needs.

Theme-based templates are beneficial as they provide a starting point for website creation within a particular niche. By selecting a theme that aligns with your business or personal brand, you can easily achieve a cohesive and professional look for your website.

C. Customizable Templates

Customizable templates are website templates that allow you to make changes and personalize the design according to your specific preferences and requirements. Unlike pre-designed templates where you have limited control over the elements, customizable templates provide more flexibility and freedom to modify various aspects of the website.

With customizable templates, you can adjust the colors, fonts, layouts, and other design elements to align with your brand identity. You can also add or remove sections, customize headers and footers, and rearrange content blocks to create a unique and tailored website.

1.4.2. Content style guide

When it comes to content, consistency is key. Companies and brands are finally considering content a team-wide effort, which is exactly how it should be. This is a move that needs to be supported by the right tools and understanding.

Consistency and brand messaging can suffer if documented brand guidelines aren’t in place. That is why a content style guide is an **invaluable** part of any organization's content operations. This step-by-step article will take you through the process of creating your own style guide template.

Easy to create and use across your organization, your style guide will:

- Keep tone, voice, and messaging consistent
- Guide your team on how to write for your audiences
- Help maintain a recognized quality and brand identity
- Lead to more compelling content and brand consistency

A content style guide is **a set of content rules** that keeps the tone of voice and other elements of brand voice consistent across pieces of content, regardless of who creates it. This guide covers aspects of content style such as grammar, language, formatting, and tone all the things needed to compose and present content.

A. To put your audience first

All style guides are about **communicating more effectively** with your audience. Their needs, wants, and expectations shape every piece of content created. Staying in tune with their interests, behaviors, and activities dictates the language, mediums, and messaging you use.

A style guide recognizes a link between your audience's needs and the best way to fulfill those needs impactfully.

B. To maintain consistency

Giving your audience a consistent experience **builds loyalty and trust**. The likes of Flickr and MailChimp are excellent at keeping their tone and brand voice consistent through everything on every level, from default text to terms and conditions.

With more than one person responsible for content creation, keeping the tone of voice locked down can be challenging. A style guide is a central reference that your content creators can use to keep the overall voice consistent across your website, blog, social media, and anywhere else you show up.

C. To encourage best practices

Creating a style guide **starts with research**. Your audience, brand, business goals, and competitors all influence your style, and thus your style guide.

D. To create better content

A style guide is about identifying and documenting how you communicate. As much as it is a practical resource, a style guide is also a commitment to more intentional content.

Grammar, punctuation, and formatting all contribute to the quality of your content, and a style guide keeps all this in check. Personality, trends, and brand values all come into play here, and it’s these elements that help your brand produce better content.

1.4.3. Understand your audiences

Audiences are complex and ever-changing, just like the content itself.

You can't start creating content until you have established who your audience is. It can be as simple as some light demographic research or go as deep as individual personas. It's all up to you.

Understanding your audience is about more than objectives and actions. As you begin to research your audience, ask questions like:

- What's important to them?
- What sources do they trust?
- What values matter to them?
- How do they speak?
- How do your competitors tap into the same market?

Look at the bigger picture and see your audience as fully formed people, not search engine keywords. This gives your content style guide more weight and relevance.

1.5. Relevant site content identification

As a content strategist, you want to create content that resonates with your target audience and meets their needs, interests, and goals. But how do you find relevant topics that will attract and engage them? In this section, we will share some of the best techniques to help you discover and validate topic ideas for your content strategy.

A. Use keyword research tools

Keyword research tools are essential for finding out what your audience is searching for, how competitive the keywords are, and what kind of content is ranking for them. You can use tools like Google Keyword Planner, Moz, or SEMrush to generate a list of relevant keywords and analyze their metrics. You can also use these tools to find related keywords, questions, and topics that can inspire your content.

B. Analyze your competitors

Another way to find relevant topics is to analyze what your competitors are doing and how they are performing. You can use tools like BuzzSumo, SimilarWeb, or Social Blade to see what kind of

content they are producing, how much traffic and engagement they are getting, and what gaps and opportunities they are missing.

C. Survey your audience

One of the best ways to find out what your audience wants and needs is to ask them directly. You can ask them questions about their demographics, preferences, challenges, goals, and feedback. You can also use tools like Hotjar, UserTesting, or Crazy Egg to collect and analyze user behavior data on your website or app.

D. Monitor social media and forums

Social media and forums are great sources of insights into what your audience is talking about, asking, and sharing. You can use these platforms to discover trending topics, common questions, popular opinions, and feedback.

E. Validate your topics

Once you have a list of potential topics, you need to validate them before you create your content. You need to make sure that your topics are relevant, valuable, and feasible for your audience and your goals.

1.6. Site design alteration negotiation

1.6.1. Negotiating Your Web Development Contract

In today's world of global commerce, having a strong Web presence is a necessary component of successful marketing and operations. There are many aspects of planning a Web design project, but the cost factor is an aspect that can't be ignored. Creating a website doesn't need to be a costly affair. When looking for website development Perth, all you have to do is find a professional Web development company and negotiate a cost-effective rate.



Figure 1.1: web design contracts

1.6.2. Preparing for the Negotiation Process

Similar to buying a car, the cost of Web design work can easily be negotiated. However, if you want to receive the best possible rate, you should know the following before entering into negotiations:

- How much do they charge?
- How much can you afford?
- What skills, knowledge, and experience do they possess?
- What are you interested in building or creating?
- How much time can they dedicate to the project and the estimated completion date?
- What date does the project need to be completed by?
- Do you or the development company have any special requirements, such as maintenance and hosting, for the project?

After determining what you want and need to be included in the contract, you can confidently negotiate certain changes to the contract, most noticeably the price. Let’s take a look at seven tips that can help you with various aspects of the negotiation process.

A. Have a Consultation

When in need of website development Perth, it is important to have a consultation with the Web development or design company before sealing the deal. The consultation is your opportunity to sit down with them one on one and inform them of the goals of your Web presence and highlight some different elements that you would like included in your finished website.

B. Discuss Contract Rates

Most Web development companies have varying methods of charging for their services. While some companies charge clients by the hour for the time it takes to complete a project, others consider the complexity and the size of a project to decide upon a lump sum fee. Most clients who start a project from scratch usually choose the latter, because paying a one-time fee frees up time that would have been spent keeping tabs on the total project hours and allows them to know the exact delivery date.

C. Review Samples of Their Work

You should always make sure that the company provides you with samples of their work before you agree upon using their services for the entire project. Typically, Web development and design companies will provide you with a sample homepage and sitemap of your site for a reduced fee. After reviewing the work, you can decide to use them for the rest of your project or choose another company. Critiquing their work will also provide you with added negotiating power.

D. Ensure the Intellectual Property Rights

In most cases, if you hire a reputable company to design and develop a website on your behalf, you receive sole ownership of the finished product. However, important matters such as this should be discussed beforehand, and the ownership should be clearly stated in the legal agreement. It’s important to note that this problem is more frequent when working with freelancers.

E. Consider the Maintenance of the Site

The cost of future maintenance should also be outlined in the contract. Generally, a Web design project is considered finished when a client receives their final website. However, unless you have an in-house webmaster, you will likely want to negotiate the maintenance of the site into the contract agreement.

F. Keep the Timing in Mind

The time it takes to complete the project should also be considered. Ask the Web design company about the estimated time it will take to complete the project. Not only will this provide you with an idea of when to expect the finished site, but it will also allow you to negotiate rates depending on the time it takes to complete the project.

G. Enquire About Package Deals

Many service providers provide a wide-range of services. From website design to search engine optimization, all of your online needs can often be taken care of by the same company. If this is an option, you will receive cheaper rates by ordering more than one service from the same provider than what you can expect to pay by hiring more than one service provider.

Developing a website and an online presence is crucial for success in the modern business world. There are many website development Perth companies to choose from, but by following these tips, you will be able to find the right company at the right price, and celebrate as you watch your online presence grow right before your eyes.

Self-Check 1

Part-I: Choose the correct answer

1. One of the following is not used to identify customer information needs
   A. Demographics C. User Personas
   B. Psychographics D. Journal
2. Which of the following create a deep connection with listeners through storytelling and discussions?
   A. Blog Post C. Content creation
   B. Podcasts D. Infographics
3. Which type of content is effective for conveying complex information in a visually digestible way?
   A. Blog Post C. Content creation
   B. Podcasts D. Infographics
4. Which one of the following website templates focuses on specific industries, niches, or styles.
   A. Pre-designed template
   B. Theme-based template
   C. Customizable template
   D. None
5. _____ data helps you tailor content to the specific characteristics of your audience.
   A. Demographics C. User Personas
   B. Psychographics D. Journal

Part-II: Answer the following questions accordingly

1. List down methods to conduct customer research.
2. Explain the use of pre-designed web template.
3. What is the need of Web development contract?
4. List some of the techniques to help you discover and validate topic ideas for your content strategy.

Unit Two: Webpage content creation

This unit to provide you the necessary information regarding the following content coverage and topics:

- Content generation
- Optimization of content for accessibility and visibility
- Content Editing for audience and functionality

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Generate content that aligns with client requirements.
- Optimize content for accessibility and visibility.
- Edit content effectively to cater to audience needs, functional requirements, and client specifications.

2.1. Content generation

Content creation is the process of creating various forms of media that appeal to your target audience. It involves multiple steps, from generating an initial idea to promoting a published piece. And the content creation process involves different experts.

For instance, content strategists often identify relevant topic ideas that align with marketing goals. And writers, video producers, and other creators turn these ideas into exciting pieces of content.



Figure 2.1: content creation

Content creation is key for ensuring you have what you need to reach potential customers. Why? Because it's a key part of content marketing a long-term strategy that involves developing and sharing content across channels to reach and engage your target audience.

Which helps in your efforts to:

a. Grow brand awareness

b. Engage with different online communities
c. Retain existing customers
d. Educate potential customers
e. Build credibility
f. Improve organic (unpaid) search rankings

Improving organic rankings through content can be especially beneficial for reaching potential customers.

You do this through search engine optimization (SEO), which involves creating and improving your website and content to rank higher in Google's search results.

2.2. Optimization of content for accessibility and visibility

2.2.1. Website accessibility

Website accessibility simply means that your content is readily available, and anyone can operate it. It involves designing your webpage to ensure that there are no hindrances for people with disabilities. Website accessibility is important for two main reasons.

- It makes content easily accessible to people living with a disability
- Web accessibility assists brands reach a larger audience. When proper on-page SEO is used, the bounce rate lowers while the conversion rate increases.

2.2.2. Optimize an accessible website

A. Use headings correctly to organize your content structure.

Headers are a powerful resource that, correctly used, organize the layout of your content. They make the content easy to understand and improve its flow.

Headers make your work look neater and allows users to navigate the web pages easily. This is an effective tool for onsite SEO optimization. When properly used, it makes it easier for you to attract more traffic.

B. Include Proper ALT text for images and provide captions for video and audio

Images on a webpage bring in a lot of value. An ALT text is a word that describes a picture. The image's description comes on whenever a user hovers over the image, and a screen reader can read it aloud. This not only makes your content fun and functional but also makes it accessible to visually impaired people.

In on-page SEO, alt text provides information about a page for search engines. We are increasing user traffic, accessibility, and SEO user experience.

Using captions to describe video assists in providing information in real-time to non-audio users. These are closed cations embedded in the video. It means that they can be easily turned on and off. Captions should synchronize well with the content and be readily available to many devices.

C. Use proper Descriptive Linking

Appropriate descriptive links act as a show and tell. They help screen readers navigate your website and understand the reason for your link and where it will redirect them.

To provide better information, avoid the word "click here" as it is vague and the screen reader cannot understand it. To provide better information, use descriptions with better contextual information around them so, instead of "click here," you may opt for "contact us for more information."

Using more descriptive contextual links gives your site an SEO boost, and it is a great on-page SEO checklist.

Pro-tip, do not overuse links in your website because they will make navigation a nightmare, and screen readers will have a hard time skipping them.

Instead, you could place one main link at the beginning of your page, which redirects o=your users to anchor links below. This will assist your users in skipping all unnecessary information.

D. Make use of color with much care

Color brings out the life of a website. However, overuse or misuse of color might inhibit the accessibility of your site. Colorblindness is a real issue affecting over 8% of the population, according to colorblindawareness.org.

You, therefore, need to make sure that the colors selected for your site have good contrast. It will help everyone tell the difference between several elements on the page. For example, using black letters on a white background.

Here are a few things to keep in mind:

g. Do not use thin fonts, they are difficult to read.
h. Bright colors will be too intense for those with high photosensitivity.
i. Ensure the most important elements in your site are not heavily color reliant.
j. Keep very clear contrast lines. This helps serve color blind people.
k. Make use of features that will help your users increase contrast as they wish.

E. Use keyboard Navigation

For visually impaired users, navigation can be very difficult. It is advisable to incorporate keyboard navigation. This way, your visitors can make use of braille keyboards.

Many assistive technologies depend upon keyboard-only navigation. You have to ensure that they have accessibility to every area of your site; your pages, links, and content.

To test this, try using your site without a mouse. If you find it challenging to access some areas, address them. Your site will only be ready when you can use your site without a mouse.

F. Use tables and layouts appropriately

Tables are very effective when it comes to describing and displaying data. Even then, try to use them when necessary and design them to enhance accessibility.

When you use tables to display lists and step-by-step instructions, you will clutter your site and make navigation a nightmare.

Visual readers are programmed in a way that usually interprets one data cell at a time. Therefore, if you misuse tables, it will make understanding complex and confusing.

The same goes for layouts. Complex and hard-to-use layouts not only turn off users but also cause a navigation nightmare to blind people.

G. Test your website to see what can be improved

Creating the perfect website takes time. I recommend that you have a beta mentality. When you know that something is not perfect, it has room for improvement.

Testing your site at an individual level and user level will help you pinpoint what needs improvement. Test your website on a mobile device. A website built with a user-friendly design on all devices goes a long way towards boosting accessibility. Google analytics has a page speed analysis tool for mobile devices. This tool will help track your site's mobile-friendliness.

2.3. Content Editing for audience and functionality

Editing or altering an article, page, photo, or video can be done in several ways depending on what you want to change and how much editing you need to do. You may use your computer software or a ***third-party website editor*** to edit content.

There are **many free editors** that most websites contain an upload feature where you can publish new material. Some of these have limited features but they are adequate for doing small edits such as changing a word here and there or adding some pictures or videos.

If you just wanted to make minor changes to your site then this is enough! But if you really needed to make major changes to your site, it's better to go into one of the more advanced website editors like Photoshop or InDesign so you don't **waste time trying** to figure out how to use them.

A. Make edit as needed

There is no hard and fast rule for how many times you should have to edit your website content, but we can give you some tips!

If you are ever needing to make an adjustment to a page or section of content, it's better to do so late night or early in the morning when less people will see it. This way if someone does happen to come across it, they won't notice any changes and assume everything is okay!

We ***also recommend editing*** after the day has calmed down a little bit. Sometimes stress causes confusion with updates, so try to do it later in the day when there's not too much going on.

And lastly, don't worry about making too many changes at one time. If you feel that ***something needs*** to be corrected or updated, do it slowly over several days to **keep things smooth** and efficient.

B. Link everything properly

The second part of editing content is linking it up with other sources or deleting unneeded links. Make sure all of your links are appropriate and clearly defined.

If you run into issues finding where something goes, use the linked website as a reference. If there's no reference, then create one!

Google makes an excellent point when they say that people will not trust your site if there are too **many poor-quality links pointing towards low**-quality sites. This could be from **ugly looking logos** to pages that do not exist or have expired domains.

Content writers can ***also provide valuable resources*** through their blogs, websites, and/or social media accounts. By adding these links to your website, show off their influence and credit them for helping to boost yours.

And finally, don't just leave out links to things because you don't like the look of them. Leaving out links due to **personal preference may seem harmless**, but it can hurt your online reputation and credibility.

C. Use SEO keywords

After you have logged into your website's dashboard, your next step is to **start editing content** or developing new pages. When designing your site, make sure to **include important search engine optimization** (SEO) keywords in the page titles, body copy, and URL.

Titles are what people will be searching for when looking at your webpages so make them descriptive and emphasize the importance of the keyword. Make sure to use these keywords often and clearly as well as in the ***right tone* –** no one wants to read a boring title that doesn't catch the eye!

The body of the text is what users will be reading once they click "submit" on their search results. Make it interesting and contain lots of the same SEO keywords to help bring traffic to your site.

D. Create engaging visuals

It's very tempting as a writer to offer some tips about how to improve your writing or how to use quality sources, but you should add another element to that — creating engaging visuals.

Writing is an integral part of shaping someone's perception of things. Great writers know how to weave stories and experiences into words so that they can influence others.

But we all have different ideas of what makes an experience "engaging" or not, which is why there are so many ways to enjoy a book without reading any parts.

Music can be just as powerful for changing emotions as written word ever could. A well-placed song can get even more people involved in something than plain talking ever could!

Making presentations is also a form of storytelling, and getting good at it takes practice, but once you do, you'll find yourself spending most of your time doing it.

Luckily, presenting isn't too difficult if you understand how to apply some basic concepts.

E. Test your site with potential customers

Sometimes, you need to take a break from editing and designing your website or web page before adding more content. These are sometimes needed when we want to test an experiment of some kind!

We could be trying to boost search engine rankings by changing the wording on a webpage or testing different styles for our website's look.

Or maybe we're just not sure what else to add to our article so we decide to do that instead!

Either way, it's best to test these changes out on your own website first before going live. You don't want to risk ruining your online presence while experimenting!

Your personal website is yours. Only you can make decisions about how much try new things. It's better to save yourself some stress and give this tip a shot before launching into anything major.

F. Update your website constantly

Editing a site means making changes to the content included in various pages, styles, templates, and/or apps. It can be as simple as changing the font or adding new pictures or videos, but more likely it is replacing whole sections or even deleting an entire page or component.

The hardest part about editing a website is actually deciding where to make changes. With technology moving at such a lightning speed, there are always newer features being added to sites, as well as ways to configure them.

There are many free tools that can help you find any issues with your website quickly and easily. Most of these have limited functions, so they do not cost very much to use. Some only test for certain types of errors, while others test both functionality and performance.

Many third-party websites offer their users a way to check the look and feel of their website, as well as whether it works properly. This includes looking at the layout, fonts, colors, and general appearance. Beyond this, some will assess how fast the site responds and if anything seems slow, they may suggest improving it.

These external resources usually also provide tips and tricks to improve your website's usability. All too often we get stuck using outdated software and equipment because no one makes it easy to upgrade.

Self-Check-2

Part-I: Say True or False

1. Content creation is the process of creating various forms of media that appeal to your target audience.
2. Proper descriptive linking cannot be a good way to optimize your content.
3. Headers are a powerful resource that, correctly used, organize the layout of your content.

Part-II: Give short answer

1. How to optimize an accessible website?
2. What is the need of SEO keywords in a website?
3. What is the need of website accessibility?

Operation sheet 2.1: Create a HTML & CSS Files

Operation Title: Creating HTML & CSS codes

Purpose: To crate HTML file in order to add different web contents.

Equipment Tools and Materials:

- Computer
- Text editors (Notepad/Notepad ++/Sublime)

Steps in doing the task

1. Create a project folder and set up **index.html** and **styles.css**
2. Create the following with your text editor and save it to **index.html.**

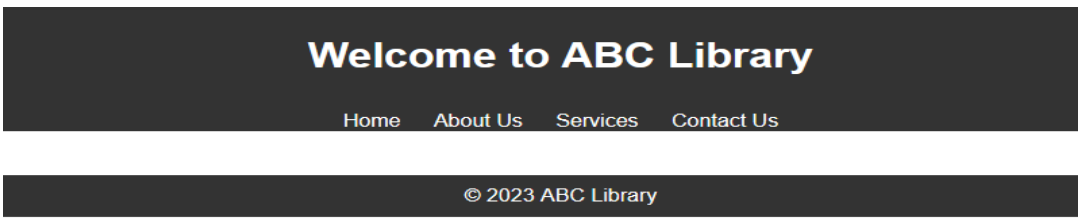
```
<!DOCTYPE html>
<html>
<head>
    <title>ABC Library - Home</title>
    <link rel = "stylesheet" type = "text/css" href = "style.css">
</head>
<body>
    <header>
        <h1>Welcome to ABC Library</h1>
    </header>
    <nav>
        <ul>
            <li><a href="index.html">Home</a></li>
            <li><a href="aboutus.html">About Us</a></li>
            <li><a href="services.html">Services</a></li>
            <li><a href="contactus.html">Contact Us</a></li>
        </ul>
    </nav>
    <section>
        <!--Add your contents here-->
    </section>
    <footer>
        &copy; 2023 ABC Library
    </footer>
</body>
</html>
```

3. Create another file and save it with **styles.css**

```css
body {
    font-family: Arial, sans-serif;
    margin: 0;
    padding: 0;
    background-color: #f2f2f2;
}
header {
    background-color: #333;
    color: #fff;
    text-align: center;
    padding: 10px 0;
}
nav ul {
    background-color: #333;
    list-style: none;
    margin: 0;
    padding: 0;
    text-align: center;
}
nav ul li {
    display: inline;
    margin: 0 10px;
}
nav ul li a {
    text-decoration: none;
    color: #fff;
}
section {
    max-width: 800px;
    margin: 0 auto;
    padding: 20px;
    background-color: #fff;
}
footer {
    background-color: #333;
    color: #fff;
    text-align: center;
    padding: 10px 0;
}
```

4. Check the output of your HTML and CSS Files

Quality Criteria: The output should be look like this.



Operation sheet 2.2: Create a content for you website

Operation Title: Creating content for your web

Purpose: To create more appealing content for a website.

Equipment Tools and Materials:

- Computer
- Text editors (Notepad/Notepad ++/Sublime)

Steps in doing the task

1. Add different paragraphs and images to your **Home page** to make it more engaging your site.
2. Create a file with **aboutus.html** file and structure your content for **about us** menu.

About Us

Welcome to ABC Library, your literary haven! We are passionate educators dedicated to fostering a love for reading and empowering individuals with the skills to navigate the enchanting world of books.

Our Mission:

At ABC Library, our mission is to be more than just a repository of books; we strive to create a vibrant online platform where readers can delve into captivating stories and master the art of web content creation through engaging, hands-on experiences. We believe in cultivating a reading culture, encouraging collaboration, and equipping individuals with the knowledge to explore the boundless realms of literature in the ever-evolving digital landscape.

3. Create a file with **Services.html** file and structure your content for **Service** menu.

Our Services

Discover a world of literary delights and digital possibilities at ABC Library. We are committed to providing a suite of services that cater to your reading interests and enhance your overall library experience.

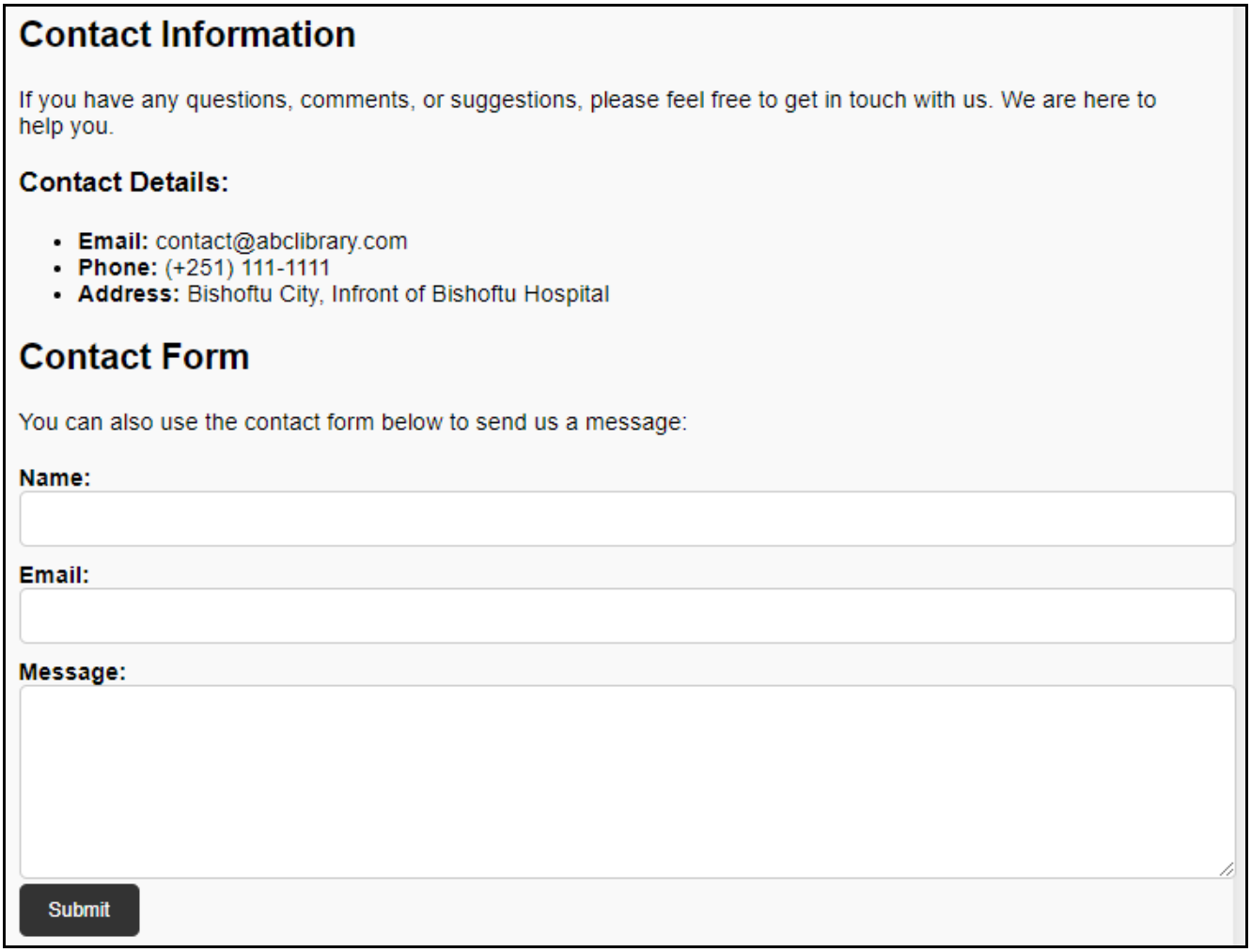
1. Extensive Book Collection:

Immerse yourself in our extensive collection of books, ranging from classic literature to contemporary bestsellers. Our carefully curated selection ensures there's something for every reader.

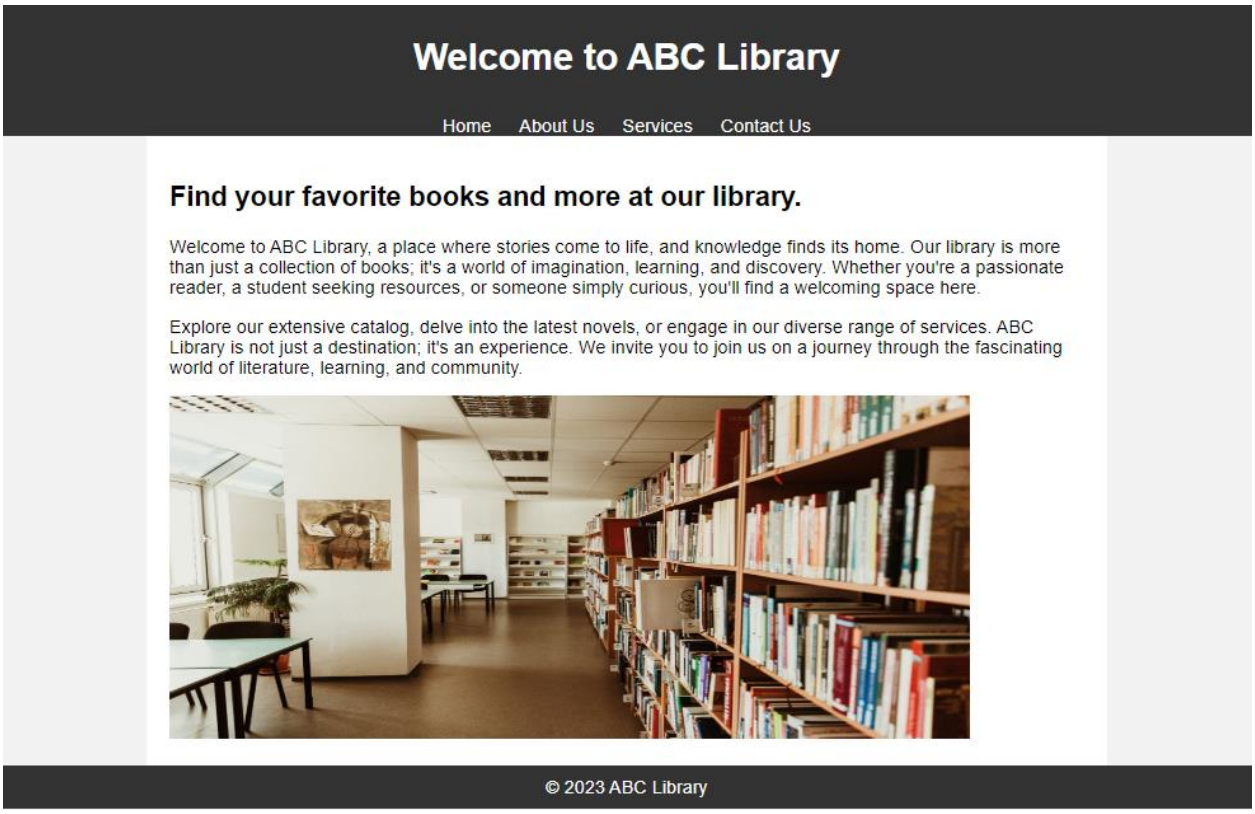
2. Reading Platforms:

Enjoy the flexibility of reading on various platforms. Access our digital library from your desktop, tablet, or mobile device, allowing you to dive into a good book anytime, anywhere.

4. Create a file with **Contactus.html** file and create the following content for **Contactus** menu.



Quality Criteria: The output should be look like this.



Lap Tests

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks accordingly.

Task 1: Gather data and identify the need of particular organization.

Task 2: Create a website based on the identified business requirement

Task 3: Create a content for your website

Unit Three: Content Upload

This learning guide is developed to provide you the necessary information regarding the following content coverage and topics:

- Server access and FTP log-in
- File transfer protocol management
- Logical design and extensions organization of files

Demonstration of effective operations

This guide will also assist you to attain the learning outcomes stated in the cover page. Specifically, upon completion of this learning guide, you will be able to:

- Access servers and log in through FTP.
- Manage file transfer protocols effectively.
- Organize digital files with a logical design and appropriate extensions.

3.1. Server access and FTP log-in

3.1.1. FTP (File Transfer Protocol)

A network protocol for transmitting files between computers over Transmission Control Protocol/Internet Protocol (TCP/IP) connections. Within the TCP/IP suite, FTP is considered an application layer protocol.

In an FTP transaction, the end user's computer is typically called the ***local host***. The second computer involved in FTP is a ***remote host***, which is usually a server. Both computers need to be connected via a network and configured properly to transfer files via FTP. Servers must be set up to run FTP services, and the client must have FTP software installed to access these services.

Although many file transfers can be conducted using Hypertext Transfer Protocol (HTTP) another protocol in the TCP/IP suite FTP is still commonly used to transfer files behind the scenes for other applications, such as banking services. It is also sometimes used to download new applications via web browsers.

3.1.2. FTP types

There are several different ways an FTP server and client software can conduct a file transfer using FTP:

- **Anonymous FTP.** This is the most basic form of FTP. It provides support for data transfers without encrypting data or using a username and password. It's most commonly used for download of material that is allowed for unrestricted distribution. It works on port
- **Password-protected FTP.** This is also a basic FTP service, but it requires the use of a username and password, though the service might not be encrypted or secure. It also works on port 21.
- **FTP Secure (FTPS).** Sometimes referred to as FTP Secure Sockets Layer (FTP-SSL), this approach enables implicit Transport Layer Security (TLS) as soon as an FTP connection is established. FTPS was initially used to help enable a more secure form of FTP data transfer. It typically defaults to using port 990.

- **FTP over explicit SSL/TLS (FTPES).** This approach enables explicit TLS support by upgrading an FTP connection over port 21 to an encrypted connection. This is a commonly used approach by web and file sharing services to enable secure file transfers.
- **Secure FTP (SFTP).** This is technically not an FTP protocol, but it functions similarly. Rather, SFTP is a subset of the Secure Shell (SSH) protocol that runs over port 22. SSH is commonly used by systems administrators to remotely and securely access systems and applications, and SFTP provides a mechanism within SSH for secure file transfer.

3.1.3. FTP clients

FTP clients are used to upload, download and manage files on a server. FTP clients include the following:

- **FileZilla.** This is a free FTP client for Windows, macOS and Linux that supports FTP, FTPS and SFTP.
- **Transmit.** This is an FTP client for macOS that supports FTP and SSH.
- **WinSCP.** This is a Windows FTP client that supports FTP, SSH and SFTP.
- **WS_FTP.** This is another Windows FTP client that supports SSH.

3.2. File transfer protocol Management

FTP is a client-server protocol that relies on two communications channels between the client and server: a command channel for controlling the conversation and a data channel for transmitting file content.

Here is how a typical FTP transfer works:

1. A user typically needs to log on to the FTP server, although some servers make some or all of their content available without a login, a model known as anonymous FTP.
2. The client initiates a conversation with the server when the user requests to download a file.
3. Using FTP, a client can upload, download, delete, rename, move and copy files on a server.

FTP sessions work in active or passive modes:

- **Active mode.** After a client initiates a session via a command channel request, the server creates a data connection back to the client and begins transferring data.

- **Passive mode.** The server uses the command channel to send the client the information it needs to open a data channel. Because passive mode has the client initiating all connections, it works well across firewalls and network address translation gateways.

Users can work with FTP via a simple command-line interface from a console or terminal window in Microsoft Windows, Apple macOS or Linux or with a dedicated graphical user interface. Web browsers can also serve as FTP clients.

3.3. Logical design and extensions organization of files

Effective file organization is a crucial aspect of efficient data management, ensuring easy accessibility, retrieval, and maintenance of information. The logical design and proper use of file extensions play a pivotal role in achieving a well-organized file system.

Logical Design:

1. **Folder Hierarchy**: Establish a logical folder hierarchy to categorize files based on their content and purpose. This hierarchy should reflect the natural flow of information within your organization or personal system.
2. **Naming Conventions**: Implement consistent and descriptive naming conventions for both folders and files. This practice enhances searchability and makes it easier for users to understand the content without opening each file.
3. **Version Control**: If applicable, incorporate a version control system to track changes and updates. This ensures that older versions are preserved, and users can revert to previous iterations if needed.

Benefits of Logical Design and Extensions:

1. **Efficient Retrieval**: Logical organization facilitates quick and efficient retrieval of files. Users can navigate through folders with ease, knowing where to find specific types of information.
2. **Reduced Redundancy**: A well-designed file system minimizes redundancy by preventing the creation of duplicate files. Users are less likely to save multiple copies if the file structure is intuitive.
3. **Enhanced Collaboration**: Logical file organization contributes to improved collaboration, as team members can easily locate and share relevant files. This is especially crucial in collaborative work environments.

Self-Check-3

Part-I: Say True or False

1. Password protected FTP referred to as Secure Sockets Layer.
2. In Active mode of FTP Sessions, the server uses command channels.
3. FTP sessions work with in three different types of modes.
4. Anonymous FTP requires the use of username and password.
5. logical design and proper use of file extensions play a pivotal role in achieving a well-organized file system.

Part-II: Answer the following questions accordingly

1. List the types of FTP. (at least two)
2. Explain about the use of FTP clients.
3. What is SSL?

Operation sheet 3.1: Activate IIS on window 10

Operation Title: Enabling Internet Information Services (IIS) on Windows 10

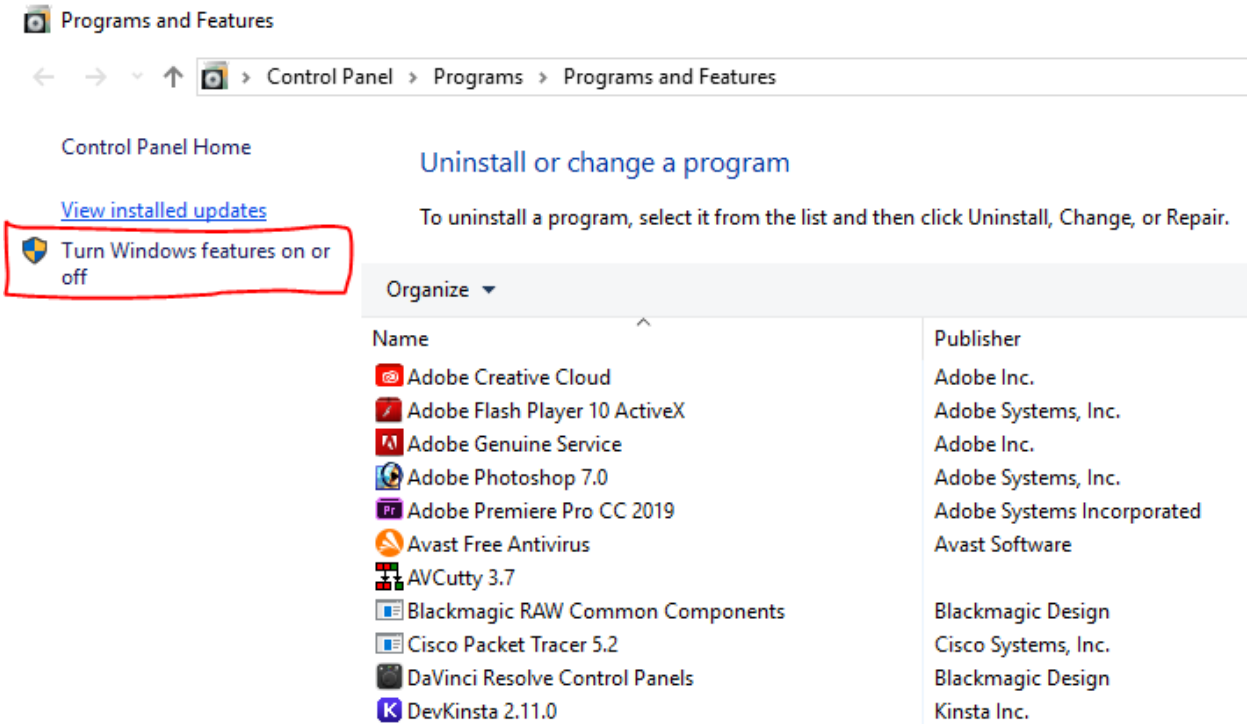
Purpose: To transform your personal computer into a local web server

Equipment Tools and Materials:

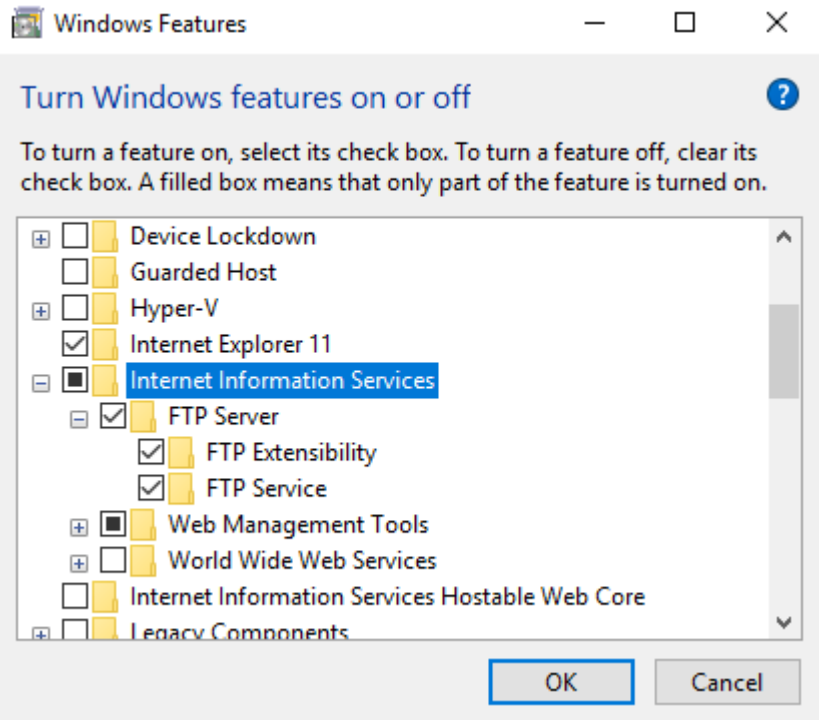
- Computer
- Internet connection
- Administrative credentials (for administrative login)

Steps in doing the task

1. Press ‘WinKey + R’.
2. Type in “appwiz.cpl” and press Enter.



3. From the left-hand panel, click on “Turn Windows features on or off.”



4. Then find ‘Internet Information Services’ and expand it. Check the ‘FTP Server’ and expand it. Check the ‘FTP Extensibility’. Check the ‘Web Management Tools’.
5. Click OK. Windows will proceed to install the tools. Then you can configure your server.

Quality Criteria: Enable IIS on Window 10

Operation sheet 3.2: Configure an FTP Server on Windows 10

Operation Title: Configuring an FTP Server on Windows 10

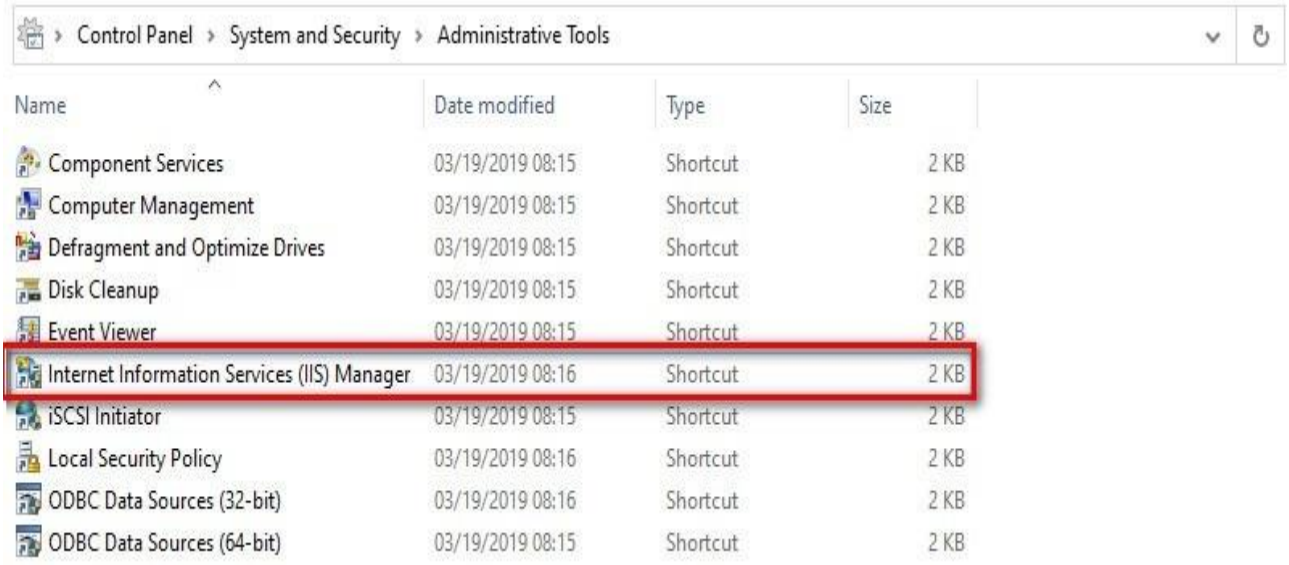
Purpose: To establish a File Transfer Protocol (FTP) server on a Windows 10 system, enabling efficient and secure file transfer capabilities for users within a designated network.

Equipment Tools and Materials:

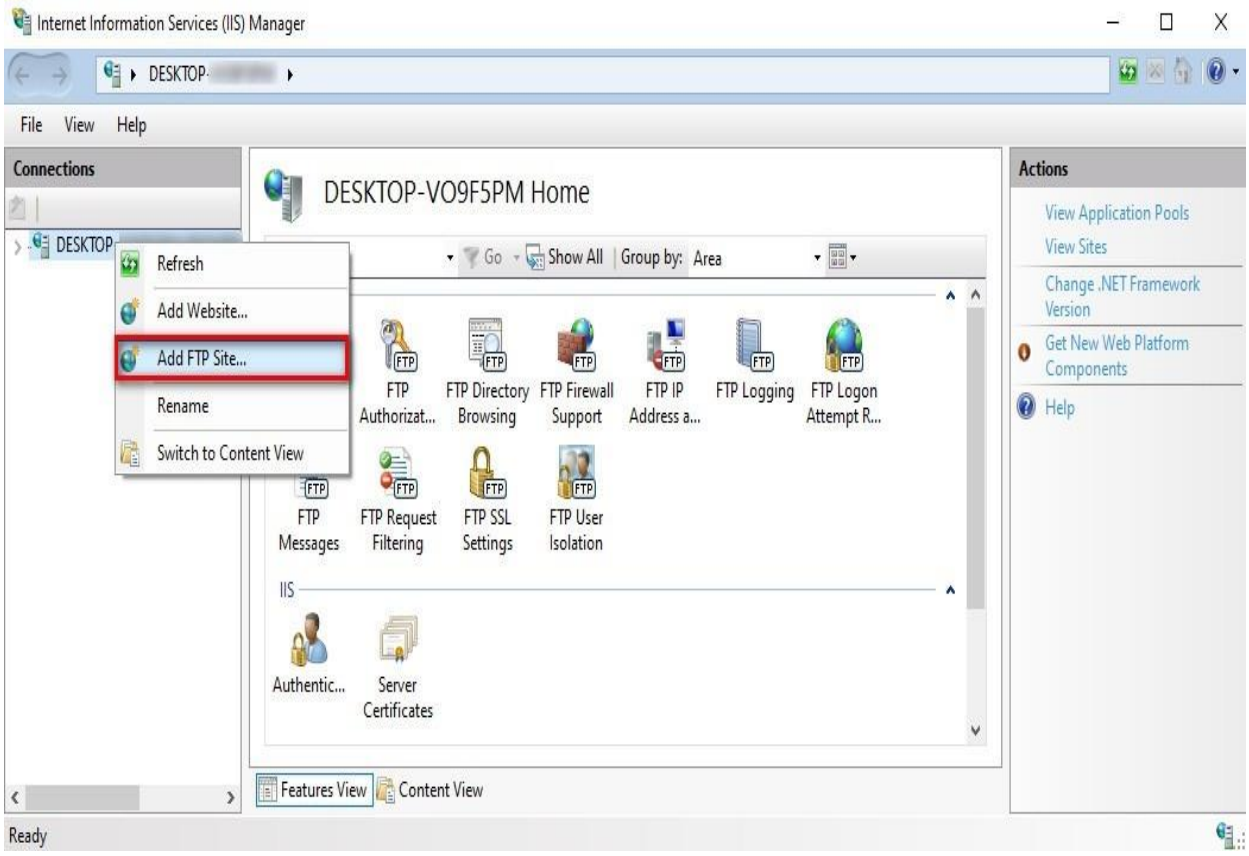
- ✓ Windows 10 computer
- ✓ Internet connection
- ✓ Administrative access
- ✓ FTP server software (e.g., FileZilla Server, Microsoft FTP Server)

Steps in doing the task

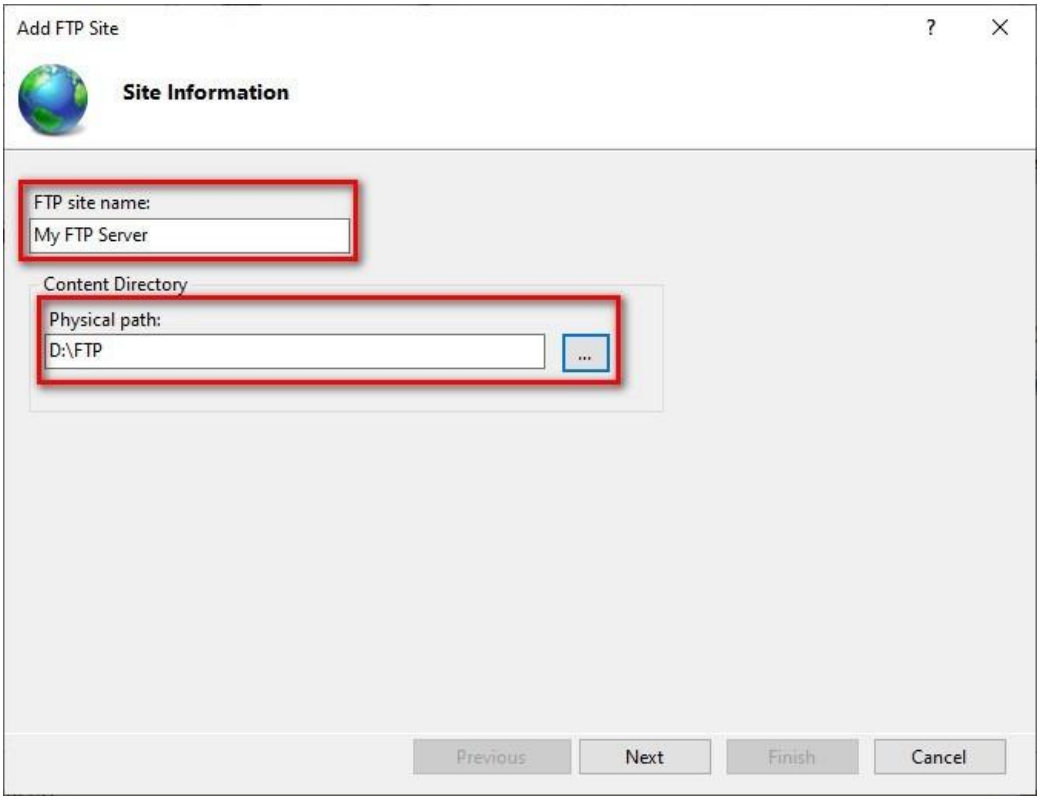
1. Press ‘WinKey + S’ and Search for and open ‘Windows Administrative Tools’.
2. Double-click on ‘Internet Information Services (IIS) Manager’.



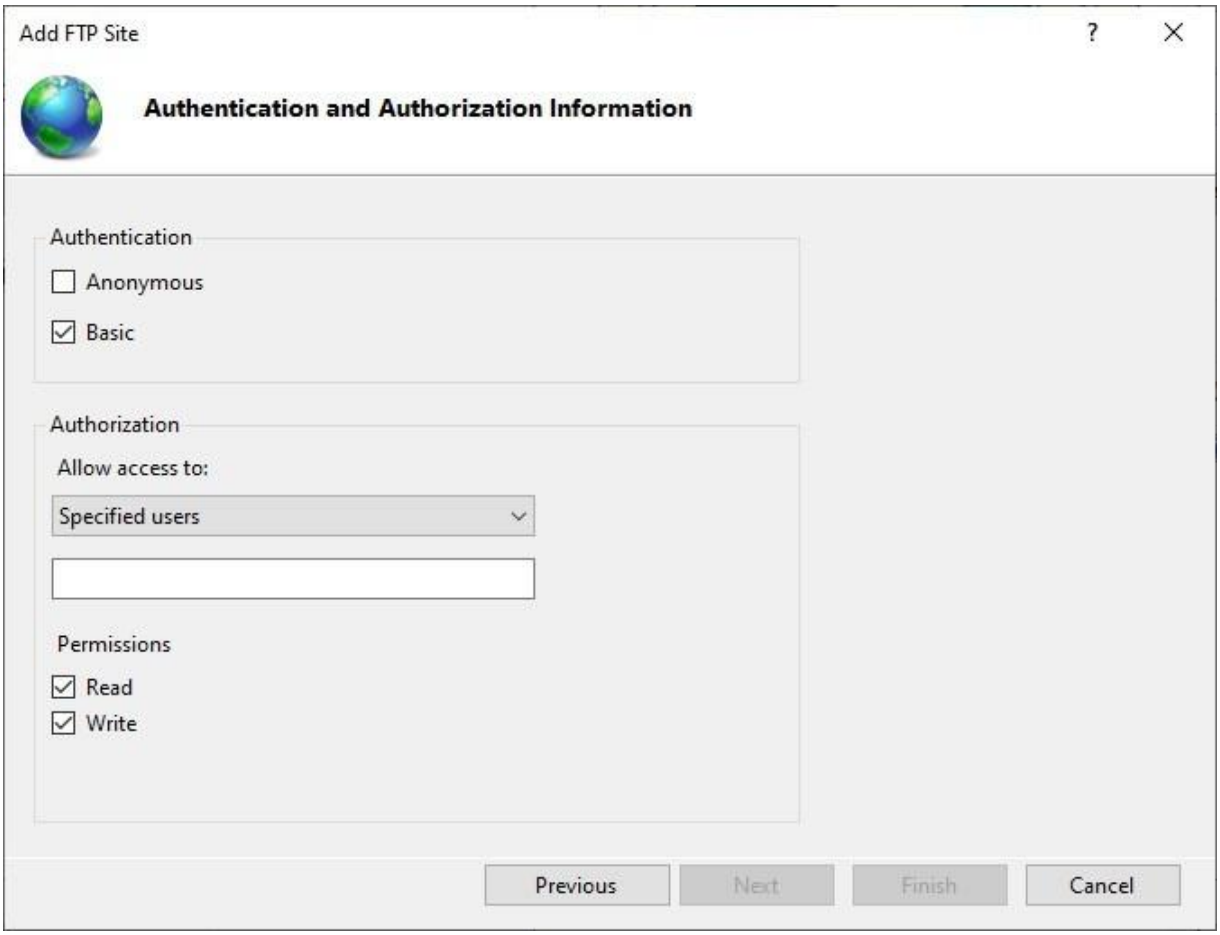
3. From the left-hand panel, right-click on your computer’s name.
4. Click on the ‘Add FTP site’.



5. Type in a name for your FTP server in the ‘FTP site name’ field.
6. Choose a folder as the physical path of your FTP directory.



7. You can assign an IP address and port to your FTP in the next step. You can leave them the way they are.
8. If you use the FTP server as a test and security isn't an issue, you can choose No SSL and proceed. And configure an FTP server on Windows 10
9. On the authentication section, choose 'Basic'.



10. Set 'Allow Access to' on Specified users.
11. Type your name or your Microsoft account's email address in the field below.
12. Give yourself permission to Read and Write. Click on Finish. Now you have an FTP server on your Windows.

Quality Criteria: Successful installation and configuration of the FTP server software

Operation sheet 3.3: Access FTP Servers in Windows' File Explorer

Operation Title: Accessing FTP Servers in Windows File Explorer

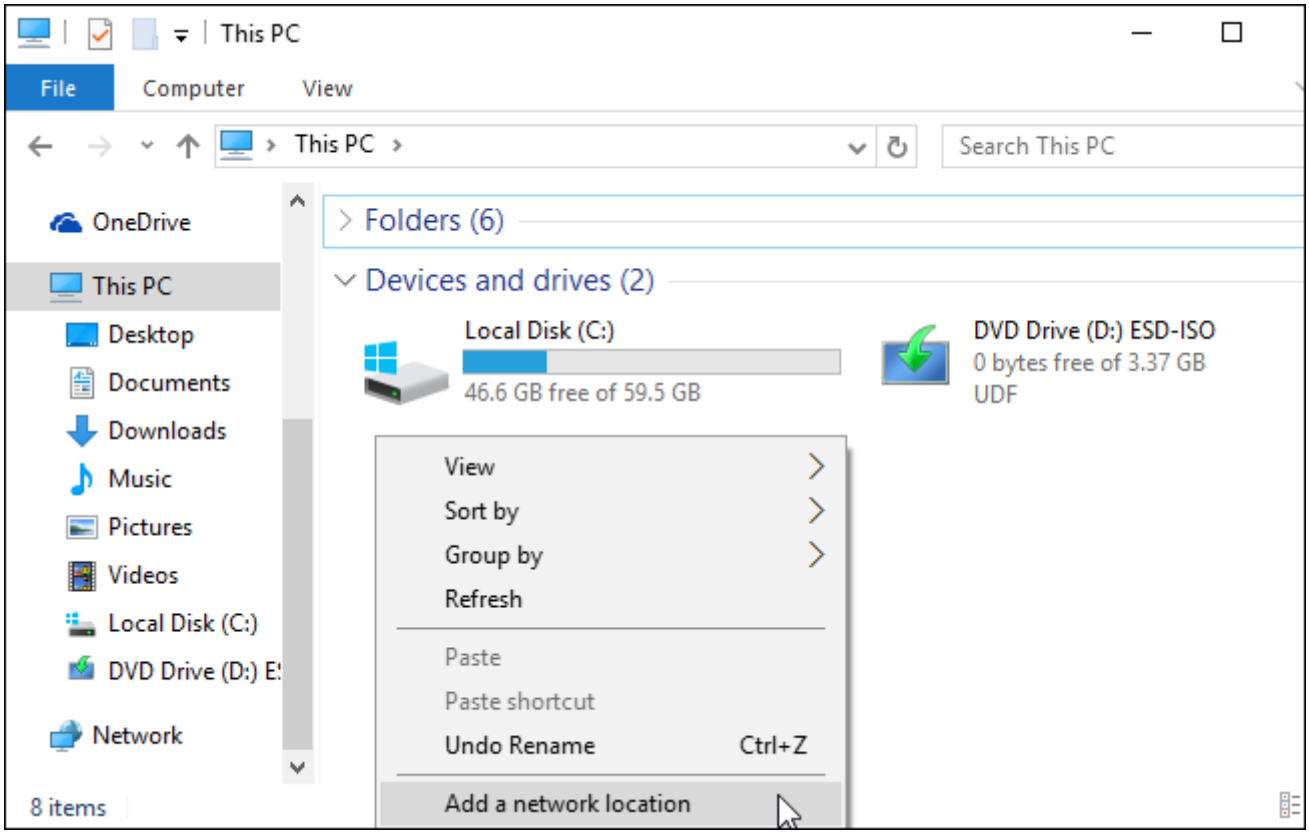
Purpose: To provide users with a user-friendly method to access FTP servers directly through Windows File Explorer

Equipment Tools and Materials:

- ✓ Windows computer
- ✓ Internet connection
- ✓ Windows File Explorer application
- ✓ FTP server credentials (username and password)
- ✓ FTP server address (IP address or domain name)

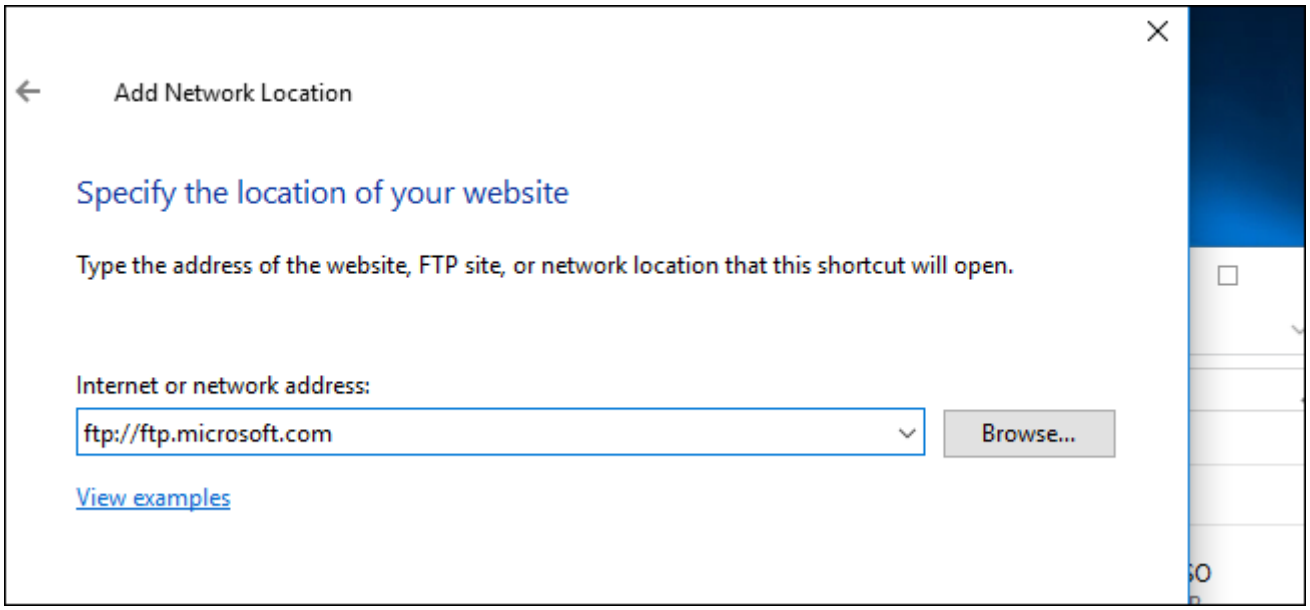
Steps in doing the task

4. Open a File Explorer or Windows Explorer window, click the "This PC" or "Computer". Right-click in the right pane and select "Add a network location".

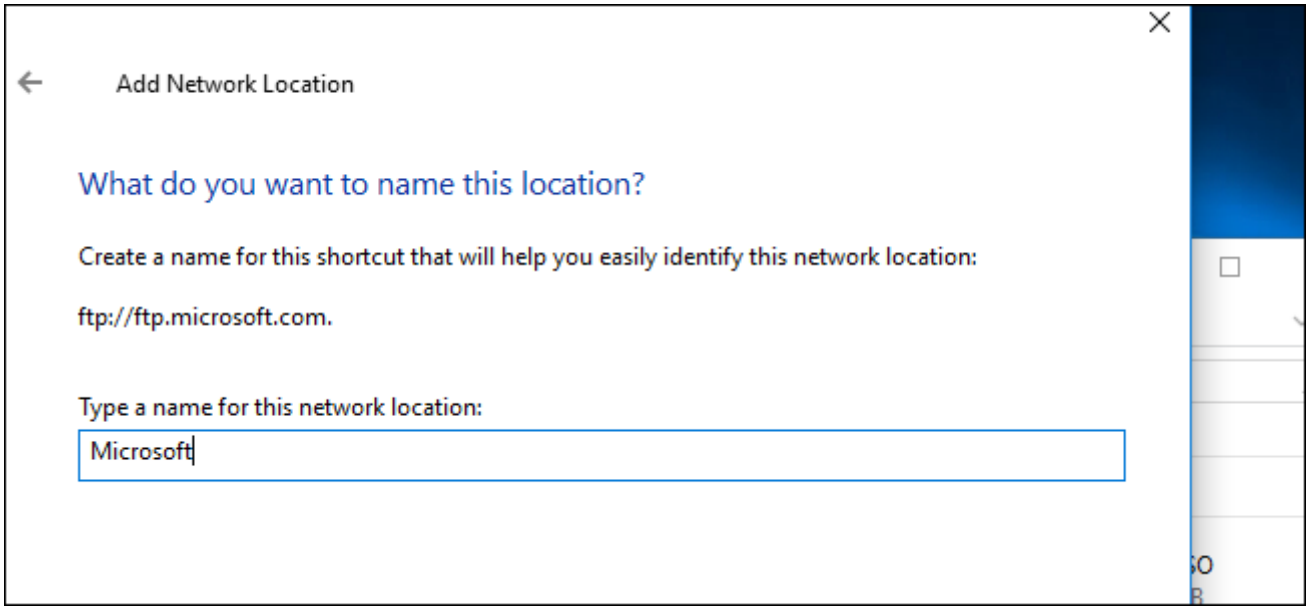


5. Go through the wizard that appears and select "Choose a custom network location".

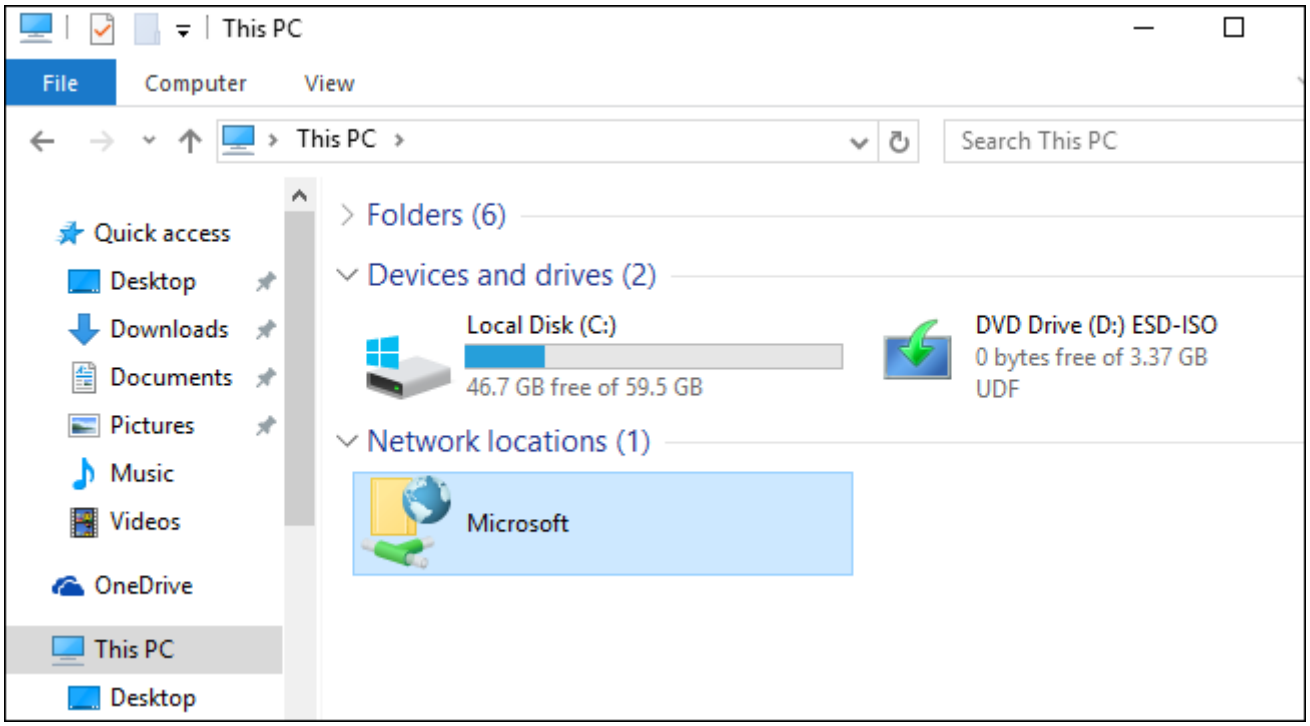
6. In the “Specify the location of your website” dialog, enter the address of the ftp server in the form ftp://server.com. For example, Microsoft’s FTP server is ftp.microsoft.com, so we’d enter ftp://ftp.microsoft.com here if we wanted to connect to that particular server.



7. If you don’t have a username and password, you can often check the “Log on anonymously” box and sign into the server without a username and password. This gives you limited access to the server–you can generally download publicly available files but not upload files, for example. If you do have a username and password, enter your username here. The first time you connect to the FTP server, you’ll be prompted to enter your password.
8. You’ll now be asked to enter a name for the network location. Enter whatever name you like–the FTP site will appear with this name so you can easily remember which is which.



9. When you're done, the FTP site will appear under "Network locations" in the This PC or Computer pane. Download files and upload files by copying and pasting them to and from this folder.



Quality Criteria: Ensure successful and prompt connection to the FTP server through Windows File Explorer.

Operation sheet 3.4: Access FTP Servers in the Command Prompt

Operation Title: Accessing FTP Servers via Command Prompt

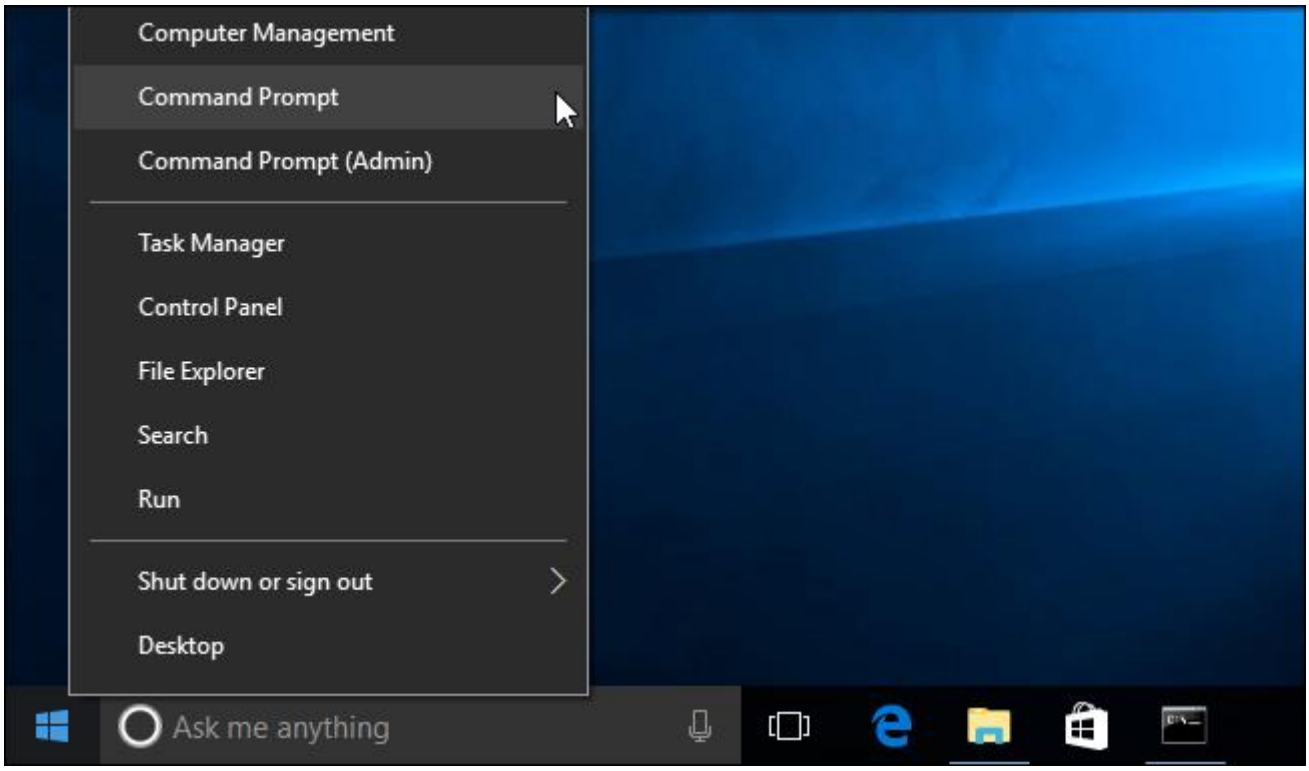
Purpose: To establish a connection to FTP servers using the Command Prompt in Windows

Equipment Tools and Materials:

- ✓ Windows computer
- ✓ Functional Command Prompt
- ✓ Reliable Internet connection
- ✓ FTP server credentials (username and password)
- ✓ FTP server address (IP address or domain name)

Steps in doing the task

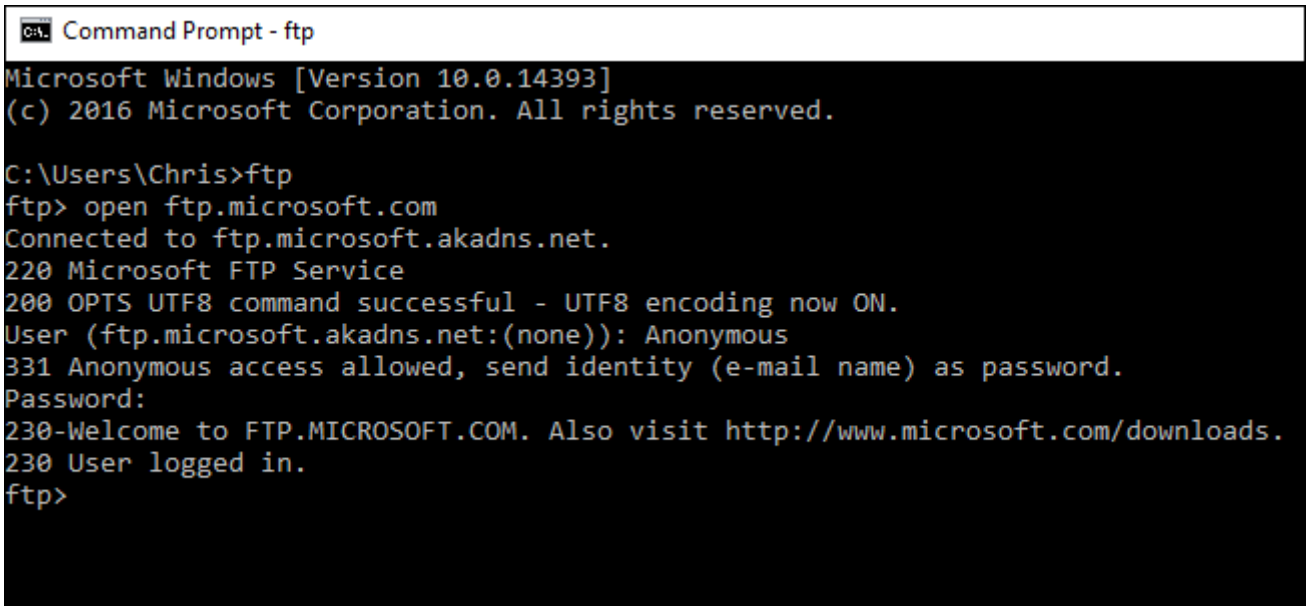
1. Open a Command Prompt window. On Windows 10 or 8, right-click the Start button or press Windows+X on your keyboard and select “Command Prompt”. On Windows 7, search the Start menu for “Command Prompt”.



2. Type ftp at the prompt and press Enter. The prompt will change to an ftp> prompt. To connect to a server, type open followed by the address of the FTP server. For example, to connect to Microsoft’s FTP server, you’d type:

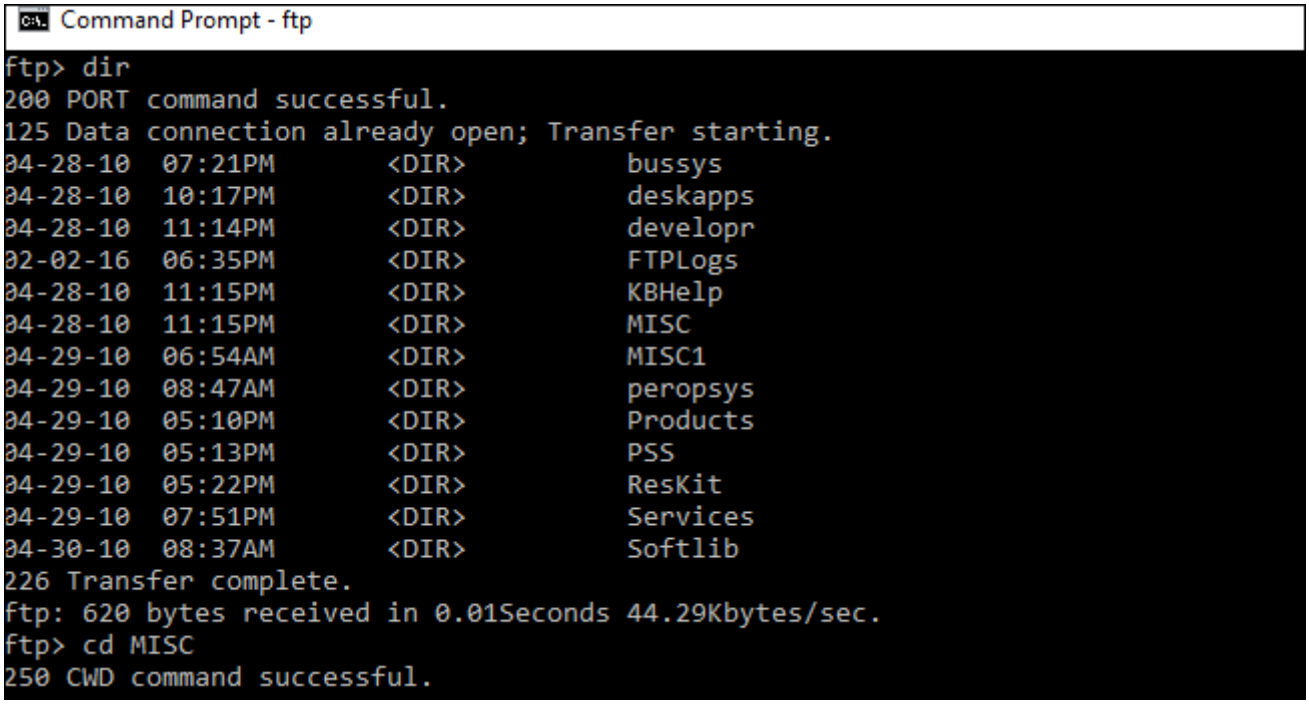
```
open ftp.microsoft.com
```

You’ll then be prompted for a username. Enter the username and password to connect to the site. If you don’t have one, you can enter “Anonymous” followed by a blank password to see if the FTP server allows anonymous access.



3. Once you're connected, you can navigate the FTP server with the dir and cd commands. To change to another directory, type the cd command followed by the name of the directory. For example, you'd type the following command to change to a directory named "example":

```
cd example
```

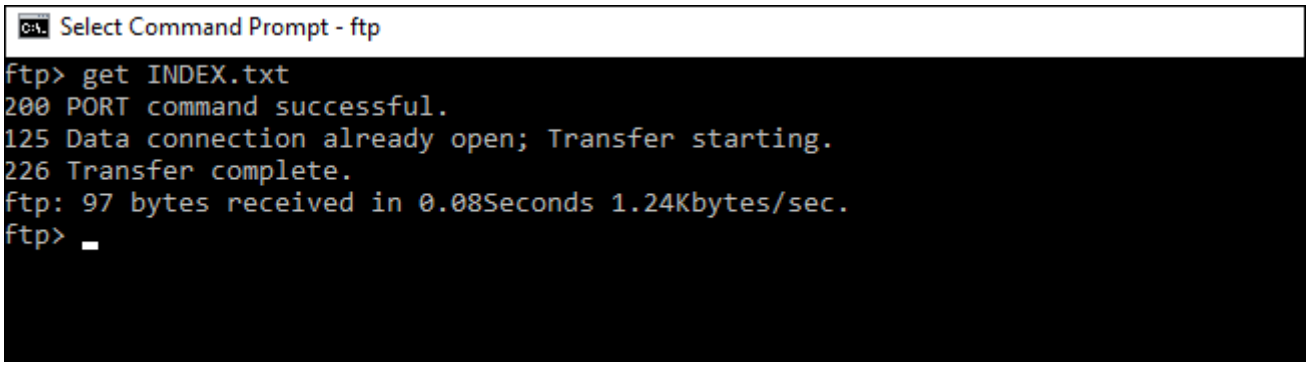


4. To upload or download files, use the get and push commands. For example, to download a file named example.txt in the current FTP folder, you'd type:

```
get example.txt
```

To upload a file stored on your desktop named example.txt to the FTP server, you'd type:

```
put "C:\Users\YOURNAME\Desktop\example.txt"
```



5. When you're done, just type **quit** to close the connection:

Quality Criteria: Establish a successful connection to the FTP server using the Command Prompt.

Lap Tests

Instructions: Given necessary templates, tools and materials you are required to perform the following tasks accordingly.

Task 1: Activate IIS on your window

Task 2: Configure an FTP Server

Task 3: Access FTP Servers in Windows' File Explorer

Task 4: Access FTP Servers in the Command Prompt

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