GOVERNMENT POLYTECHNIC COLLEGE PERUMBAVOOR

Koovappady P.O Ernakulam – 683 544 Kerala

Semester – V

Computer Engineering 2022-23

Report on

INDUSTRIAL VISIT

IN

ICT ACADEMY OF KERALA, KORATTY

**DEPARTMENT OF
COMPUTER ENGINEERING**

ACKNOWLEDGEMENT

My profound thanks to the following patrons:

Sri. Aiju Thomas (Principal)

Ms. Njambika V.A (CT HOD)

Santhosh C Kurup (CEO of ICTAK)

The guidance of above persons indeed helped me to complete the industrial training program quite successful. In addition, I would like to express my immense gratitude to all those who helped me to complete the training successfully.

The department of Computer Engineering, Government Polytechnic College Perumbavoor, organized 14 days Industrial visit to ICT Academy of Kerala for computer engineering students. The visit was organized with the prior permission and guidance of Hon. Principal Sri. Aiju Thomas. Total 70 students of class (CT) have joined this Industrial Visit. The 14 days visit was organized with prior permission of ICTAK, Koratty.

CONTENT

SCHEDULE OF INDUSTRIAL TRAINING

PLACE : ICT Academy, Infopark, Koratty

PERIOD : 12th September 2022 – 24th September 2022

TIME : 9:30 AM - 3:30 PM

TEA BREAK : 11:10 AM – 11:15 AM

LUNCH BREAK : 1:00 PM – 1.30 PM

INTRODUCTION

On receiving the permission letter from the Principle of Govt. Polytechnic College, Perumbavoor, we 70 students went on an Industrial Visit to ICT Academy of Kerala, Infopark, Koratty on 12/09/2022. We all assembled at the training hall arranged by the company at 9 AM.

ICT Academy members welcomed us and gave a brief introduction about their IT Company. Industrial training began at 9.30 AM. The training sessions were arranged at a seminar hall located inside the academy. Program was conducted by Jibin N and Muneer KH. ICT Academy offered with best deal with students compelling to provide Industrial Training those who are willing to grab the opportunity after the completion of Technical Courses. It is one of the best training institutes provide dedicating facility for the students who are interested to gain the knowledge over the practical factors of the working environment in leading IT and Software Industries.

It is very informative, interesting and successful visit. As a student of computer science, we learned about web development, business of different domain and team management from there.

COMPANY PROFILE

Information and Communication Technology Academy of Kerala (ICTAK) is a social enterprise officially launched on the 24th of June 2014. The organization had a humble beginning providing skill training programs to selected academic institutions. Over the years, ICTAK has grown to a prime service provider of all ICT and innovation-related training and capacity-building programs in the state.

The organization is created in a Public Private Partnership model (PPP) for imparting computers and information technology skills to the youths of Kerala and improving their employability opportunities in the industry. The Company is supported by Govt. of India, partnered by Govt. of Kerala and the IT industry.

GF-1 Thejaswini Building, Technopark Rd, Thiruvananthapuram,

Kerala 695581

https://ictkerala.org/

WEBSITE DEVELOPMENT

USING WORDPRESS

INDUSTRIAL TRAINING REPORT

CONTENTS

- INTERNET
- WEB APPLICATIONS
- HTML, CSS, JAVASCRIPT
- WEB HOSTING
- DOMAIN NAME
- WORDPRESS
- WORDPRESS PLUGINS
- SEARCH ENGINE OPTIMIZATION
- PROJECT BUILDING
- PRESENTATION

DAY 1 (12/09/2022)

We arrived at ICTAK, Koratty at 9.15 AM. Class started at 9.30 AM. Before getting into wordpress we started learning about the basics of internet such as what is internet, www, web hosting, domain names, web server, web browser, websites, URL, HTTP, etc.

WHAT IS INTERNET?

It is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols. Internet is mostly hardware. It's a connection of networks.

What is WWW?

World Wide Web is basically a system of Internet servers that support specially formatted documents. It is software.

• The documents are formatted in a markup language called HTML that supports links to other documents, as well as graphics, audio, and video files.

Web Servers

- Web servers are programs that provide documents to requesting browsers.

- They act only when requests are made to them by browsers running on other computers on the Internet

- The most commonly used Web servers are Apache, cross platforms, and Microsoft's Internet Information Server (IIS), which runs under Windows operating systems.

- All communications between browsers and servers use Hypertext Transfer Protocol (HTTP)

URLs

- Uniform resource locators (URLs) are used to identify documents (resources) on the Internet.

- General form: scheme:object-address

  - example - http://google.com

Hyper Text Transfer Protocol

- All Web communications transactions use the same protocol: the Hyper Text Transfer Protocol (HTTP)

• HTTP is the underlying protocol used by the World Wide Web and this protocol defines how messages are formatted and transmitted, and what actions Web servers and browsers should take in response to various commands.

After learning about basics of internet we started learning about web apps.

What are Web Applications

A Web application (Web app) is an application program that is stored on a remote server and delivered over the Internet through a browser interface. Web services are Web apps by definition and many, although not all, websites contain Web apps.

Web applications can be designed for a wide variety of uses and can be used by anyone; from an organization to an individual for numerous reasons. Commonly used Web applications can include webmail, social media, or e-commerce shops.

How Web Applications work

Web applications do not need to be downloaded since they are accessed through a network. Users can access a Web application through a web browser such as Google Chrome, Mozilla Firefox or Safari.

For a web app to operate, it needs a Web server, application server, and a database. Web servers manage the requests that come from a client, while the application server completes the requested task. A database can be used to store any needed information.

Web applications typically have short development cycles and can be made with small development teams. Most Web apps are written in java script, or Cascading Style Sheets (CSS). Client-side programming typically utilizes these languages, which help build an applications front-end. Server-side programming is done to create the scripts a Web app will use. Languages such as Python, Java, and Ruby are commonly used in server-side programming.

DAY 2 (13/09/2022)

Day 2 was about HTML, CSS and JavaScript

HTML

- Stands for Hyper Text Markup Language
- Standard markup language for creating Web pages
- HTML elements tell the browser how to display the content

HTML Tags

- <!DOCTYPE html> defines that this document is an HTML5 document
  - <html> root element of an HTML page
  - <head> contains meta information about the HTML page
  - <title> to specify a title for the HTML page
- <body> to define the document's body, and is a container for all the visible contents, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.
  - <p> to define a paragraph
  - <a> for link
  - <b> to make bold text
  - <strong> for bold text with emphasis
  -
 for break
  - <div> it is a division or part of an HTML document
  - <h1> to <h6> for titles
  - <i> to make an italic text
  - <img> for images in document
  - is an ordered list, <ul> for an unordered list
    - is a list item in bulleted (ordered list)

CSS

- Stands for Cascading Style Sheets
- Describes how HTML elements are to be displayed on screen, paper, or in other media
- Saves a lot of work. It can control the layout of multiple web pages all at once
- External stylesheets are stored in CSS files

JAVASCRIPT

JavaScript is used to make websites interactive. It is the programming language of the web. It is used by almost every website. At the beginning JavaScript were used mainly for client-side scripting. Now a days it is started using NodeJS JavaScript backend runtime environment.

After learning the basics of html, css and javascript, Jibin sir conducted an online quiz session related to web development. Vinayak Prakash was the winner of the quiz.

DAY 3 (14/09/2022)

We started day 3 by again conducting the quiz. Vinayak Prakash won again. Then we started learning about web hosting.

WEB HOSTING

Web hosting is an online service that allows you to publish your website files onto the internet. So, anyone who has access to the internet has access to your website. In practice, it usually refers to the service you get from a web hosting provider like hostinger.com.

How does Web Hosting work?

Hosting providing companies like Hostinger rent out services and technologies to host your websites on the internet. Once you've chosen your domain name and signed up to a hosting plan, then your website is accessible on the internet.

When you use web hosting services, your web host is responsible for making sure your server is up and running. Not only that, but it is also a hosts job to prevent any security breaches and store all your files, assets and databases onto the server.

WordPress Hosting

WordPress Hosting simply means hosting that has been optimized for WordPress on a server level to ensure smooth sailing.

How is WordPress different from regular hosting? While details vary by provider, most WordPress hosting packages offer these common traits:

1. Simple one-click installation that avoids the dozen or so manual steps in configuring a new WordPress site.

2. Server configurations optimised for faster loading of WordPress sites. This could include performance cache optimisations and other tweaks.

3. Security measures to protect against common WordPress vulnerabilities. As WordPress powers 43.2% of the web on 2022, it regularly comes under attack. You might also come across "Managed WordPress", which often refers to a pre-defined secure environment that restricts usage of unsupported or vulnerable plugins.

VPS Hosting

VPS stands for Virtual Private Server. Like shared hosting, websites that run on VPS share a physical server with other websites. However, each VPS

tenant has its own partition with guaranteed dedicated resources. There's

often more memory, storage and processing power available – with a price tag to match.

Dedicated Hosting

Dedicated hosting means you have the entire server to yourself. It gives you access like a VPS, but you don't have to share the server with other sites or apps. Effectively, you are leasing a physical web server housed at your service provider's facility. You also have professional support and expertise on hand when needed.

Cloud Hosting

These days, cloud hosting has become a bit of a nebulous term. So, we would strongly recommend looking closely at what you are getting if you are signing up for "Cloud Hosting".

In the beginning, "cloud hosting" referred to a VPS setup scalable to multiple servers; this way, if your web application had a sudden traffic spike, the system would be able to provision more resources.

DAY 4 (15/09/2022)

How much does website hosting cost?

Your website hosting cost will vary by provider. Technically you can use a free web hosting service, although, we do recommend avoiding them.

Free vs Paid web hosting

By opting for free hosting, you may encounter problems such as unwanted advertising on your page and their domain name in your URL.

There are numerous reason for why you should choose paid web hosting over free web hosting:

1. Bandwidth & disk space

2. Content limitations

3. Security breaches

4. Domain name & URL

5. Server speed

WHAT IS DOMAIN NAME

Simply put, a domain name (or just "domain") is the name of a website. It's what comes after "@" in an email address, or after "www." in a web address. If someone asks how to find you online, what you tell them is usually your domain name.

Examples of domain names are:
google.com wikipedia.org
youtube.com

URL vs Domain Name

A URL (Universal Resource Locator) is a complete web address used to find a particular web page. While the domain is the name of the website, a URL will lead to any one of the pages within the website. Every URL contains a domain name, as well as other components needed to locate the specific page or piece of content.

Examples of URLs:
http://www.google.com
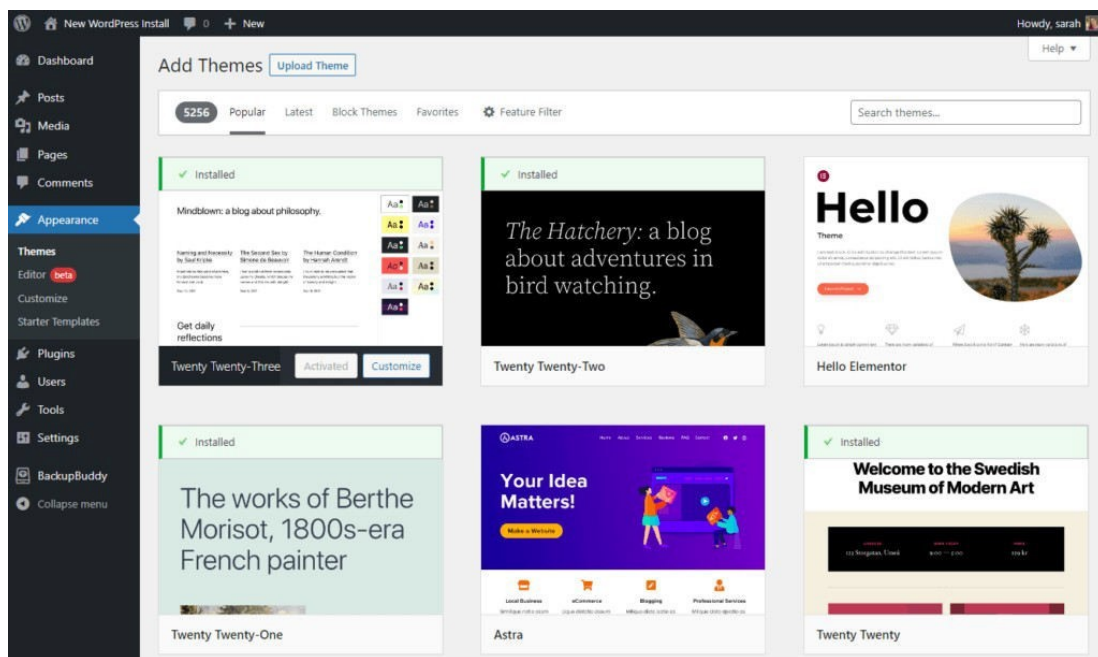https://en.wikipedia.org/wiki/umami
https://www.youtube.com/feed/trending

What is DNS Host?

A DNS host is a company that manages your domain's configuration (also known as DNS resource records) that makes sure that your domain name points to your website and email. Most domain hosts also offer domain name registration.

DAY 5 (16/09/2022)

WORDPRESS

WordPress is the simplest, most popular way to create your own website or blog. WordPress powers over 43.3% of all the websites on the Internet. It is an open-sourced content management system licensed under GPLv2, which means that anyone can use or modify the WordPress software for free.

What is CMS

A content management system, often abbreviated as **CMS**, is software that helps users create, manage, and modify content on a website without the need for specialized technical knowledge.

It is a tool that helps you build a website without needing to write all the code from scratch or even know how to code at all.

Instead of building your own system for creating web pages, storing images, and other functions, CMS handles all that basic infrastructure stuff for you so that you can focus on more forward-facing parts of your website.

WordPress is an example of CMS.

What Kinds of Websites Can WordPress Make?

Many years ago, WordPress was primarily a tool to create a blog, rather than more traditional websites. Nowadays, thanks to changes to the core code, as well as WordPress' massive ecosystem of plugins and themes, you can create any type of website with WordPress.

WORDPRESS.ORG vs WORDPRESS.COM

WordPress.org aka "the real WordPress", is the popular website platform that you have heard all the great things about.

It is an open-source software, and it's 100% free for anyone to use. All you need is a domain name and web hosting. Therefore it is also referred to as self-hosted WordPress.

WordPress.com is a hosting service created by Automattic, the company led by WordPress co-founder, Matt Mullenweg. Because of the same founder,

often users confuse WordPress.com with the popular WordPress.org software.

WORDPRESS PLUGINS

A WordPress plugin is a piece of software that "plugs into" your WordPress site. Plugins can add new functionality or extend existing functionality on your site, allowing you to create virtually any kind of website, from ecommerce stores to portfolios to directory sites.

Plugins can make small tweaks on your site or massive changes, depending on their features. For example, you could use a plugin to add a WhatsApp share button to your site or to create a fully multilingual site. Or, if you run an ecommerce business, you might install a plugin to assist with payment gateways or allow visitors to book appointments online.

HOW DO PLUGINS WORK?

Plugins allow you to add or extend the functionality of your WordPress site without changing core WordPress files. Plugins use access points, formally known as filter and action hooks, provided by the WordPress Plugin API to "hook into" the source code. These access points and methods will call the functions of the plugin at specific times and modify the default behavior of WordPress.

How to Use a Plugin in WordPress

There are multiple ways can add WordPress plugins to your site. For example, you can do so from your dashboard, from the official WordPress

plugin directory, or from third-party sites. Plugins from the official directory can be automatically installed in one click, while some premium plugins have to be manually installed via a File Transfer Protocol (FTP) client.

To install a plugin from the official WordPress directory, you simply have to log into your dashboard and select *Plugins > Add New*. Then search for the plugin using the built-in search bar. From there, you just have to click *Install* and *Activate*.

TOP WORDPRESS PLUGINS

1.   WOOCOMMERCE

WooCommerce is the best eCommerce WordPress plugin. It provides essential eCommerce functionality such as storefront creation, product listing, and order management.

Moreover, WooCommerce accepts major credit cards and bank transfer payments and integrates seamlessly with 140 region-specific payment gateways.

2.   ELEMENTOR

Elementor is one of the most popular WordPress plugins for page building. At its core, Elementor provides a drag-and-drop functionality so users can customize their pages and posts in no time.

The plugin also offers more than 100 pre-made page templates to start any type of website. 90+ widget options help incorporate features like social media icons and a progress bar without installing additional WordPress plugins.

DAY 6
(17/09/2022)

SEARCH ENGINE OPTIMIZATION (SEO)

Let's break that down in the context of your website.

- **Search:** What people do when they want to find an answer to a question or a product or service that meets their needs.
- **Search engine:** A site (like Google or Bing) where a person can perform said search.
- **Search engine optimization:** What you do to get said search engine to connect said search with your site.

HOW SEO WORKS?

Search engines such as Google and Bing use bots to crawl pages on the web, going from site to site, collecting information about those pages and putting them in an index. Think of the index like a giant library where a librarian can pull up a book (or a web page) to help you find exactly what you're looking for at the time.

Benefits & importance of SEO

People are searching for any manner of things both loosely and directly related to your business. These are all opportunities to connect with these people, answer their questions, solve their problems, and become a trusted resource for them.

DAY 7 (18/09/2022)

After learning the basics of internet, web development and wordpress we started our project building on day 7. Total 70 students were divided into 12 groups. Each group consist of 5-6 members. And Jibin sir told each group to pick a subject for website creation.

These are group's project names and respective industries.

Group No	Group Name
1	Trip's India
2	Course Journal
3	Sentry
4	Borsa Valori
5	Timension
6	Enlight
7	Job Search
8	Sports Ethics
9	Booking Hub
10	Photo Genix
11	Tourism
12	Heaven

My group was 1ST one and the members of our group were

1. Abdul Latheef M M
2. Abhai Sajeevan
3. Abhinav K
4. Akshay Martin
5. Binil Binoy
6. Sajin T J

We were planning is to build a Online Tours booking website.

Our application will include

1. Tour related post's
2. Tour details
3. Payment options
4. Diffrent destinations
5. Discounts

Each group provided a URL.

On day one of project building, we were looking for how login and registration working in the website. Then we found out that that the login and registration page can be provided by the theme itself. Then we started searching for a suitable theme and found one.

Then we started discussing what news should be displayed in the homepage. Then we decided to create some post about some tourist destinations and details.

We named our website as Trip's India.Because we decided to provide tour packages all over india.

The front page of our website contain posts and some tour locations.

DAY 8 (19/09/2022)

On this day we tried to search for suitable plugins for our tour website.As a result we found a suitable plugin named **Yathra Plugin.**It is very helpfull for our team to use this plugin.It has already built in Login,Register Page,Cart and wishlist too.This plugin well matched for our site and make our site really user friendly.Email notificatios were also send to users who register and make payments.

DAY 9 (20/09/2022)

On this day we worked on creating packages of various tourist destinations.We created some categories and added locations into those categories.

Main categories are:

1. North India

2. South India

3. Western India

4. South india

These categories mainly includes famous tour locations and their tour packages.

Day 10 (21/09/2022)

The next step is to implement the purchasing option for the added tour packages. For enabling the ecommerce application in wordpress, we used the number one ecommerce plugin, **"WooCommerce"**. WooCommerce accepts major credit cards and bank transfer payments and integrates seamlessly with 140 region-specific payment gateways. Woocommerce supports email feature. Cart, checkout and order placed routers created during the installation of woocommerce plugin.

When you click on the enrol in courses, you will be directed to the cart page.

Day 11 (22/09/2022)

On this day we included a contact information page.We provided our team members contact informations including phone number,Email id.We also includes a space for customers feedback to know if they require new features or improvement in existing features.

Day 12 (23/09/2022)

After Succesfully developed our website and its layout we desided to test it amoung our friends.So we shared the link of our website through whatsapp and they tested it.We got good review and we decided to make this website ready for presentation.

All of our team members made their own contributions by creating and exchanging their valuable ideas through group discussions.

Day 13 (24/09/2022)

Projects almost completed and now it is time for presentation. We presented the project starting from 10 AM to all the other students and taught them how to use the website. Other students asked doubts mainly related to the plugins that we used.

The main drawback students said about the project was there can be a rating option.

We concluded the day after completing the presentation of all 12 groups and it was wind up day for the industrial visit.

CONCLUSION

In conclusion, I am well satisfied with my training. There wasn't that much coding part in wordpress web development. Still this project was so much helpful to learn what's happening in the backend of every business and how different business work in different domain. I have acquired a new skill and improved existing skills, other than those gained at university laboratories. What I like most about my training is that we learned a lot of things about teamwork, importance of group discussion, building products that people love and presentation of a project.

I also learned why 43.2% of the webistes in 2022 use wordpress. Because it was easy to integrate more features into the project. No need of any hard codes.

REFERENCE

https://ictkerala.org/

https://www.w3schools.com/

https://www.yathra.com/