



Build and Manage Websites with CMS

Session 1:

Introduction to CMS and WordPress

Objectives

- Define CMS and its purpose
- List and compare popular CMS platforms
- Describe basic content creation and management in CMS
- Explain user roles and permissions in CMS
- Outline the evolution and key features of WordPress



Overview of CMS

**Software for
creating,
managing,
and modifying
digital content**



**Enables
Website
building
without
extensive
technical
knowledge**

Popular CMS Platforms



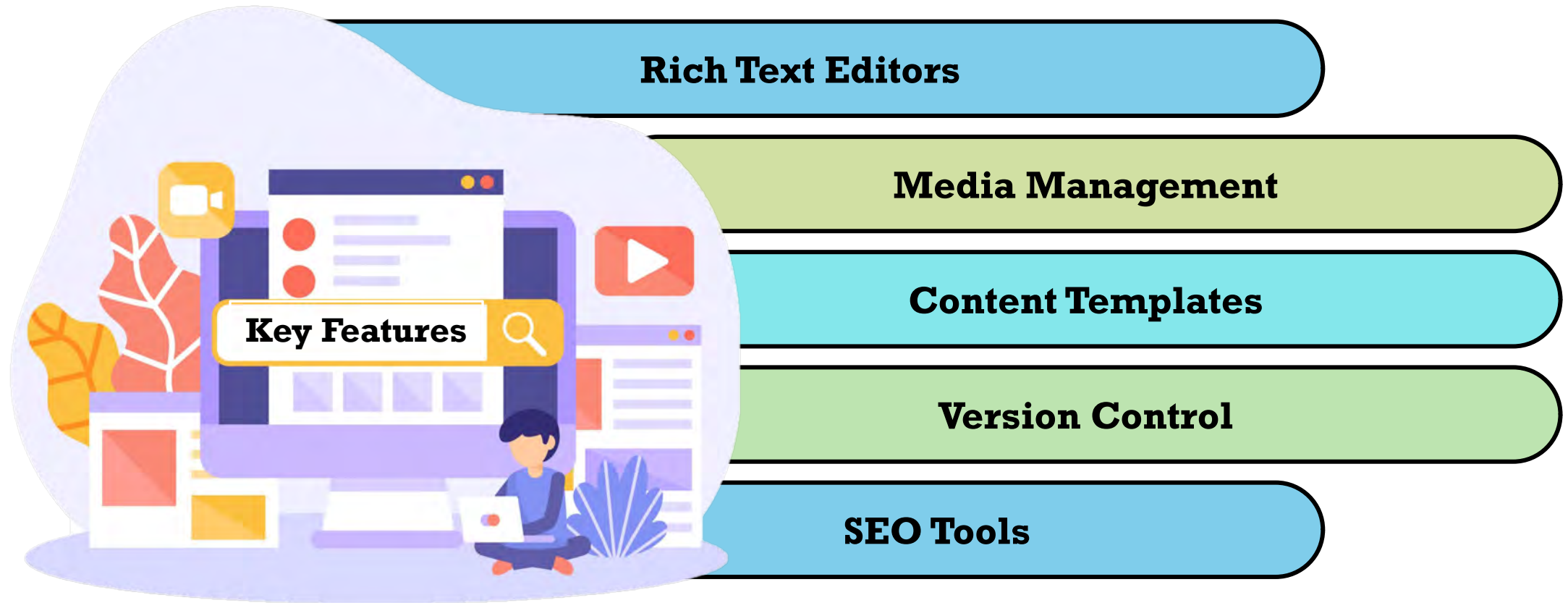
WordPress

Joomla

Drupal

Basic Components of a CMS [1-4]

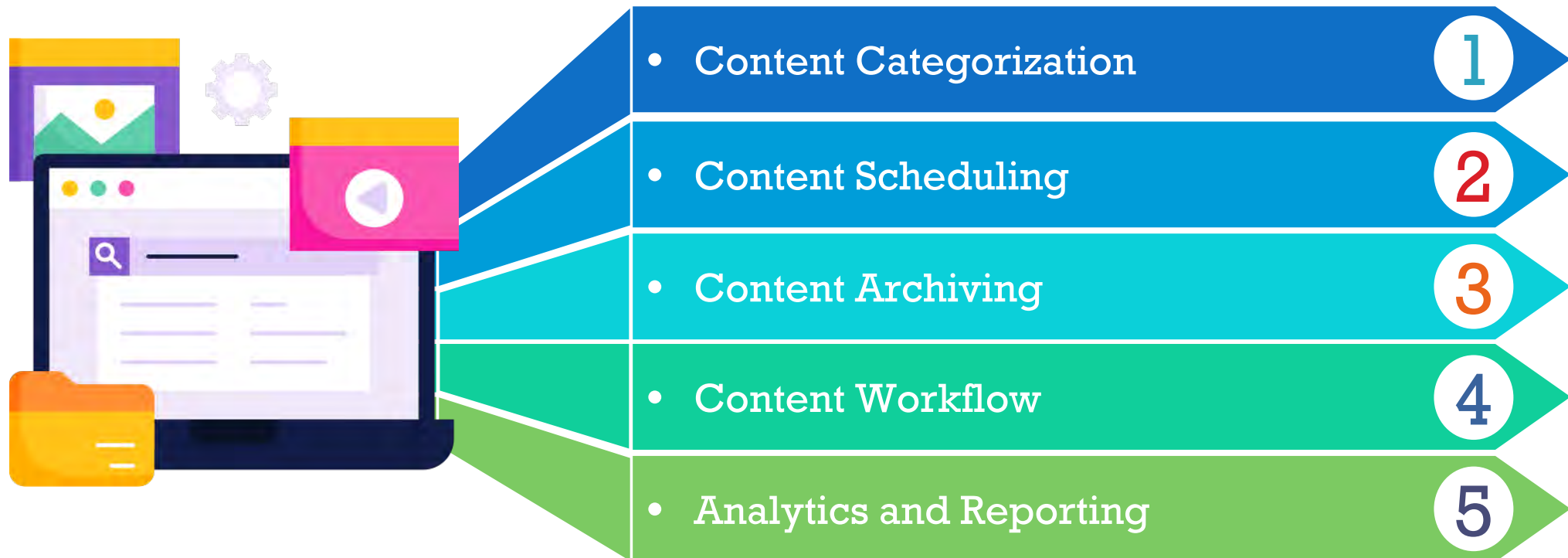
Content Creation



Basic Components of a CMS [2-4]

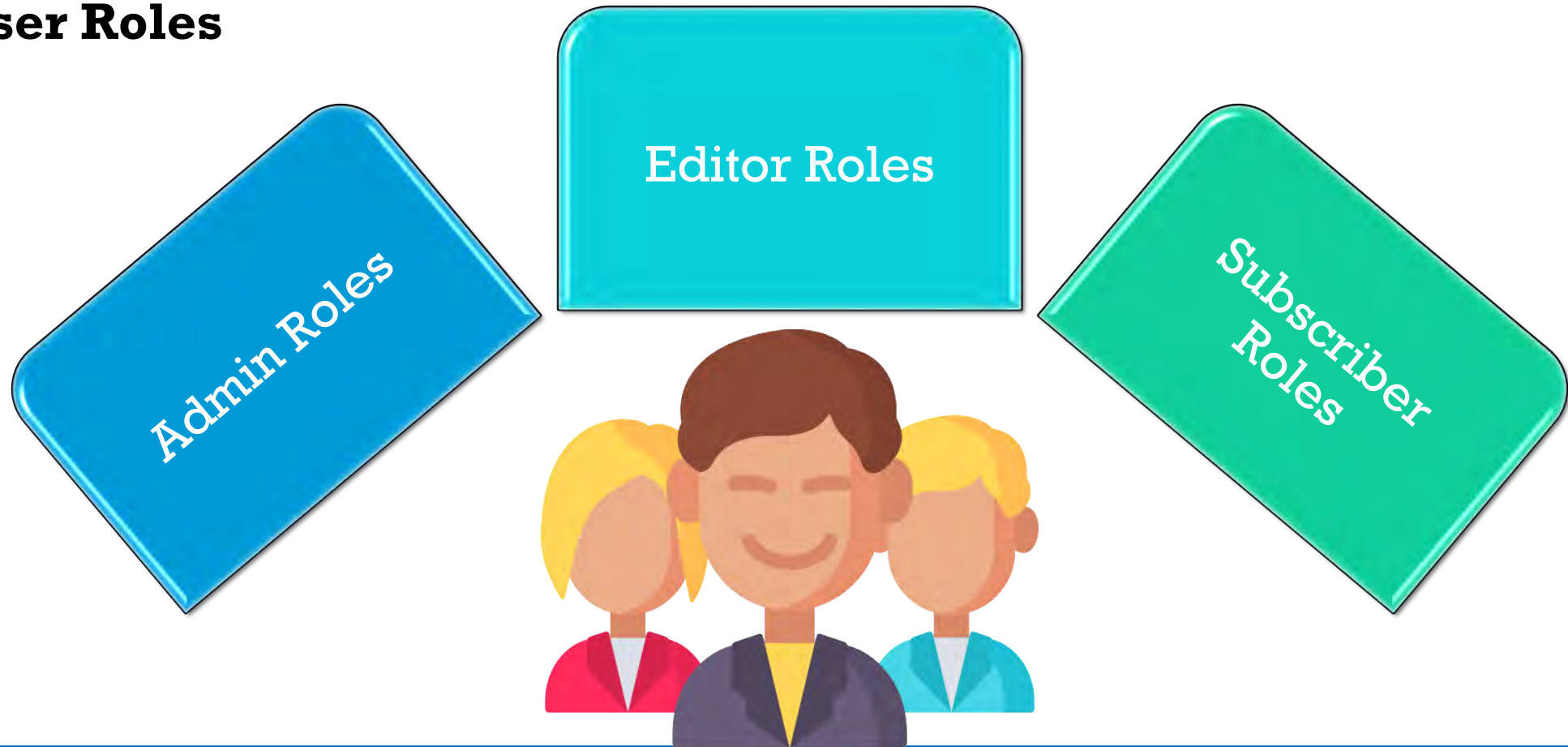
Content Management

➤ Key features that support content management include:



Basic Components of a CMS [3-4]

User Roles



Basic Components of a CMS [4-4]

User Permissions



WordPress [1-2]

Overview

WordPress started as a simple blogging platform and has evolved into a leading CMS.

It supports a wide range of Websites including personal blogs, portfolios, e-commerce Websites, and corporate portals.

It offers a vast selection of themes and plugins, allowing users to customize their Websites' appearance and functionality without coding.



WordPress [2-2]

Features



Summary [1-2]

- A CMS is software that simplifies Website creation and content management with user-friendly tools, requiring minimal technical expertise.
- A CMS streamlines digital content management with intuitive interfaces, WYSIWYG editors, organizational tools, version control, SEO integration, and security features.
- WordPress is the most popular open-source CMS, powering over 40% of Websites, and offers a flexible and scalable solution for diverse Website types.
- Joomla is an open-source CMS that balances ease of use and flexibility, making it ideal for users seeking more functionality than basic platforms without extensive developer customization.
- Drupal is a highly customizable, developer-focused CMS renowned for its robustness and security, designed for complex and large-scale Websites.

Summary [2-2]

- Creating and managing content in a CMS involves generating, organizing, editing, and maintaining digital assets such as articles, images, and videos to ensure relevance and accessibility.
- User roles in a CMS help set access levels: Admins control all functions, Editors handle content creation and review, while Subscribers access and interact with published content.
- Permissions define user actions such as viewing, creating, editing, deleting, publishing, and moderating content, plus managing users and settings.
- WordPress, with its robust features and versatility offers easy content management, extensive customization, and ongoing updates from an active community.



Build and Manage Websites with CMS

Session 2:

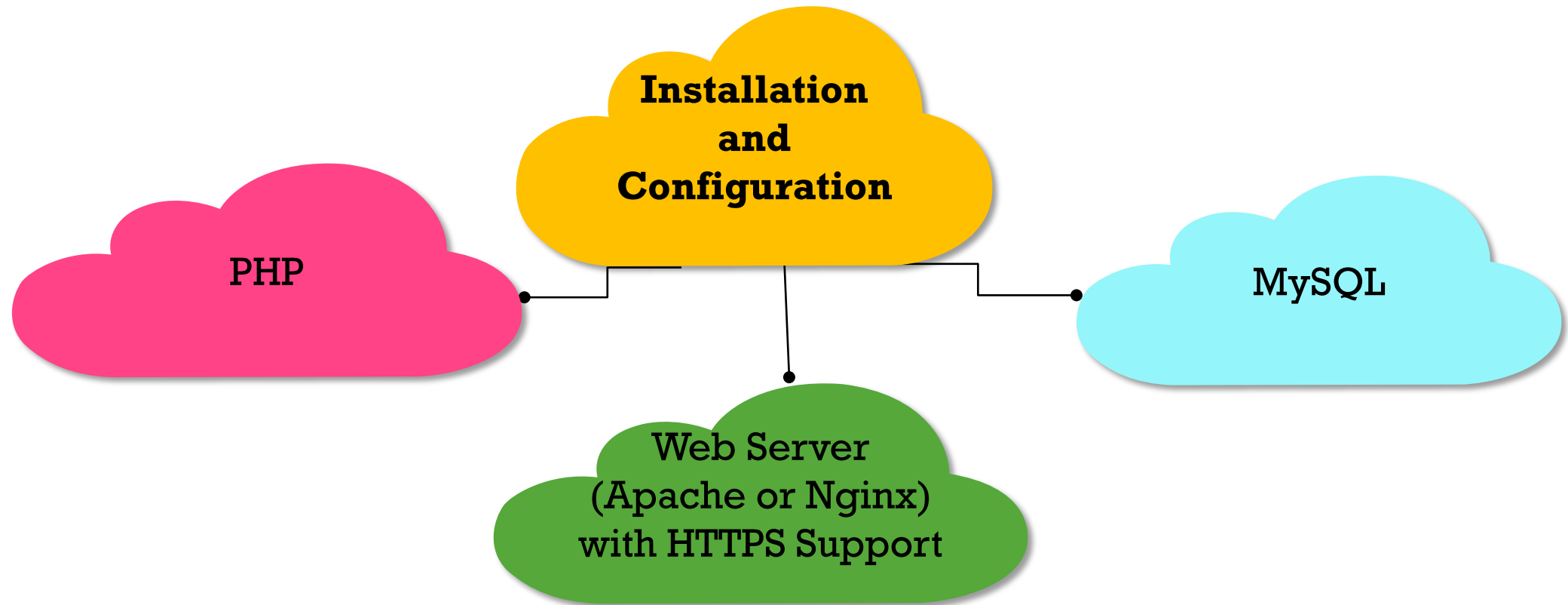
Setting Up WordPress Environment

Objectives

- List and explain WordPress 6.5 installation setup essentials
- Describe the installation and configuration of WordPress 6.5
- Illustrate the creation of a WordPress database
- Outline the steps to set up basic settings and the admin account

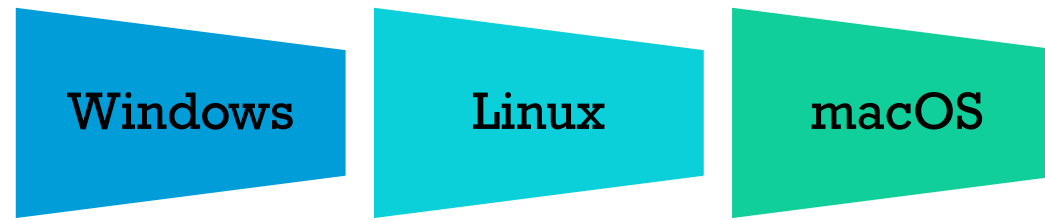


Environment Setup Essentials

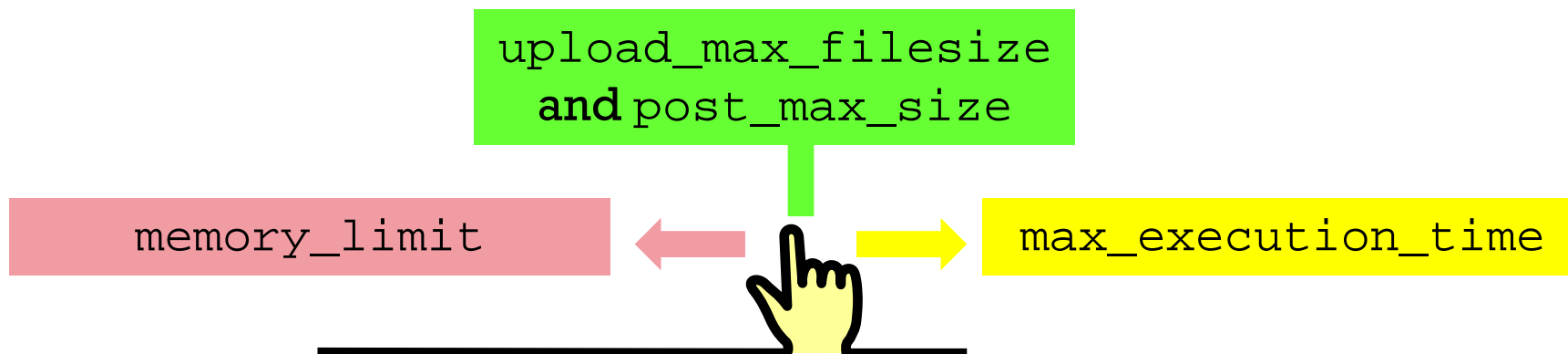


PHP 8.3 Installation

- PHP can be downloaded in various operating systems, which include:

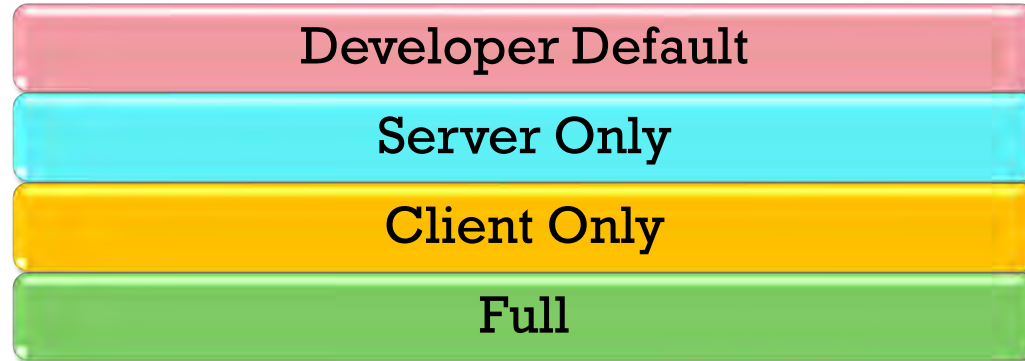


- Key settings for configuring PHP include:

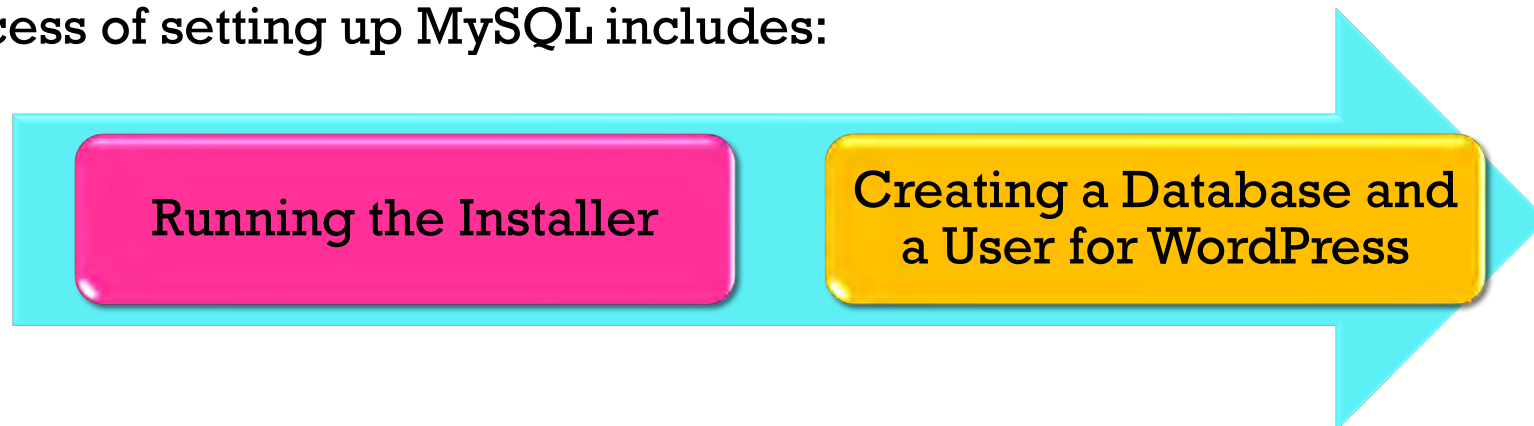


MySQL 8.4.x Installation

- Various setup types of MySQL are as follows:

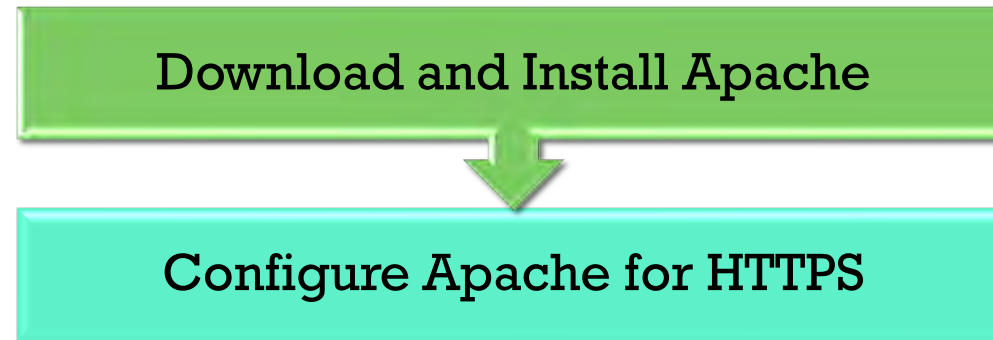


- The process of setting up MySQL includes:



Web Server Setup (Apache/Nginx) with HTTPS Support

- Steps for Apache installation with HTTPS support are as follows:



- Steps for Nginx installation with HTTPS support as follows:

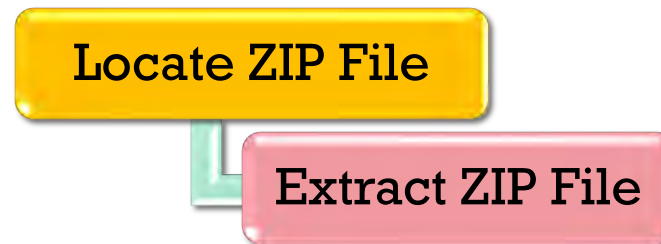


Installing WordPress 6.5

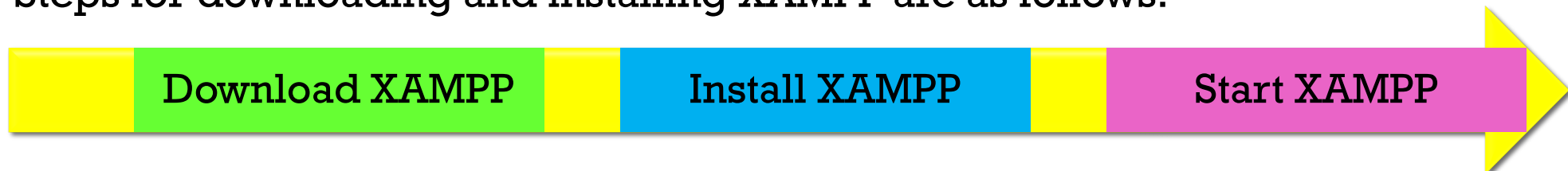
- Steps for downloading WordPress package are as follows:



- Steps for using MySQL command line are as follows:

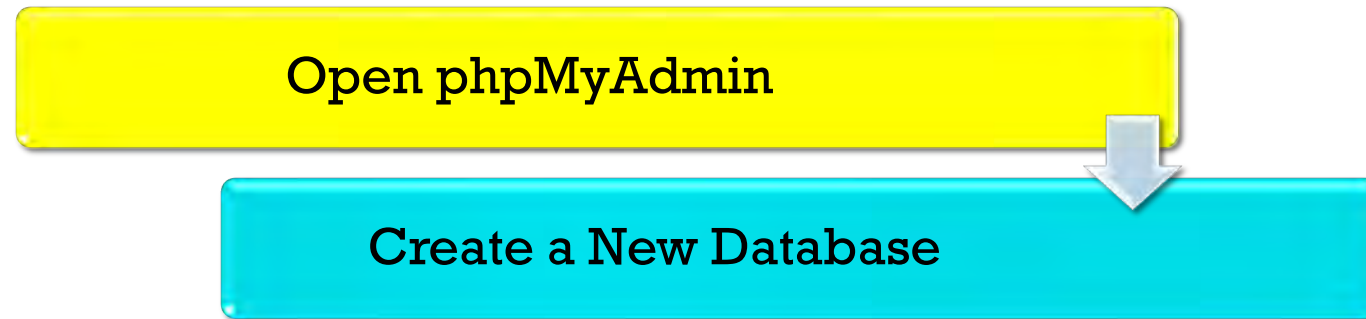


- Steps for downloading and installing XAMPP are as follows:

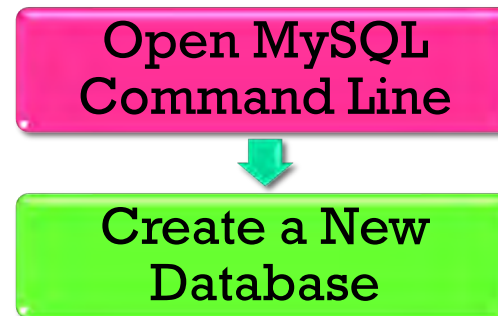


Creating a Database for WordPress

- Steps for using phpMyAdmin are as follows:

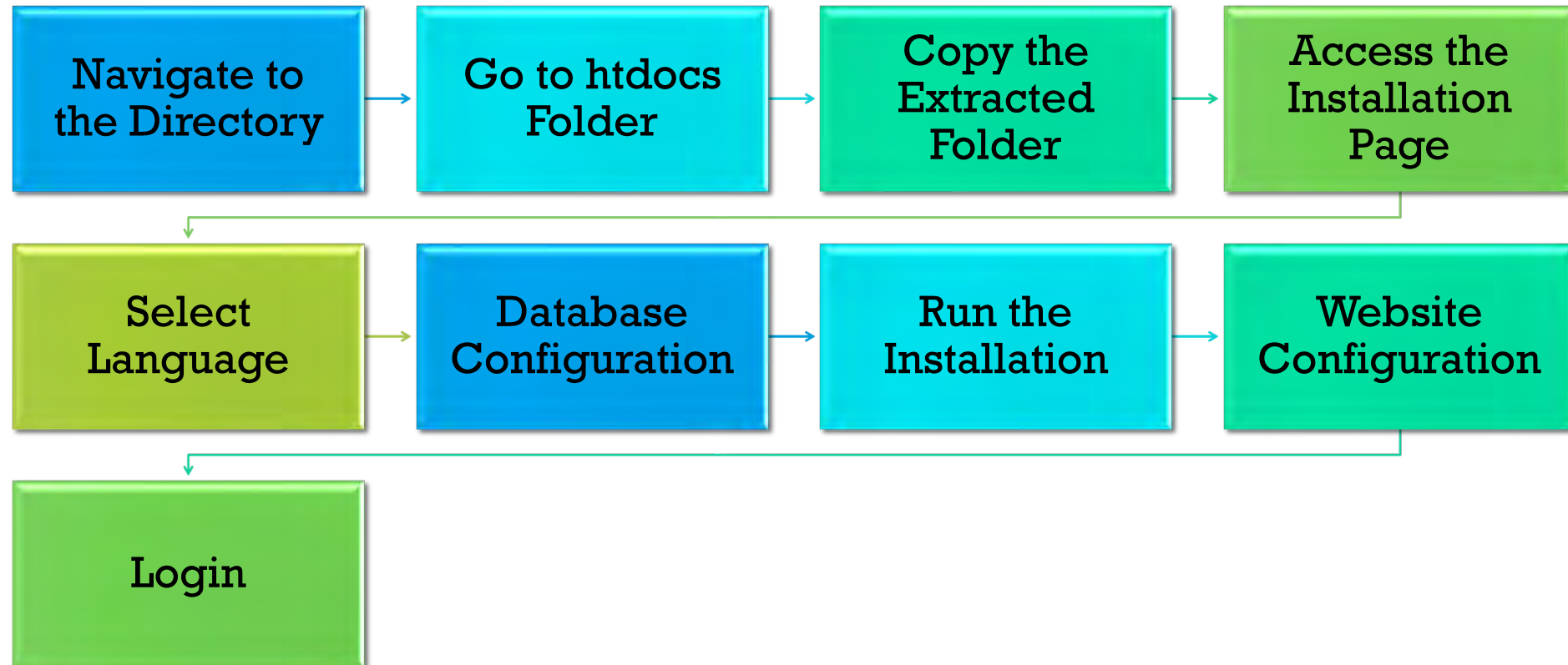


- Steps for using MySQL command line are as follows:



Executing the WordPress Installer

- Steps for configuring the wizard and finalizing installation are as follows:



Configuring Basic Settings

- Steps for configuring Site Title and Tagline are as follows:

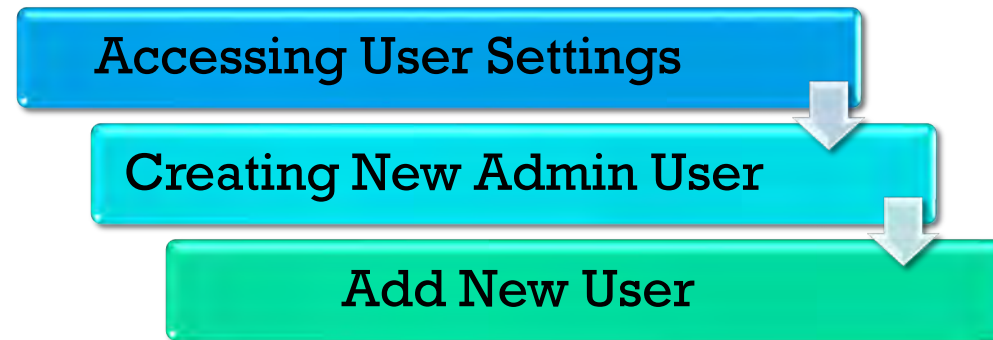


- Steps for configuring the Timezone and Date Format are as follows:



Setting Up Admin Account

- Steps for creating an admin account are as follows:



- Steps for assigning roles are as follows:



Summary [1-2]

- Environment setup for WordPress includes installing PHP 8.3, MySQL 8.4.x, and a Web server (Apache or Nginx) with HTTPS support.
- PHP 8.3 installation involves downloading from official sources, configuring php.ini, and enabling necessary extensions.
- MySQL 8.4.x setup requires downloading the installer, choosing the setup type, and creating a database and the user for WordPress.
- Web server setup (Apache/Nginx) includes installation, configuration for HTTPS, and obtaining/configuring SSL certificates.
- WordPress 6.5 installation involves downloading the package, extracting files, and using XAMPP for the local development environment.
- Creating a database for WordPress can be done by using phpMyAdmin or MySQL command line interface.

Summary [2-2]

- The WordPress installer guides through language selection, database configuration, and initial Website setup.
- Initial WordPress configuration includes setting up basic Website information (title, tagline, and timezone) and creating/managing admin accounts and user roles.



Build and Manage Websites with CMS

Session 3: Exploring WordPress Themes

Objectives

- Explain the purpose and functionality of WordPress themes
- Identify default WordPress themes and their features
- Describe the process to install and activate themes
- Illustrate methods to upload and install custom themes
- Explain the process of customizing themes using the WordPress customizer and custom CSS



Themes Functionality

Themes play a key role in how a WordPress Website looks and works.

They affect both the Website's appearance and layout, shaping the overall user experience.

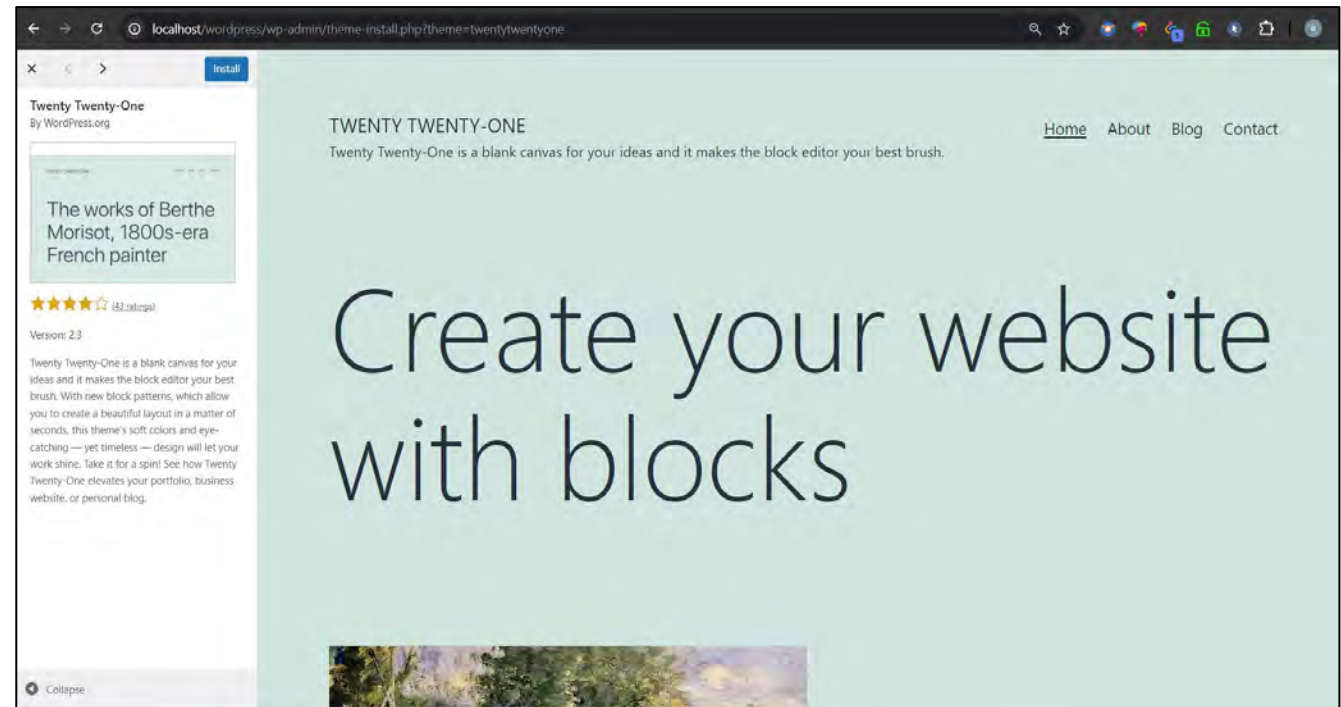
They form the foundation of a Website's design and structure.



Default WordPress Themes [1-2]

Twenty Twenty-One

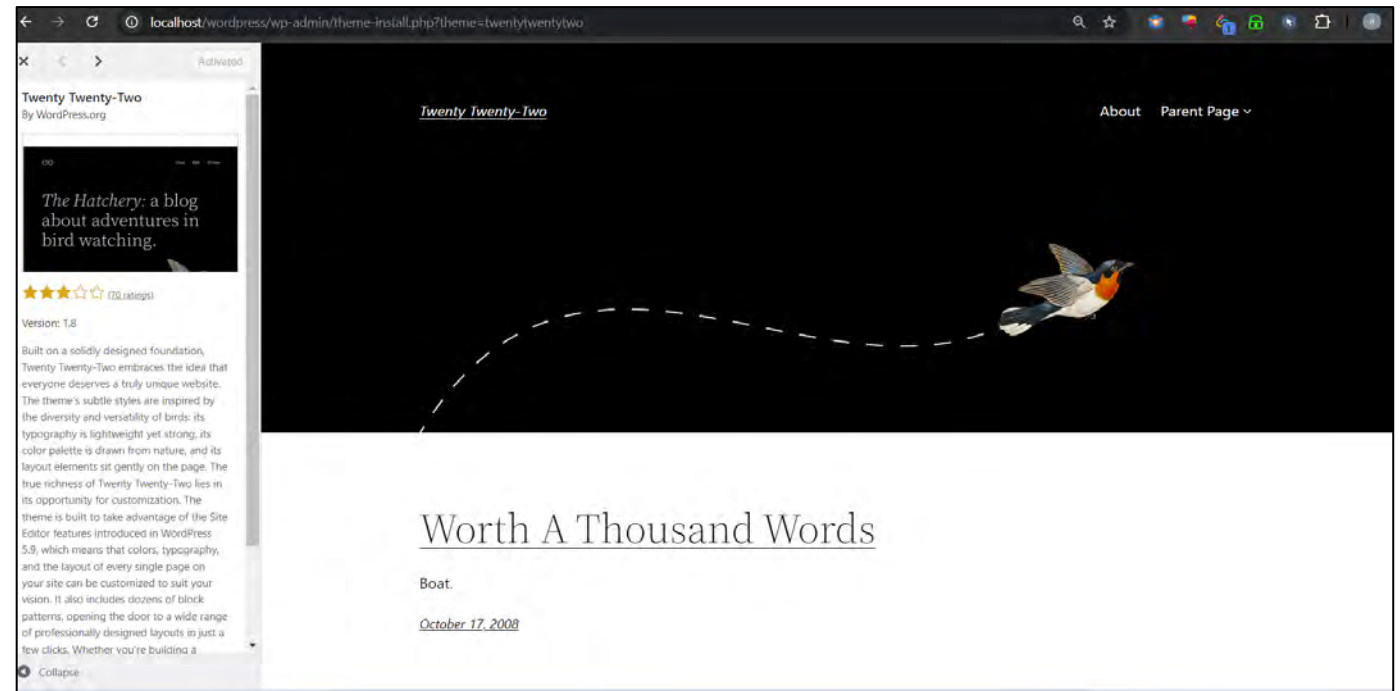
- ✓ Minimalist Design
- ✓ Block Editor Support
- ✓ Pre-designed Block Patterns
- ✓ Accessibility Features



Default WordPress Themes [2-2]

Twenty Twenty-Two

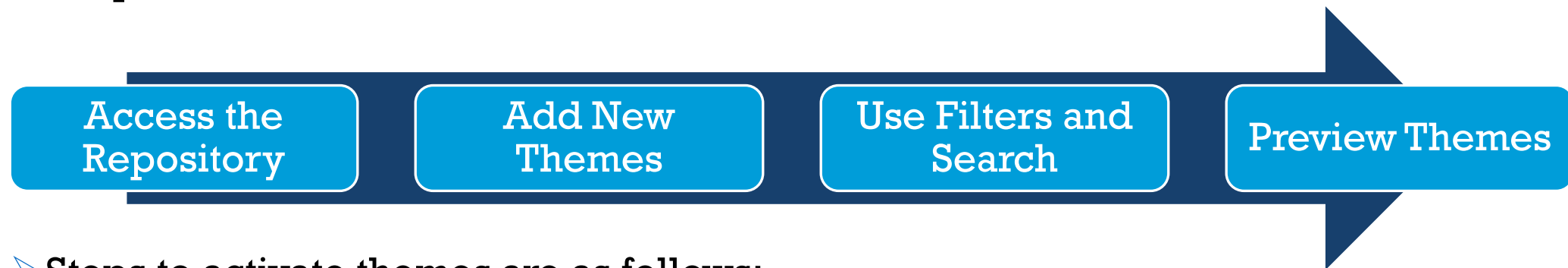
- ✓ FSE
- ✓ Customization Flexibility
- ✓ Performance Optimization
- ✓ Theme Variations and Styles
- ✓ Using Template Parts



Installing and Activating Themes [1-2]

Using Theme Repository

- Steps to browse themes are as follows:



- Steps to activate themes are as follows:



Installing and Activating Themes [2-2]

Uploading Custom Themes

Navigate to the Upload Section

Upload the Theme

Choose the File

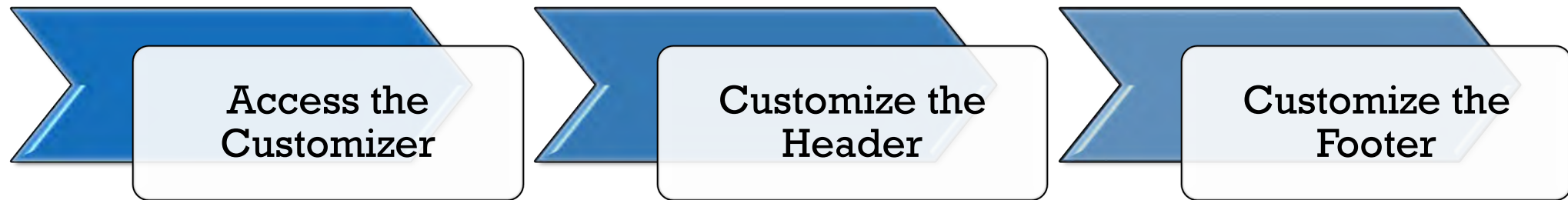
Install the Theme

Activate the Theme

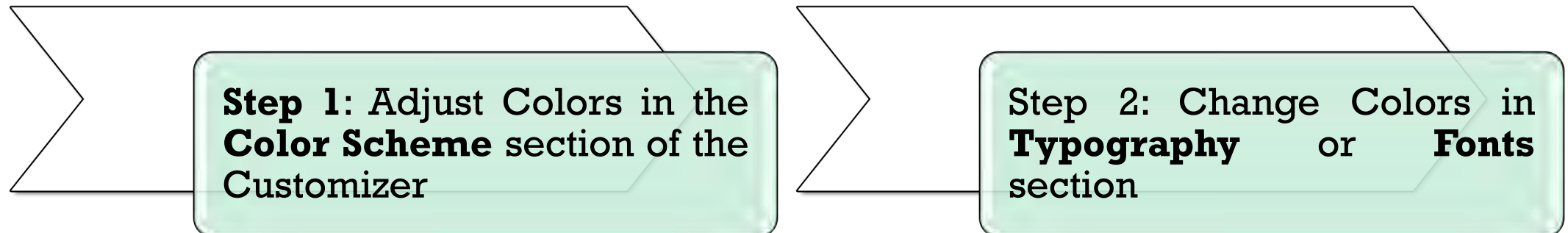
Customizing Themes [1-2]

Using the WordPress Customizer

- Steps to customize header and footer are as follows:

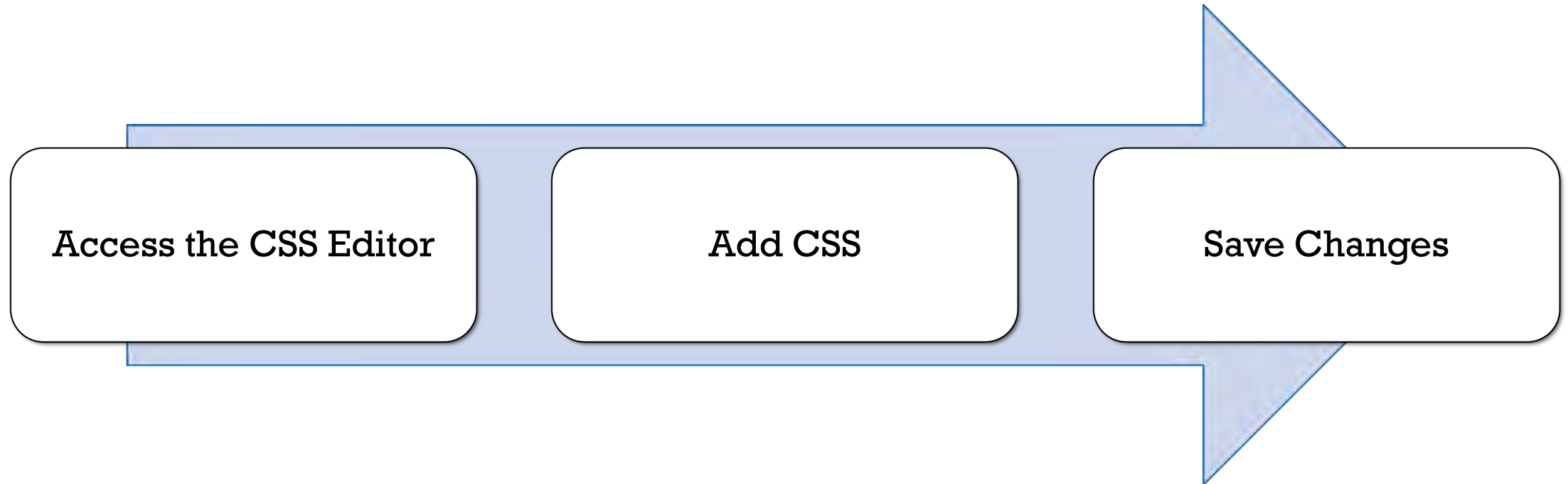


- Steps to customize color schemes and fonts as follows:



Customizing Themes [2-2]

Using Custom CSS



Summary [1-2]

- WordPress themes determine a Website's aesthetic appeal, layout, and user experience, providing a framework for design elements and content display.
- Themes offer both aesthetic design control (color schemes, typography, and graphics) and layout control (arrangement of headers, footers, sidebars, and content areas).
- Default themes such as Twenty Twenty-One and Twenty Twenty-Two showcase the latest features, with Twenty Twenty-Two fully embracing block-based FSE.
- Themes can be installed from the WordPress Theme Repository or by uploading custom themes, with the repository offering thousands of free and reviewed options.

Summary [2-2]

- The WordPress Customizer allows real-time preview of theme modifications, including header/footer customization, color schemes, and font adjustments.
- Custom CSS can be used for more precise or advanced design changes beyond the options available in the Customizer.
- Advanced CSS customization techniques include targeting specific elements with selectors, using media queries for responsive design, and implementing custom stylesheets.
- Best practices for theme customization include backing up the Website before making changes and keeping Themes and Plugins Updated.



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Session 4: Working with Plugins and Widgets

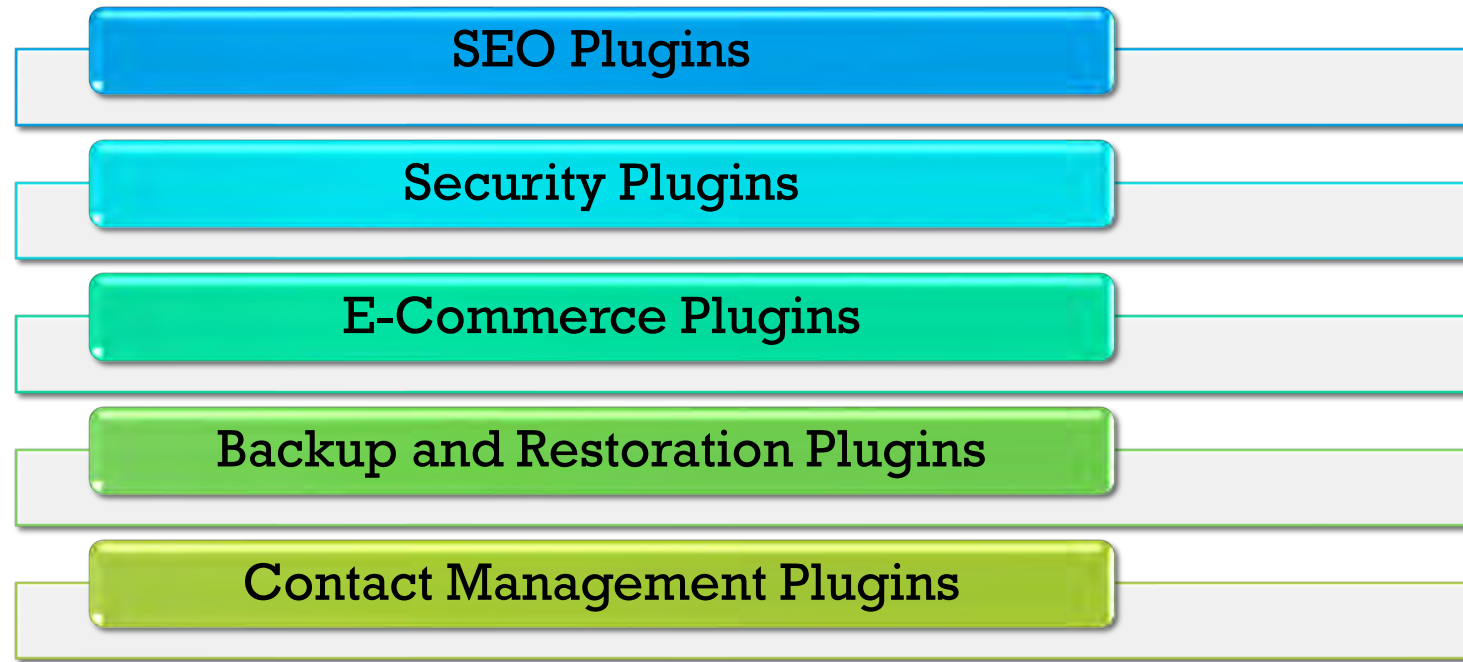
Objectives

- Identify common types of WordPress plugins
- Describe the process to install and manage plugins
- Illustrate methods to upload and activate custom plugins
- List and explain the types of widgets
- Outline the steps to add and configure widgets



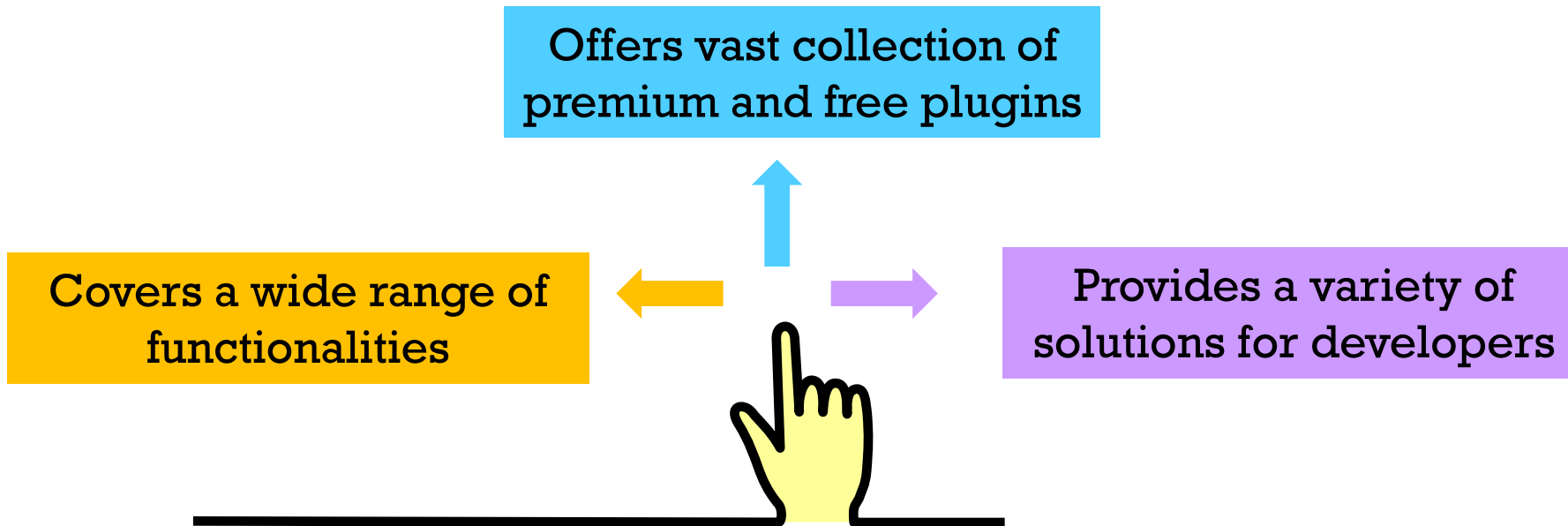
Introduction to Plugins

- Plugins add specific features or functions to a WordPress Website.
- Various types of plugins include:



Installing and Managing Plugins

- Managing WordPress plugins is key to enhancing Website functionality.
- Plugin Repository, an online directory:



Uploading Custom Plugins

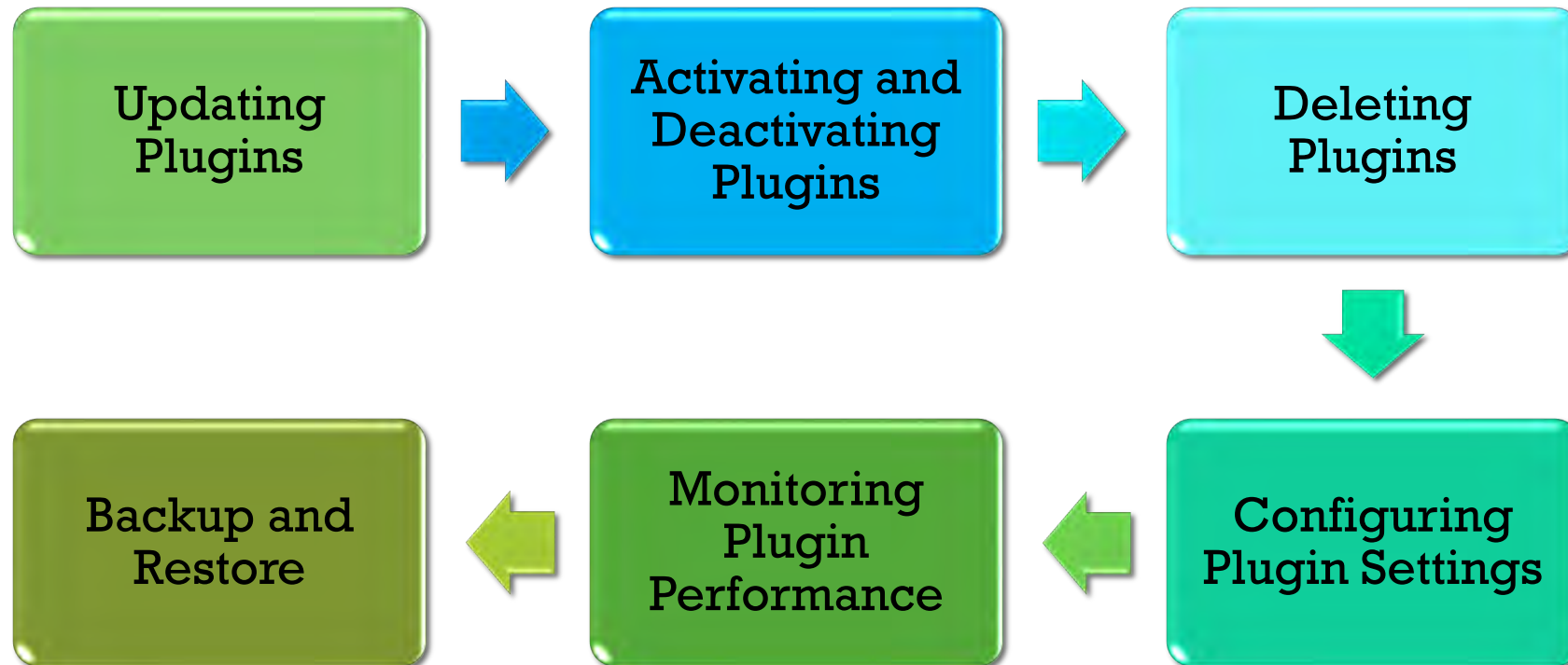
Custom Plugins

Adds special functionalities

Enables personalized features

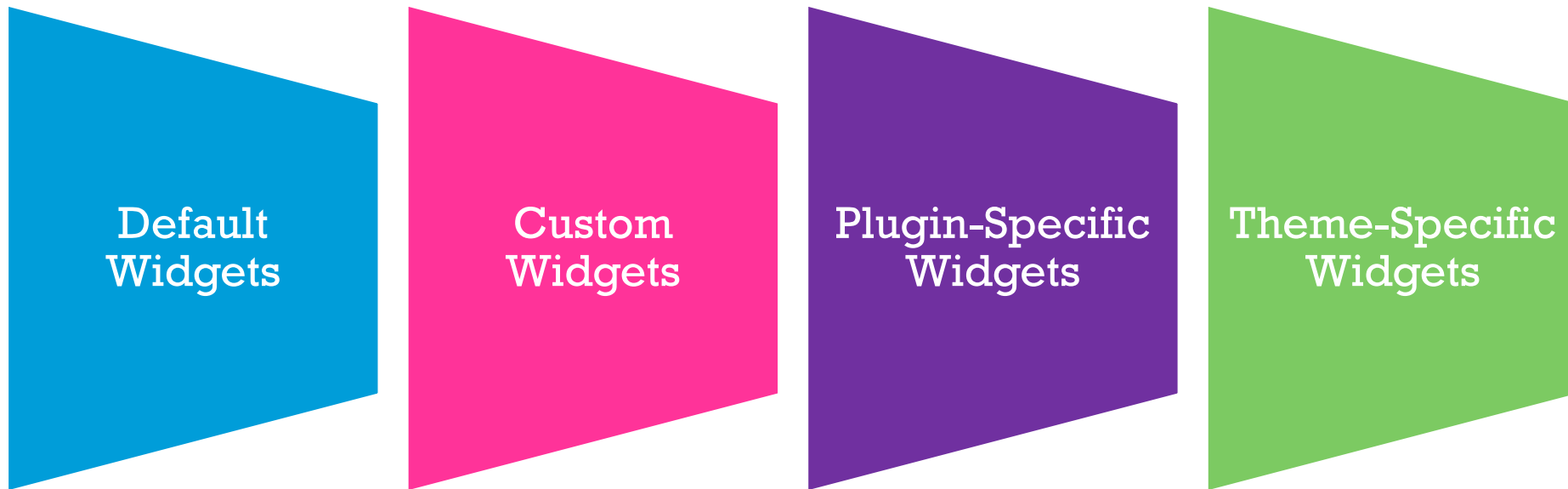
Managing Plugins

- Key steps for managing plugins are as follows:



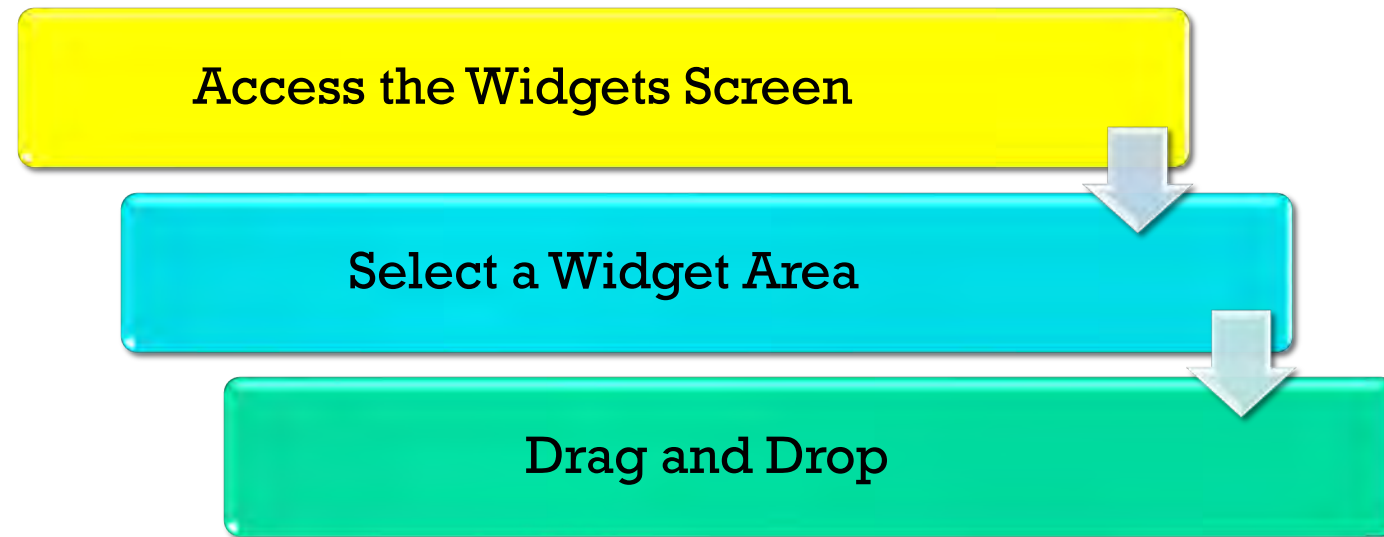
Comprehending Widgets

- Widgets in WordPress enable adding content or features to sidebars, footers, and headers.
- Various types of widgets include:



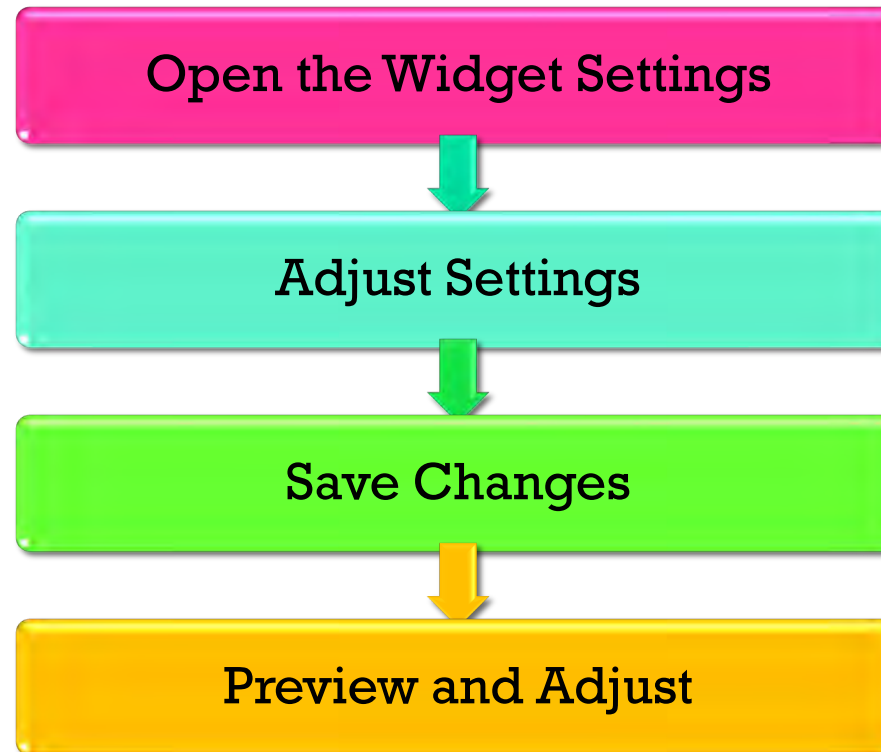
Adding and Configuring Widgets [1-2]

- Steps for adding widgets are as follows:



Adding and Configuring Widgets [2-2]

- Steps for configuring widgets are as follows:



Summary [1-2]

- Plugins add specific features to a WordPress Website, enhancing its capabilities without the requirement for custom coding. They can address various requirements, such as SEO, security, and e-commerce.
- The WordPress Plugin Repository offers a large collection of both free and premium plugins for various functionalities such as SEO, security, and e-commerce.
- Custom plugins can provide specialized features not available in the official repository.
- Widgets in WordPress are flexible components used to add content and features to widget-ready areas such as sidebars and footers, enhancing Website functionality without coding knowledge.

Summary [2-2]

- Widgets are broadly classified as default and custom widgets based on configuration. Custom widgets offer advanced functionalities that can be configured for specific requirements.
- Adding and configuring widgets involves using the Widgets Screen or Customizer, where widgets can be dragged to areas, adjusted for settings, and previewed prior to publishing.



Build and Manage Websites with CMS

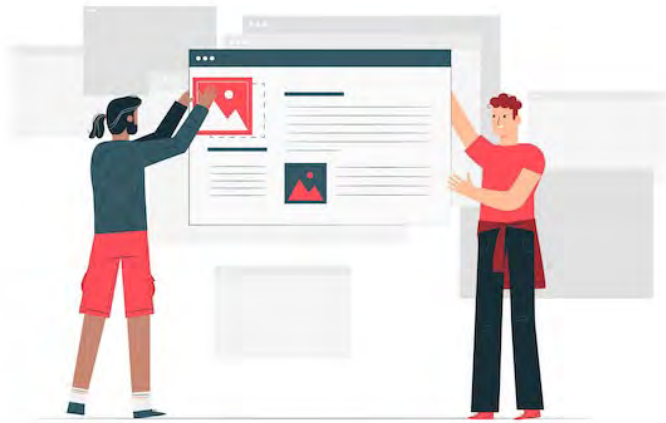
Session 5: Creating and Managing Content

Objectives

- Compare WordPress posts and pages
- Describe the process of creating and managing posts and pages effectively
- Summarize creating and managing media galleries
- Illustrate methods to embed YouTube videos in WordPress
- Explain the process of implementing contact forms using popular plugins
- Outline the steps to use custom page templates



Introduction to Posts and Pages



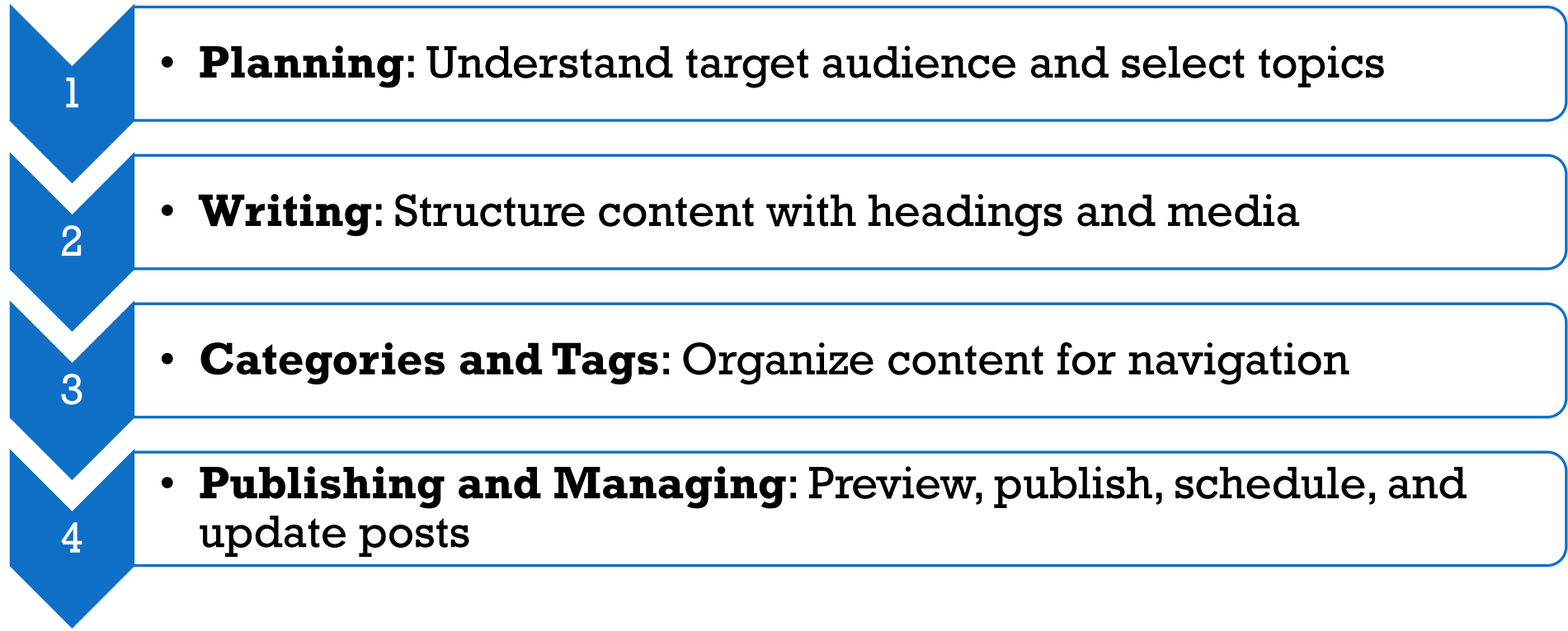
Posts
Dynamic content for blogs and updates

Pages
Stable content for About or Contact pages



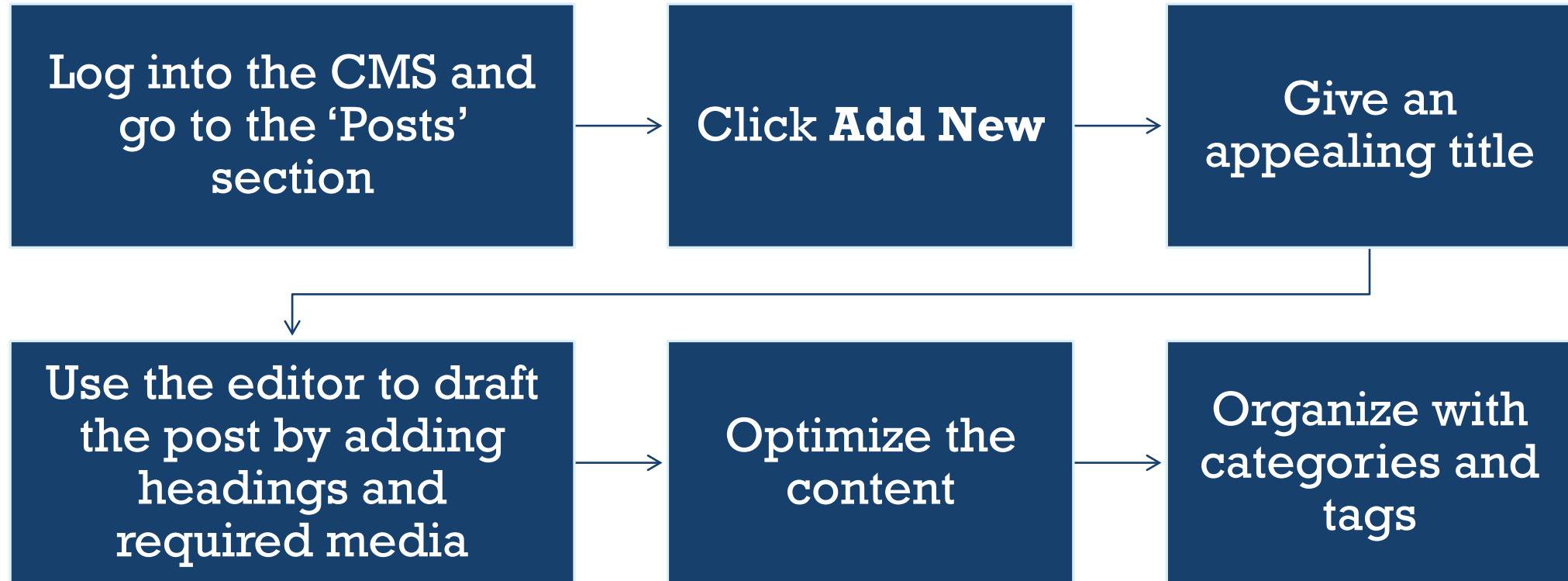
Creating and Managing Posts

- Creating and managing posts involves following steps:



Creating a Post in CMS

- Creating a post in CMS involves following steps:



Creating and Managing Pages

- Creating and managing pages involves following steps:

1. Planning: Define purpose and content



2. Page Hierarchy: Organize content with parent-child relationships



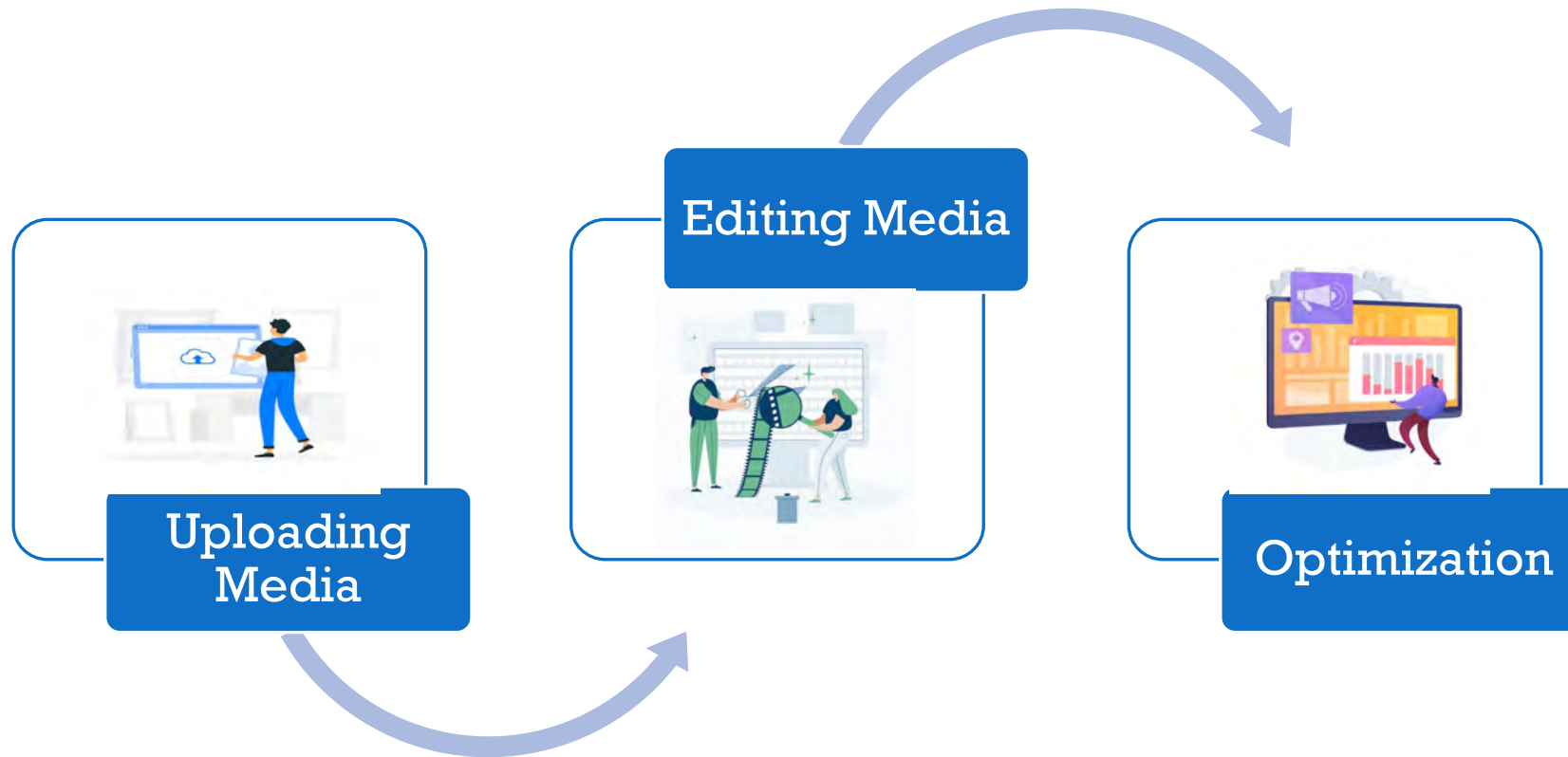
3. Creating a Page: Add title, content, SEO, and hierarchy



4. Publishing and Managing: Preview, publish, update, and add to menus

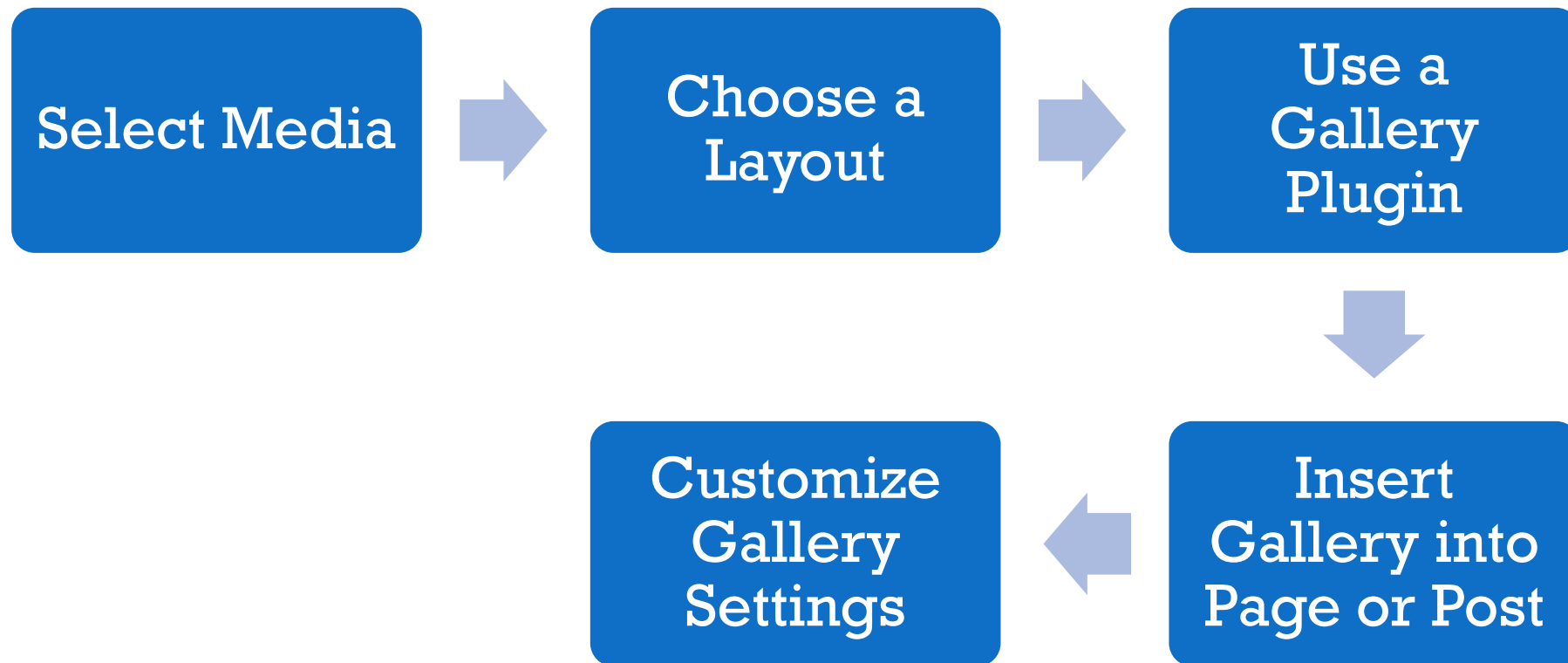
Working with Media

- Handling media on a Website involves following steps:

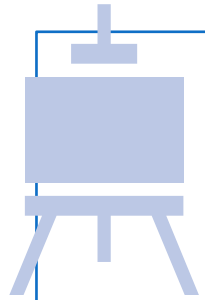


Creating and Managing Media Galleries

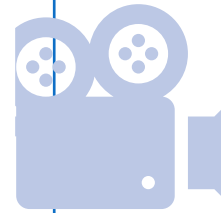
- Creating media galleries involves following steps:



Embedding Media in Posts and Pages



Insert images from the media library.



Embed videos from YouTube or Vimeo.



Include audio files from the media library.

Block Editor

- A Block Editor is characterized by following features:

Block-Based Structure

Rearrange
and
customize
blocks

Block Variety

Use
different
block
types for
content

Reusable Blocks

Save time
by
creating
reusable
blocks

Customization Options

Adjust
style,
alignment,
color, and
more

Visual Editing Highlights

Preview
the
content in
detail

Embedding YouTube Videos

- Integrating YouTube videos into a Website enhances user engagement and deliver content in a more dynamic way.

Methods for embedding YouTube videos in WordPress

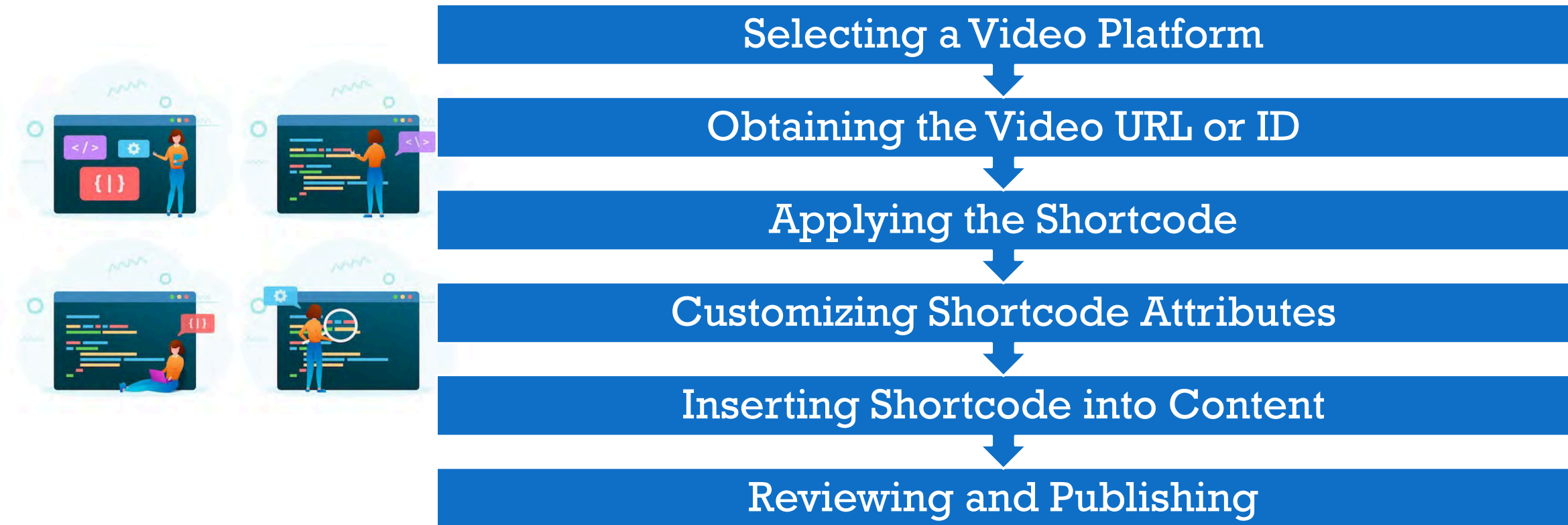
Direct embedding

Using the YouTube block in various Block Editors

Shortcodes

Embedding with Shortcodes

- Embedding videos with shortcodes involve following steps:



Designing Forms and Templates

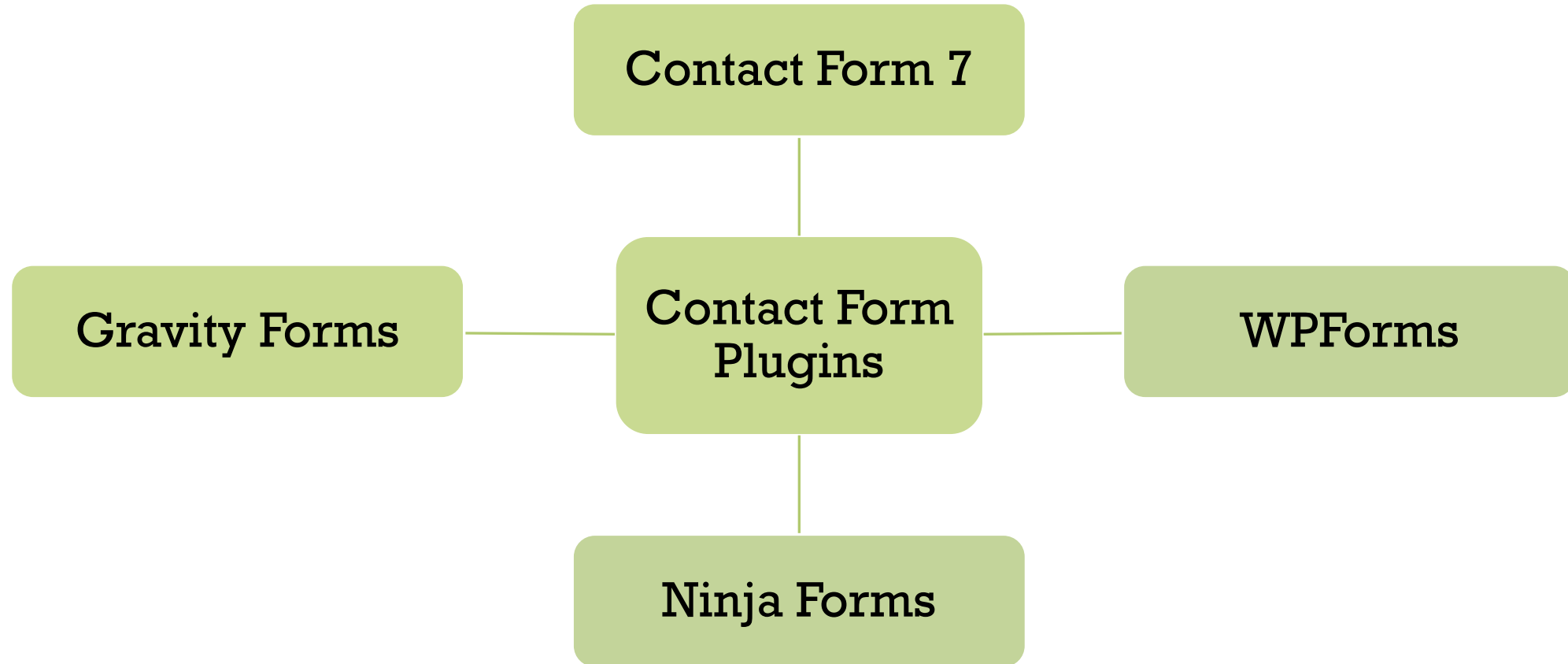
Forms

- Prioritize user-friendly design with minimal fields and clear labels.
- Ensure forms are responsive for different devices.
- Implement real-time validation and secure data with CAPTCHA and validation checks.

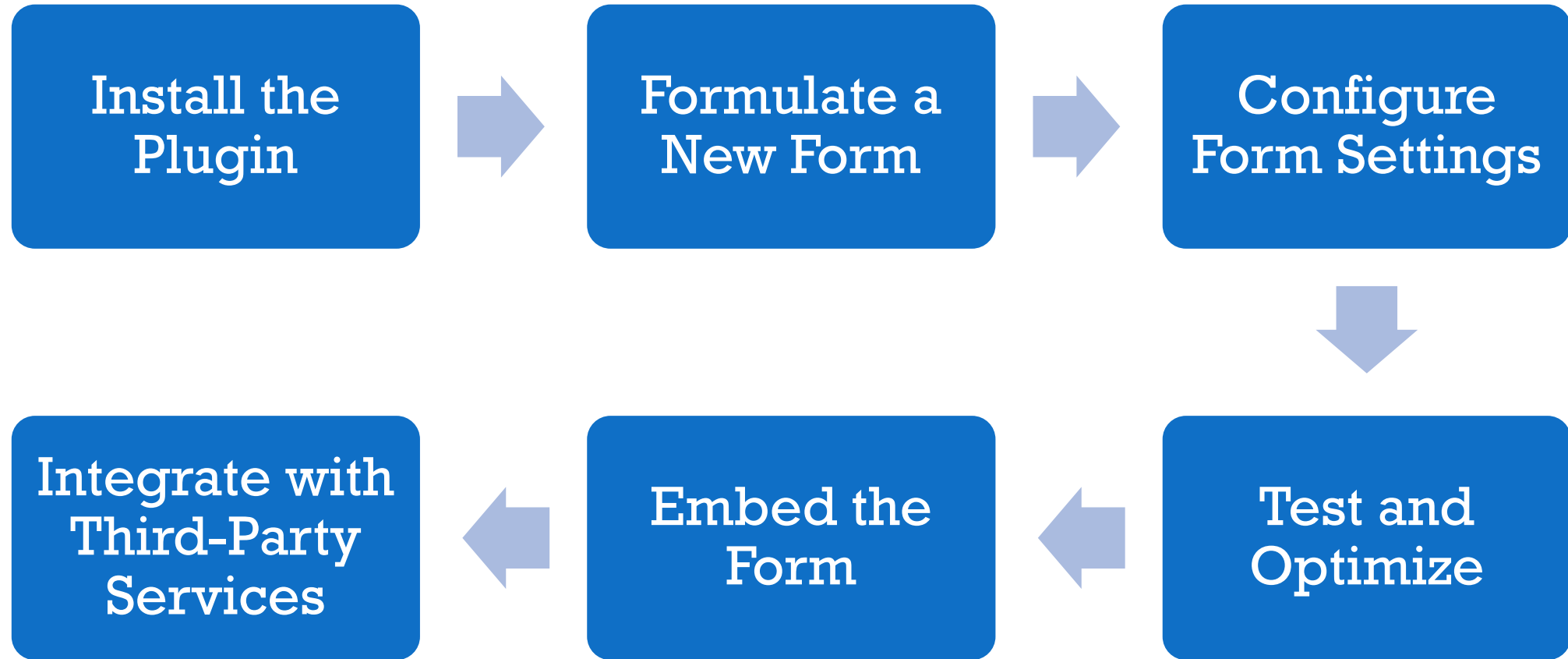
Templates

- Ensure consistency in layout and design across the Website.
- Use modular templates with reusable components.
- Allow customization while maintaining overall uniformity.

Contact Form Plugins



Setting up a Form



Custom Page Templates

- Customizing page templates involves steps as follows:

Creating a Custom Template

Applying Templates to Pages

Assigning a Template

Testing and Validation

Optimization

Summary

- Posts are frequently updated and categorized for blog content, whereas pages are static and serve as permanent content with a hierarchical structure.
- Posts and pages are created and managed through the WordPress dashboard, allowing for drafting, categorizing, tagging, and organizing content, including hierarchical options for pages.
- Media galleries are handled through the Block Editor, allowing users to add video blocks and adjust settings for optimal display and playback.
- The Block Editor allows for embedding YouTube videos by adding a YouTube block, or alternatively, using shortcodes for direct video integration into posts and pages.
- Contact forms are set up using plugins that offer customizable fields and integration options, simplifying form creation and management.
- Custom page templates are utilized by creating specific template files within a theme and applying them to pages through the WordPress dashboard for tailored design.



Build and Manage Websites with CMS

Session 6: Optimizing and Enhancing WordPress Website

Objectives

- Describe the basics of SEO
- Explain the installation and configuration of popular SEO plugins
- Describe caching and its benefits for WordPress Websites
- Identify caching plugins to optimize WordPress performance
- List and explain methods to implement mobile responsiveness in WordPress themes



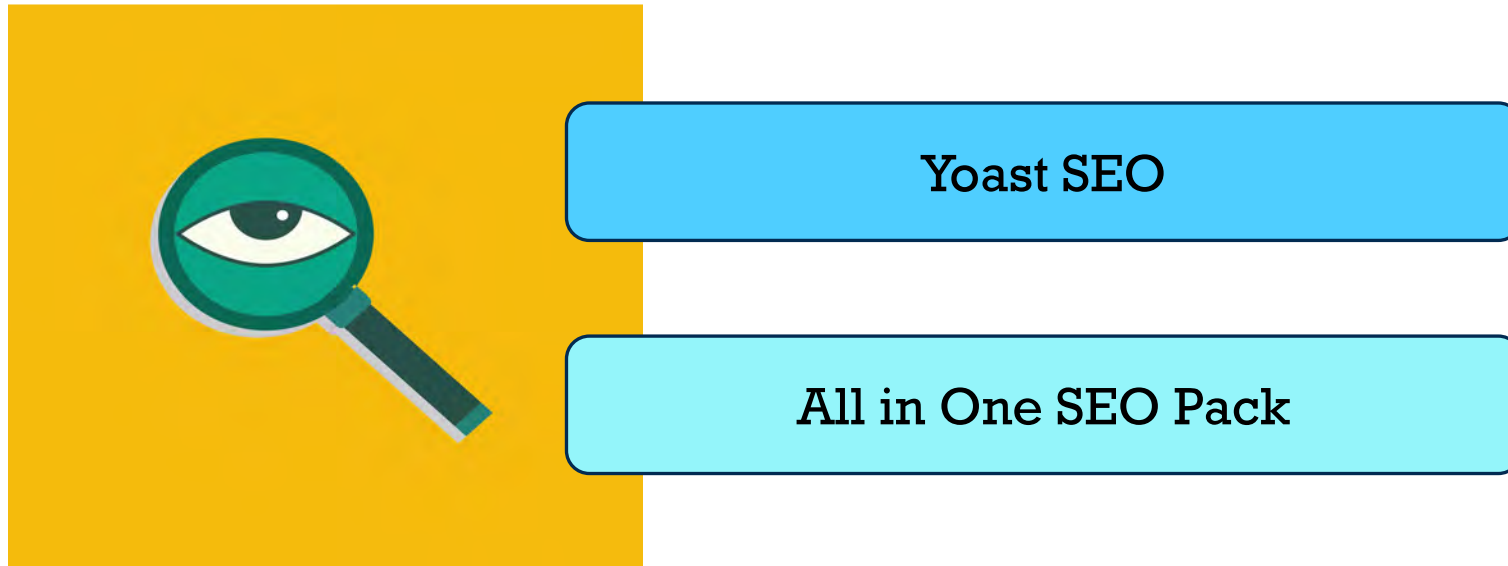
SEO

- SEO boosts a Website's search engine ranking by optimizing various factors.
- Key factors of SEO include:



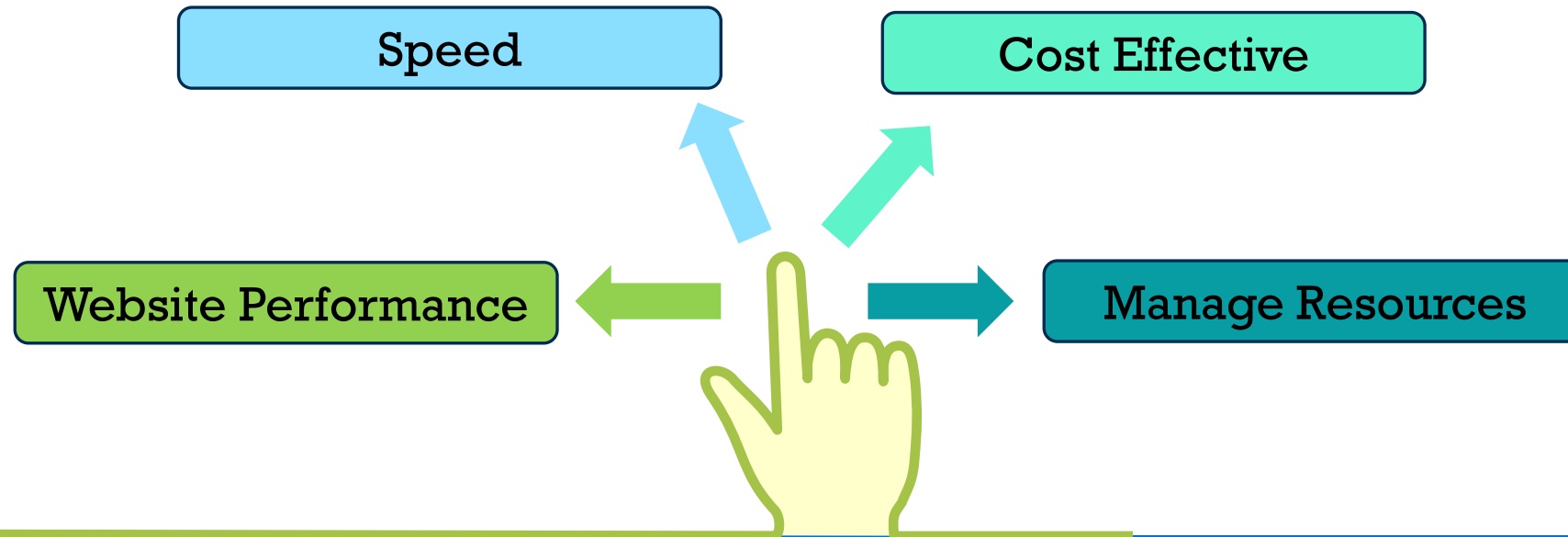
Installing and Configuring SEO Plugins

- SEO plugins are vital for optimizing WordPress Websites for search engines.
- Two of the most popular plugins are as follows:



Caching

- Caching stores copies of frequently accessed data to improve Website performance and reduce load times.
- Benefits of caching are as follows:



Caching Plugins

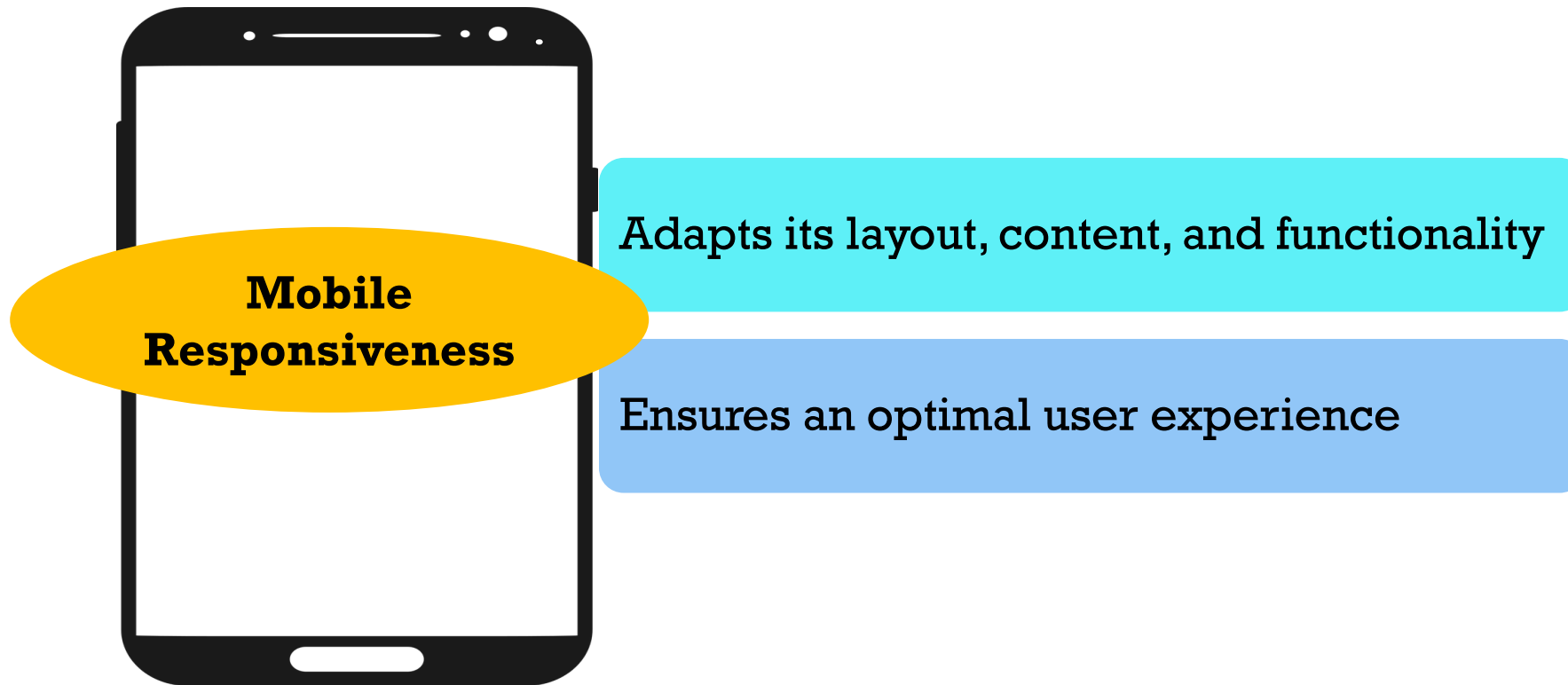
- Caching plugins significantly boost the performance of WordPress Websites.
- Popular caching plugins are as follows:



WP Super Cache

WP Total Cache

Mobile Responsiveness



Responsive Themes

Adapts its layout and content to fit the screen size and orientation of the device

Ensures that the Website looks and works perfectly on all devices without separate design

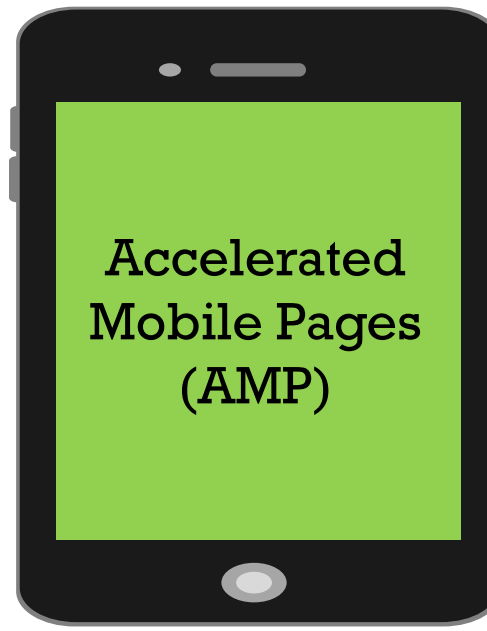
Ensures that the Website is readable and accessible on any device

Responsive Themes



Plugins for Mobile Optimization

- Mobile optimization plugins boost the performance, usability, and appearance of WordPress Websites on mobile devices.
- Popular mobile optimization plugins are as follows:



Summary [1-2]

- SEO is a way of enhancing a Website's ranking and visibility on SERPs to generate more organic traffic.
- Caching is a way to store frequently accessed data temporarily to improve retrieval speed and reduce load times.
- Mobile responsiveness is the design approach that ensures a Website displays and functions optimally across various screen devices and sizes.
- SEO plugins are tools that enhance a Website's search engine optimization by offering features such as keyword analysis, meta tags management, and sitemaps creation.
- Cache plugins improve Website performance by storing and serving static versions of Web pages to reduce server load and speed up page loading times.

Summary [2-2]

- A responsive theme automatically adjusts a Website's content and layout to fit various devices and screen sizes for optimal viewing.
- A mobile optimization plugin enhances a Website's performance and user experience on mobile devices through features such as responsive design adjustments and speed improvements.



Build and Manage Websites with CMS

Session 7: Analytics and Performance

Objectives

- Explain the steps to set up Google Analytics for a WordPress Website
- Describe the process of integrating Google Analytics tracking code into WordPress
- Identify and explain WordPress Website performance metrics using speed testing tools
- Summarize the best practices to optimize WordPress Website performance
- List and describe the essential security measures and plugins for WordPress



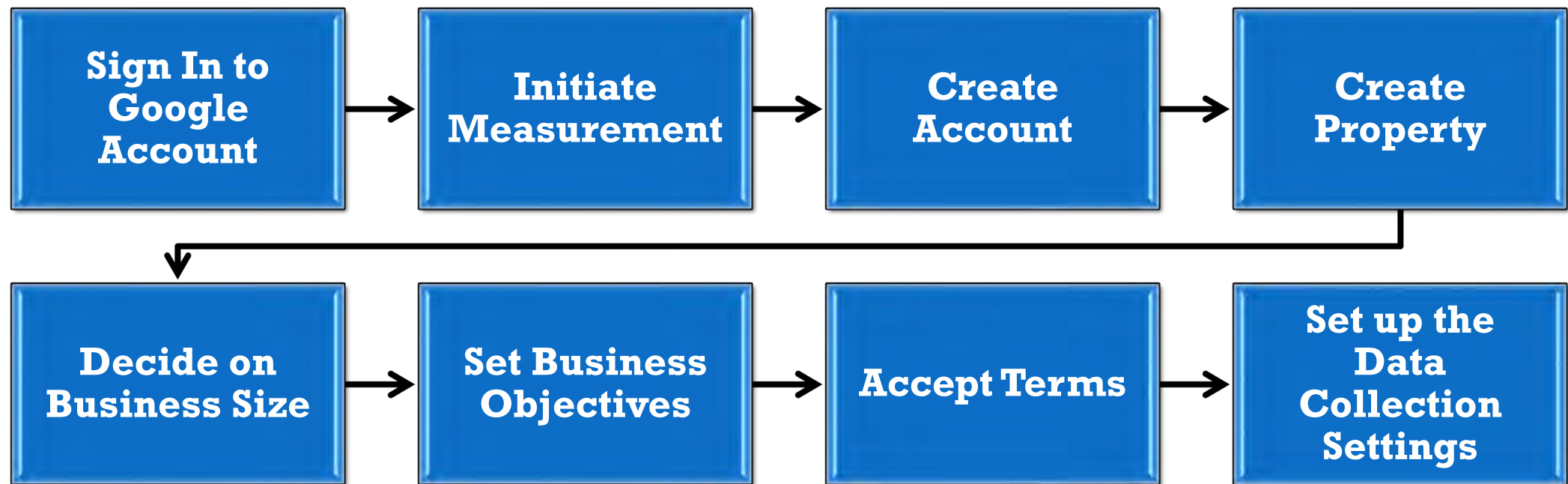
Google Analytics Integration



Google Analytics is a powerful and popular tool that tracks and reports Website traffic, user activities, and overall Website performance. Integrating Google Analytics with a WordPress Website is crucial for getting a full view of user interactions.

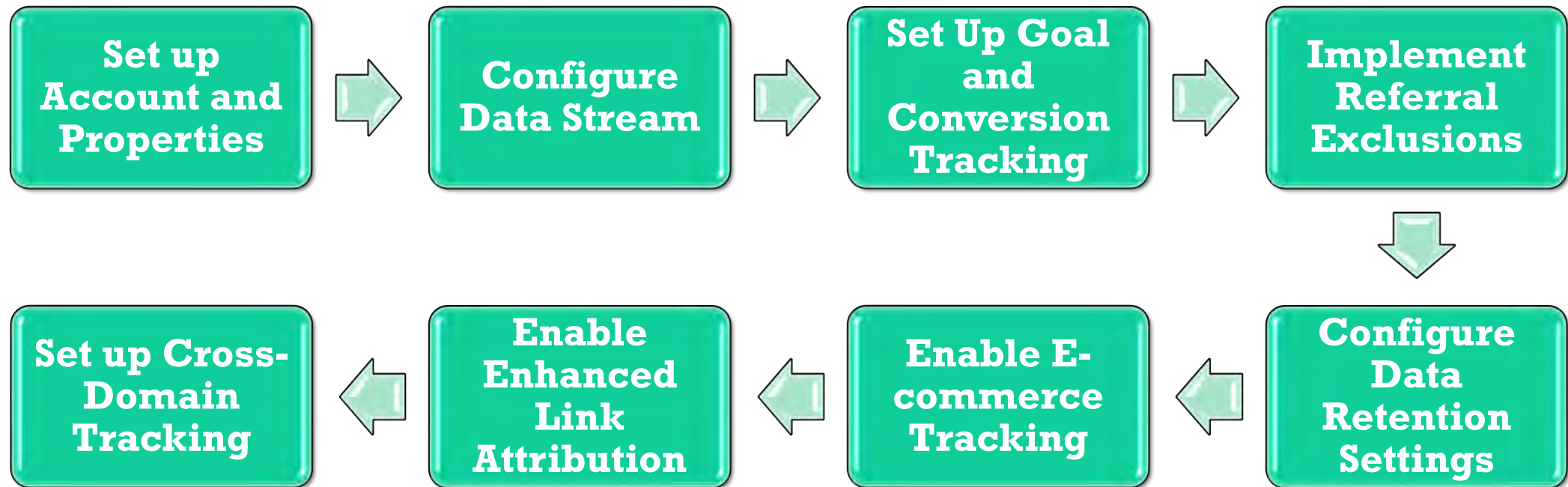
Setting Up Google Analytics [1-2]

Creating a Google Analytics Account



Setting Up Google Analytics [2-2]

Configuring Analytics Settings



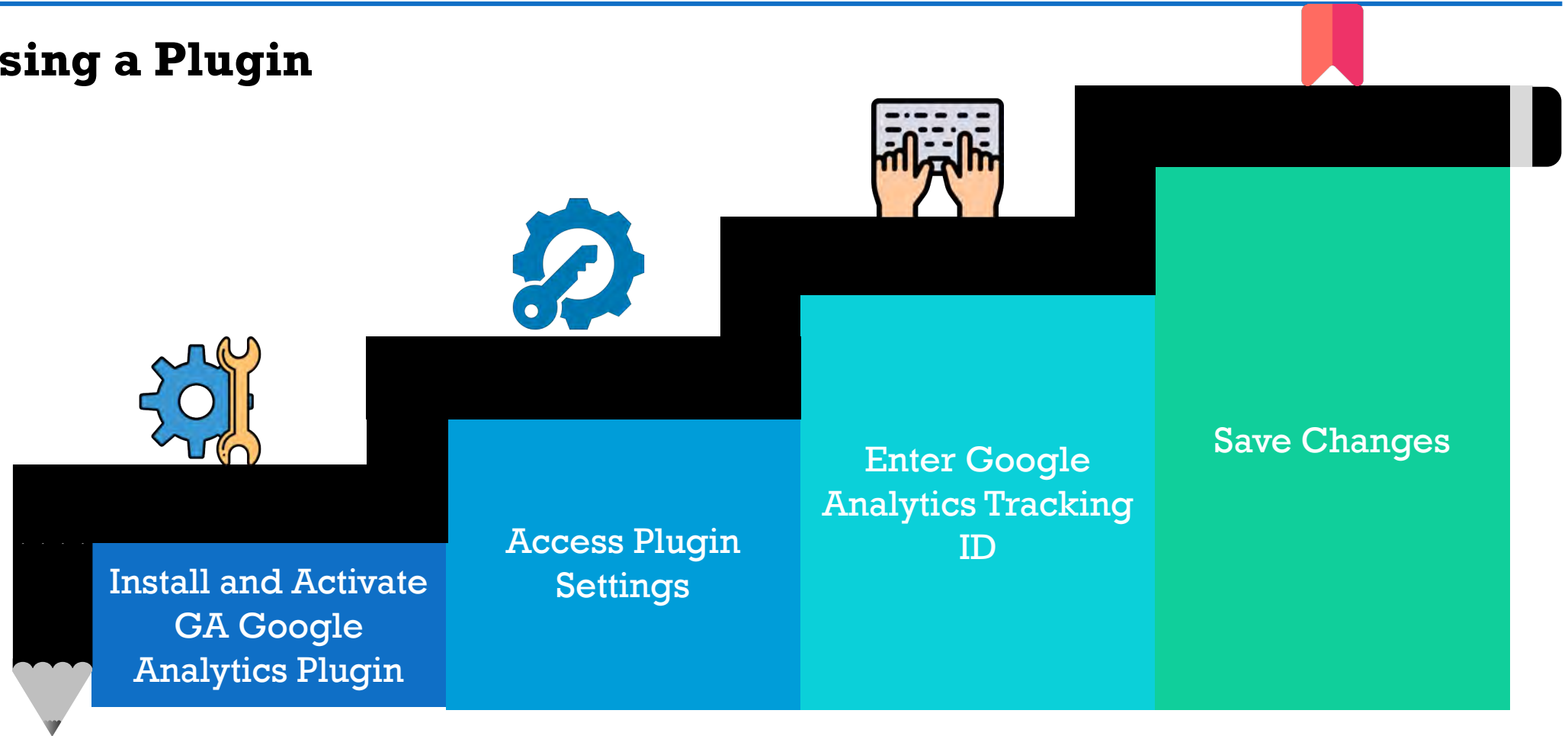
Adding Tracking Code to WordPress [1-2]

Manual Integration



Adding Tracking Code to WordPress [2-2]

Using a Plugin



Performance Optimization [1-2]

Speed Testing Tools



**Google
PageSpeed
Insights**



GTmetrix

Performance Optimization [2-2]

Best Practices for Performance

Minimizing HTTP Requests

Techniques to minimize HTTP requests are as follows:

Combine and Minify Files

Utilize CSS Sprites

Load Scripts Strategically

Optimizing Images

Steps to maximize images are as follows:

Resize for Display

Compress Images

Leverage Modern Formats

Implement Lazy Loading

Security Measures [1-3]

Importance of Security

- Website security is crucial and the key reasons are as follows:



**Safeguarding
Private Data**



**Building and Maintaining
User Confidence**



**Avoiding
Operational
Disruptions**

Security Measures [2-3]

Common Security Threats



Security Measures [3-3]

Essential Security Plugins

Wordfence Security

Sucuri Security

iThemes Security

All In One WP Security and Firewall

WPScan



Summary

- Google Analytics offers necessary tools to monitor and examine Website visitor behavior, giving insights into the tastes and activities of the audience.
- Website owners can obtain data for content optimization, user experience improvement, and performance enhancement by integrating Google Analytics and utilizing tools such as GTmetrix and Google PageSpeed Insights.
- Website speed can be improved by optimizing images and reducing HTTP requests, which are essential for enhancing user satisfaction and engagement.
- Website security should be prioritized for three key reasons: safeguarding user data, upholding confidence, and avoiding disruptions.
- Common threats include malware injection, SQL injection, XSS, and DoS attacks.
- It is essential to update Website software regularly to take advantage of new security features and patch vulnerabilities in themes, plugins, and core files.
- Security is enhanced by installing and setting up security plugins, adding an extra layer of defense to protect Websites against various attacks.



Build and Manage Websites with CMS

Session 8: Advanced Customization and Artificial Intelligence (AI) Tools

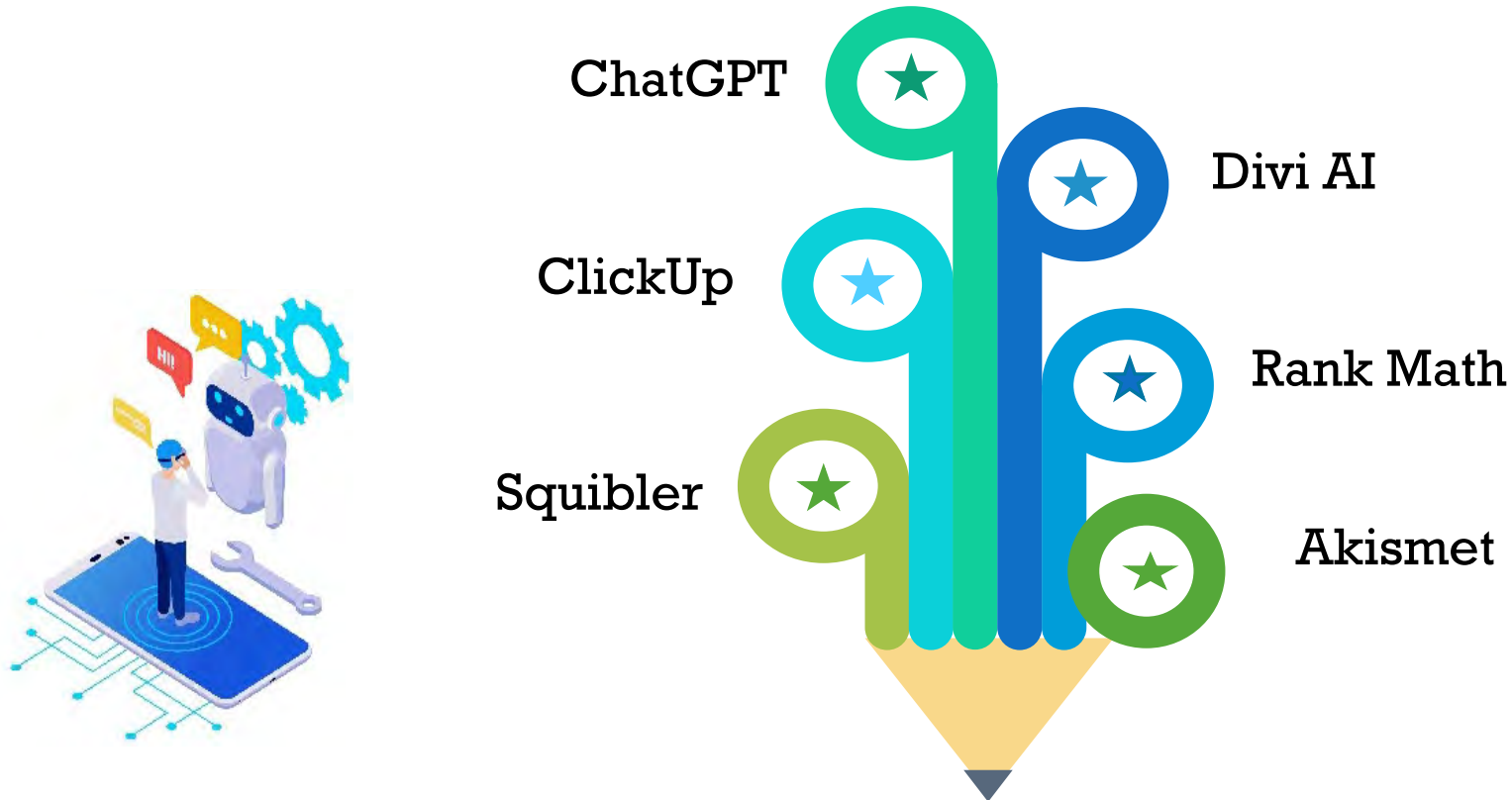
Objectives

- Describe the process of integrating AI tools and Chatbots into WordPress Websites
- Explain the process of creating and managing custom post types and taxonomies
- Define the regular update strategy for WordPress
- List and explain backup solutions to protect WordPress Websites
- Identify the common WordPress issues and resolve using debugging tools



Using AI Tools in WordPress [1-2]

- Some widely used AI tools include:



Using AI Tools in WordPress [2-2]

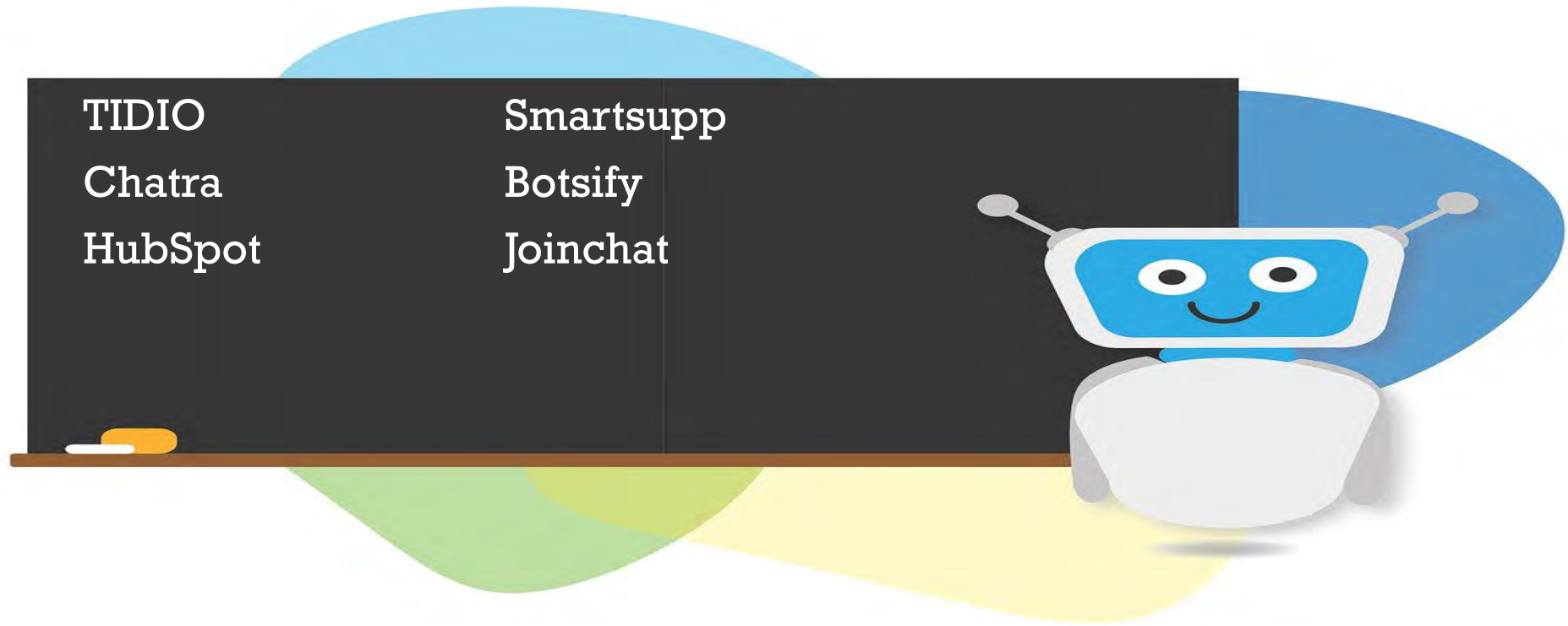
➤ Steps for integrating an AI tool into WordPress include:

- 1 • Search Appropriate AI Plugin in the WordPress Repository
- 2 • Install and Activate the AI Plugin
- 3 • Train and Customize the AI Model
- 4 • Analyze and Monitor the AI Performance



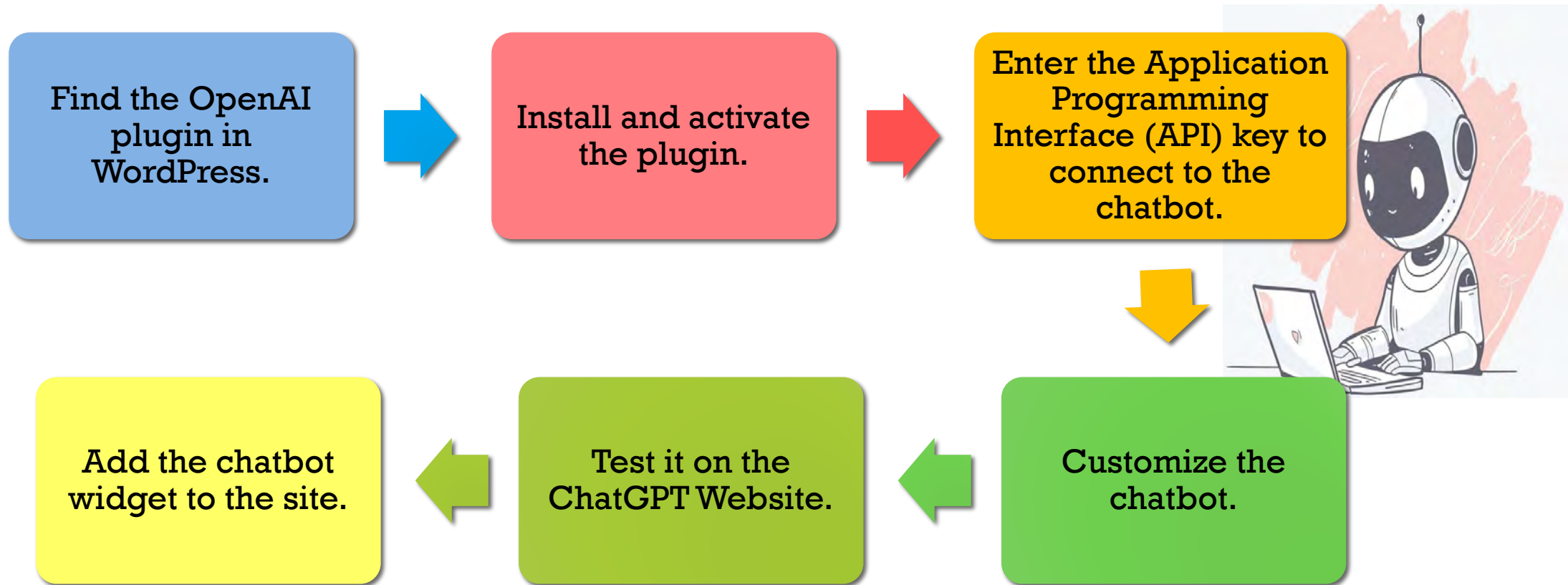
Chatbots and Virtual Assistants [1-2]

- Some free and paid chatbot plugins include:



Chatbots and Virtual Assistants [2-2]

- Steps to integrate a chatbot on WordPress are as follows:



Advanced Customization [1-3]

- Methods for creating custom post types in WordPress include:

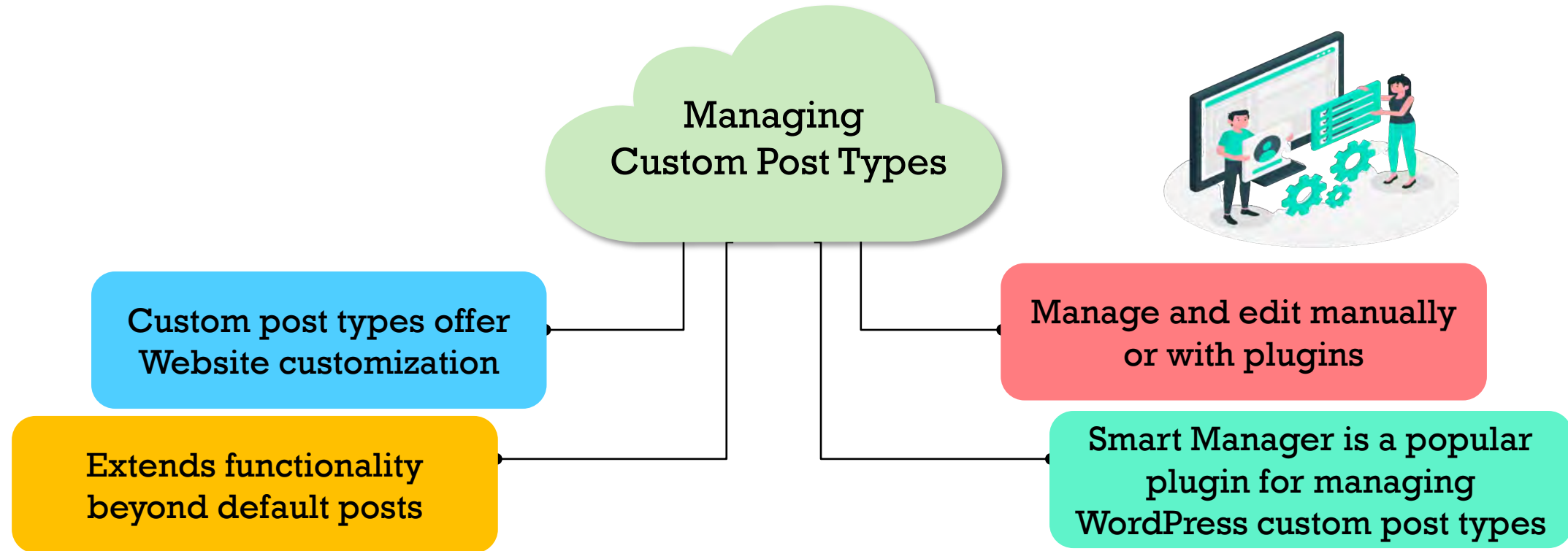


Employing a Normal Plugin

Altering `functions.php` File

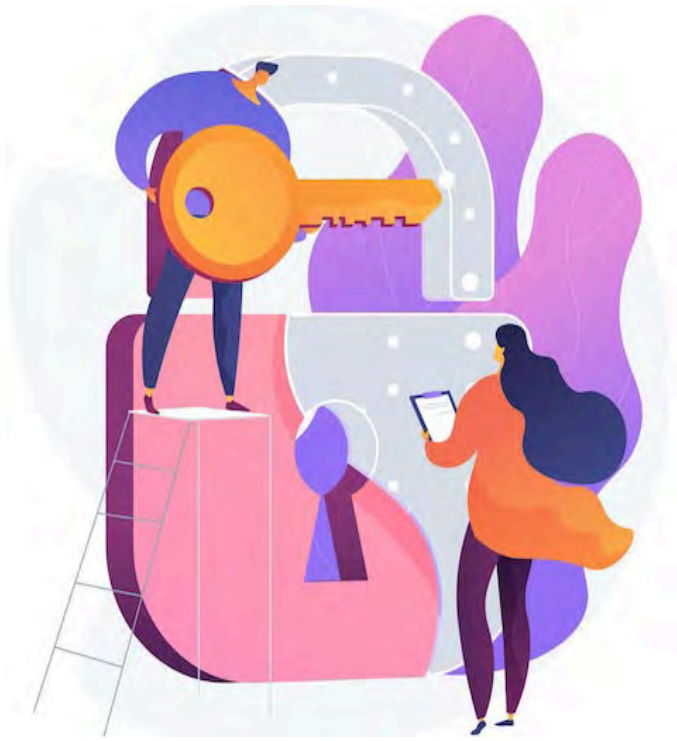
Creating a Plugin

Advanced Customization [2-3]



Advanced Customization [3-3]

- Key aspects of custom taxonomies are:



Managing and Maintaining WordPress

- Common ways to implement updates in WordPress Websites are:

Automatic Updates

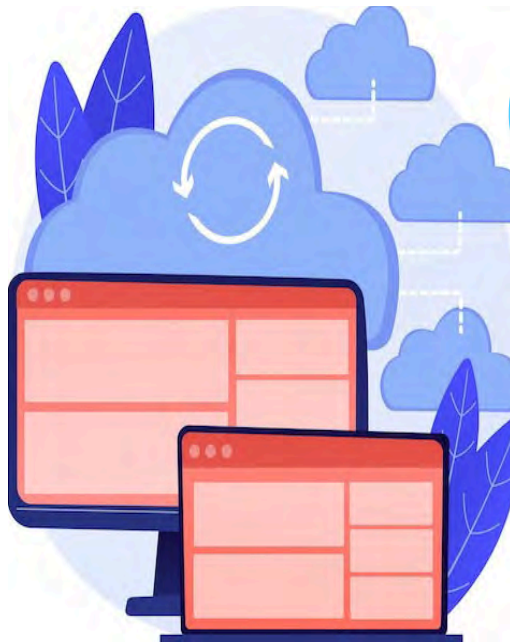
Manual Updates

Compatibility



Backup Solutions

- Conventions for WordPress Backups are:



Regular Backups

Remote Storage

Test Restores

**Multiple Backup
Solutions**

Troubleshooting Common Issues

- Some popular WordPress debugging tools include:

Query Monitor

Debug Bar

Log Deprecated
Notices

Error Log
Monitor

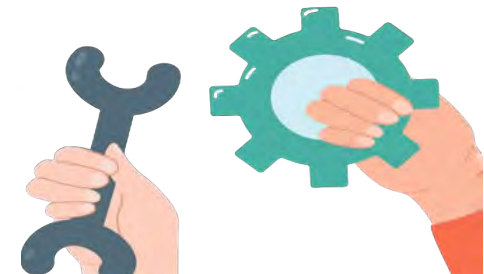
WP Debugging

Health Check
and
Troubleshooting

Developer Tools
in Browsers

WP-CLI

New Relic



Summary [1-2]

- AI tools add special capability to automate tasks, enhance content creation, and improve user engagement in WordPress.
- WordPress AI content generators, Chatbots, and Virtual Assistants enhance a Website's functionality and user experience.
- WordPress offers numerous customization options for custom post types.
- WordPress custom taxonomies offer greater classification and flexibility to organize content in a logical and well-structured manner.
- WordPress regular update releases keep the Website's software, plugins, and themes up-to-date.

Summary [2-2]

- WordPress backup solution helps users to restore a Website in case of any error or cyberattack.
- WordPress errors come in all different shapes and sizes. Many debugging tools are available to troubleshoot and fix errors.