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With deep industry experience of 17+ years and technological expertise across all major business functions, Indus Net Technologies helps corporations and Governments across the globe embrace the "Nexus of Forces" - Cloud/Web based custom application development, Mobility and Digital Marketing Services.

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Overview

WordPress is the most popular blogging system in use by more than 60 million websites. This free and open-source blogging tool and content management system (CMS) is based on PHP and MySQL and includes plugin architecture and template system.

This eBook will highlight the WordPress installation process, it's theme integration, basic configuration and how to protect a website developed on this popular CMS.

So far, **WordPress** is the best Content Management System for a website. Did you know that any WordPress Versions can automatically update your website? Yes, you heard it right. This also includes plugins and themes. However, the whole system requires technological advancements for its ease of use, security and reliability.



Designing the WordPress Theme

The design begins with Homepage layout. It gets converted into HTML file through the use of CSS and JavaScript. The design gets further split into basic structures like Header, Body Panel and Footer. The basic designing elements include simple shapes, layer styles, layer masks, patterns, characters, paragraph styles and Photoshop techniques to adapt to your website interface design workflow.



HTML and CSS

HTML is used to build the main structure of the site. It is the main language used to create web pages. CSS allows you to store style presentation information separate from the HTML structure. It provides precision control of your website layout and makes your pages load faster and easier to update.



The Three Pillars of a Website

Content, style and behaviour are supported by HTML, CSS and JavaScript. Text, images, links and buttons are all content that you see on the screen. HTML is responsible for outputting the content to the screen. Style refers to the way the content is designed. Here, HTML is styled by CSS. Lastly, behaviour refers to what a website does as you interact with it. Behaviour is more like page scroll animation, which is managed by JavaScript.



The Checklist Before You Start WordPress Installation

- Access to your web server
- Live server control panel details
- FTP
- Web browser of your choice
- The current version of WordPress
- Unzip the downloaded file on hard drive and paste it into the server



The WordPress Installation Process

Download WordPress

Download and unfasten the WordPress package from

https://wordpress.org/download/. If you want to use a remote web server to upload WordPress, WordPress package should be downloaded to your computer that must have a web browser. If you want to use console-based tools and have **shell** access to your web server, you can use Wget to download the WordPress directly to your web server.

Create a Database

Web server is the perfect place to create a database for WordPress. In addition, create a MySQL user that can access all the stored posts, metadata, comments and information. Whenever a page loads, WordPress enquires about database for all the required information including the title, content, tags, published date or categories. It also runs queries to database to dynamically generate HTML pages for your website. If you want to create a database manually, you can either use **cPanel**, **phpMyAdmin**, MySQL client or Direct Admin.

Control panel is an essential part of web hosting account. You can manage the hosting account through control panel. Even a basic control panel can be helpful for you to get hold on your account.



Set up the wp-config.php

Once you install the WordPress in the server and start giving username of database & password, wp-config.php gets automatically created on the root path of WordPress. You can check that file to confirm the database username, password and host.

You need to create and edit the wp-config.php file either by yourself or let WordPress do this when you run the installation script. You need a FTP client to edit the file wp-config-sample.php to wp-config.php from where you extracted the WordPress package and open it in code editor. You can also load wp-admin/setup-config.php in your web browser to do this directly. Now, you can enter the database information:

DB_NAME: The name of the database you created for WordPress DB_USER: The username of the database you created for WordPress **DB_PASSWORD**: The password you chose for WordPress username DB_HOSTING: The host name you have determined for WordPress DB_CHARSET: The database characters you set, which should not be changed **DB COLLATE:** The database collation should be left blank

Enter the secret key values under the section 'Authentication Unique Keys' and save the wp-config.php file.



Select a Domain

You must have a domain for users to find and share your website. For example http://www.google.com. The http:// and www. are common. There are four important subcategories of domain:

Top-Level Domain

The top-level domain or TLD is the end of the domain. The TLD that you're familiar with is .com.

Root Domain

You have full liberty to choose your root domain; example.com is a root domain.

Sub-Domains

Sub-domain appears before the root domain – sub.example.com.

Sub-Folders

Sub-folders appear after TLD – domain.com/subfolder. Your domain should be unique and must consist of letters, numbers and hyphens. Domains need to be concise, unique, memorable and easy to pronounce & spell.



Select a Host Package

Choosing the right host empowers you. If you choose a wrong host, your website will suffer. For instance, if you choose a hosting package that allows only single domain, it will never work when you plan on having multiple websites.

Factors to Consider Before Choosing the Right Hosting Package

- Does the host support WordPress?
- How many domains can be hosted?
- How much storage and bandwidth is allocated to you?
- How much of the package do you require?
- Are upgrades available if needed?
- Are there any additional costs?

Some of the Best Web Hosting Providers





Upload Files

You can make your WordPress site appear in two main domains -

Root Directory

When you upload your files to your web server, use an FTP client to upload all the content of the WordPress directory into the root directory of your website. When you are using shell access to install WordPress and your files are already there on your web server, move the content of the WordPress directory into the root directory of your website.

Subdirectory

When you have to upload your files to your web server, rename the WordPress directory to your desired name, use an FTP client and upload the directory to a desired location within the directory of your website.

When you have shell access to install WordPress and have your files already on the web server, move the WordPress directory to your desired location within the root directory of your website and rename the directory.

Script Installation

You need a web browser to start the installation script. If you place the WordPress files in the root directory you should visit example.com/wp-admin/install.php. Also if you place the WordPress files in a subdirectory, say for instance in blog, visit example.com/blog/wp-admin/install.php.

WordPress will require the database details to write them in the new wp-config.php file. Once it is done, you can start with the installation process.



The Final Installation

While you start the installation process, you have to enter a few details like site title, username, password and your email address. Do not use 'admin' as your username as it can be easily guessed by hackers. You'll find a checkbox asking whether you would like your blog to appear in search engines. If you would like your blog to be visible to everyone, leave the box checked. You can log into the **admin panel** at '**yourdomain.com/wp-admin**' to modify any of these information.

The WordPress Theme Integration

How to activate the theme -

In the file server root or in publichtml, you can find the WP files.

Firstly, go to **WP-content** > **Theme** and choose default theme (Twenty Thirteen or Twenty Fourteen).

Secondly, copy the latest theme from Theme folder and rename it with your project name.

Finally, move to **WP-admin > Appearance > Theme >** Select your theme which you renamed.



Not necessarily you have to use a free or a purchased theme. If you're an expert developer with skills in HTML and CSS, you can easily create your own WordPress themes to provide a unique experience to your visitors. Theme is nothing but a collection of template files and images that tells the browsers about the look of your pages. Template files are available in this path - WP content > Theme/Sitefolder. You have to go to the back end and click on the Appearance menu. Under this section, go to the option theme and choose your own theme and activate it. It then gets reflected in the front end. Now, to customize the theme, you would need the following:

- style.css
- page.php
- rtl.css
- index.php .
- single.php
- taxonomy.php
- front-page.php
- image.php .
- single-post-type.php .

- comments.php
- attachment.php
- category.php
- author.php
- date.php
- search.php
- archive.php
- 404.php
- tag.php



WordPress Theme Integration Process

Set up the Layout of the Theme

Set up the layout of the theme consisting of a header, footer, the main content area and a sidebar. You need a text editor to do this. Now, type the following code:

```
<title>Our Very Own WordPress Theme</title>
</head>
    <body>
      <div id="wrapper">
          <div id="header">
             header
          </div> <!-- close header -->
      <div id="content">
          <div id="main">
            main
          </div> <!-- close main content area-->
          <div id="sidebar">
             sidebar
          </div> <!-- close sidebar -->
        </div> <!-- close complete content -->
          <div id="footer">
            footer
          </div> <!-- close footer -->
      </div> <!-- close wrapper -->
    </body>
</html>
```



Create the Template Files

Open the text editor and create a new file called index.php and enter the following code.

```
<?php get_header(); ?>
<div id="main">
<div id="content">
<h1>Main Content Area</h1>
<?php if (have_posts()) : while (have_posts()) : the_post(); ?>
<h1><?php the_title(); ?></h1>
<h4>Posted on <?php the_time('F jS, Y') ?></h4>
<?php the_content(__('(more...)')); ?>
<hr>
<?php endwhile; else: ?>
<?php _e('Sorry, we couldn't find the post you are looking for.'); ?>
<?php endif; ?>
</div>
<?php get_sidebar(); ?>
</div>
<div id="delimiter"></div>
<?php get_footer(); ?>
```

You can also modify the template file. You can now create the other files.

The Header File

```
<html>
<head>
<title>My Theme</title>
<link rel="stylesheet" href="<?php bloginfo('stylesheet_url'); ?>">
</head>
<body>
<div id="wrapper">
<div id="header">
<h1>This is the header</h1>
</div>
```



The Footer File



The Sidebar File

```
<div id="sidebar">
<h2 class="sidebartitle"><?php _e('Categories'); ?></h2>
<?php wp_list_cats('sort_column=name&optioncount=1&hierarchical=0'); ?>
<h2 class="sidebartitle"><?php _e('Archives'); ?></h2>
<?php wp_get_archives('type=monthly'); ?>
</div>
```

The sidebar will grab the category and display them. It will also display the Archives monthly.



Create a style.css file

```
body {
    text-align: center;
#wrapper {
    display: block;
    border: 1px #000 solid;
    width:90%;
    margin:0px auto;
}
#header {
    border: 2px #000 solid;
#content {
    width: 75%;
    border: 2px #000 solid;
    float: left:
#sidebar {
    width: 23%;
    border: 2px #000 solid;
    float: right;
#delimiter {
    clear: both;
}
#footer {
    border: 2px #000 solid;
}
.title {
    font-size: 11pt;
    font-family: arial;
    font-weight: bold;
```

You're ready to upload everything to your WordPress site and activate the theme.

However, a perfect theme should have some basic requirements including:

- Valid HTML and CSS
- Firm code
- Impressive design
- Compatibility with latest version of WordPress
- Compatibility with plugins
- Strong readability
- Support and documentation

Source: (http://www.developerdrive.com/2011/10/how-to-build-a wordpress-theme-fromscratch-part-one/)



Set Up W3 Total Cache

When multiple people are viewing the same page, WordPress displays a static version with **W3 Total Cache** plugin. The plugin offers a unique feature called minification that combines CSS and JavaScript files, makes the file smaller and load faster and also reduces all white space from your HTML, CSS and JavaScript files.

Essential plugins

- Contact Form 7
- All in One SEO Pack

Social Media WordPress Plugins

Social media is important for any website, especially, if you're running your website on the WordPress platform. It is easy to integrate **social media WordPress plugins** in your website.



Basic Configuration

Once you install the WordPress, configure some basic things to improve your website:

● Add Gravatar

Gravatar is an image linked to your email address. Once the Gravatar is set up, your image will load whenever your email address appears in a Gravatar-enabled location.

\odot Enable Comments

If you want to allow comments, navigate to settings, go to discussion and check 'Allow people to post comments on new articles'.

⊖ Construct Permalinks

By enabling custom **permalink structure,** URLs become much friendlier to search engines and RSS readers.

● Activate Akismet

Akismet tool is used to detect spam comments. It comes built into WordPress.



WordPress Security

Installing WordPress is not the end of your responsibility. It is important to keep your WordPress site secured through the following ways:

● Keep the WordPress Site and Plugins Up-to-date

WordPress and plugins versions should contain security patches. All the WordPress files and plugins should be kept updated with the latest version.

● Secure WordPress Admin Area

Allow access to the admin area only to people who actually need to access it. Visitors should not be able to access /wp-admin/folder or wp-login.php file. In case you want to access your admin area from any IP address, limit the number of incorrect login attempt to your site. For this, you can use a plugin called Limit Login Attempts.

● Do Not Use 'ADMIN' as Username

The username admin can be easily hacked. So, keep a different username or else **change your WordPress username** immediately after WordPress installation.

$oldsymbol{\Theta}$ Do Not Showcase the WordPress Version

Your website header should not reflect your WordPress version or else it is easy to exploit your website.



• Use Strong Passwords

Avoid using such passwords that can be easily guessed. Use a strong yet an easy password that you can remember.

Enable Two-Factor Authentication

Enabling two-factor authentication like Clef for your WordPress website can dramatically increase the security of your website.

Secure WordPress Hosting

It is important to be hosted with such organizations that provide tight security. You must consider the following features when looking for WordPress hosting:

- > Account isolation
- Support the latest PHP and MySQL versions
- > Intrusion detecting system
- > Web Application Firewall

• Ensure Your Computer Has Updated Antivirus

Your computer should be free from virus or malware software to prevent potential attacker gaining access to your login details. Your computer should have an up-to-date antivirus program to keep the overall security of your WordPress site on a higher level.

With WordPress, there's always something new to learn. However, it is important to know the right WordPress development technique.



Final Thoughts

With WordPress, there's always something new to learn. Whether you wish to make changes or add something to your site, you do not need any additional software or firewall settings. However, it is important to know the right WordPress **development technique.** A WordPress website offers much more than you usually hear about. In fact, WordPress website is the very heart of all the internet marketing efforts. Every website developers have realized its potential to act as user-friendly and flexible CMS on the internet.





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Indus Net Technologies' comprehensive web solution offerings that really boosts your business

- Design and develop aesthetically appealing W3C validated websites that gives a firm digital foothold to attract customers.
- Promote business through Internet Marketing, increase visibility among customers and encourage customer engagement.
- Convert leads to customers and customers to evangelists.
- Broaden business reach with smart applications for Mobile and tablet platform.

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