A

Vocational Training Report On
"WEB DEVELOPMENT"

Submitted to

RSR –RUNGTA COLLEGE OF ENGINEERING AND TECHNOLOGY, BHILAI (C.G.)

In fulfillment of requirements for the award of degree **Of**

Bachelor of Technology

In

Computer Science &Engineering

CHHATTISGARH SWAMI VIVEKANAND UNIVERSITY

Guided By: Ms. Parineeta Jha

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Roll no. : 302902220006

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

RSR –RUNGTA COLLEGE OF ENGINEERING AND TECHNOLOGY, BHILAI (C.G.)

Session: 2023-24

DECLARATION BY THE CANDIDATE

I the undersigned solemnly declare that the **Vocational Training** report on "**WEB DEVELOPMENT"** is based on our own work carried out during the course of study under the supervision of **(Department of Computer Science & Engineering).**

We assert that the statement made and conclusions drawn are an outcome of the **Industrial Training** work. We further declare that to the best of our knowledge and belief the report does not contain any part of any work which has been submitted for the award of any other degree/certification of this University.

NAME	ROLL NO	ENROLLMENT No.	SIGN
Archit Chandrakar	302902220006	BJ9676	

CERTIFICATE

S.No-GRW/WD/4112

Certificate of Completion

This is to certify that **Archit Chandrakar** has successfully completed the Web Development Internship at GrowEven.Starting from 4th of July 2023 to 14th of August 2023 .

During the internship, Archit demonstrated exceptional dedication, enthusiasm, and a strong willingness to learn.His contributions to various web development projects were invaluable, and he consistently displayed a high level of professionalism and teamwork.

We commend Archit for his commitment to enhancing their skills in web development and for their significant contributions to our team. We believe that the knowledge and experience gained during this internship will serve as a solid foundation for his future endeavors in the field.

Signed,

Manav Tiwari
C.E.O and Co-Founder
GrowEven

Date: [14th of August 2023]

ACKNOWLEDGEMENT

I take Take Great Pleasure & immense pride to Present This **Training report**. The Sense Achievement Satisfaction reward & the appreciation As regard to the completion Of the report Cannot be comprehended the earnest support by various people associated with it.

I would also express our gratitude to our great heartfelt gratitude to hour honorable **Mr.Saket Rungata, director, RSR Rungata colledge of Engineering & Technology, Bhilai.**

Finally I Extend our thanks to all our faculty member & **Ms. Parineeta Jha Asst. Professor** of **Computer Science & Engineering Department** for their support is completing this training report.

THANK YOU.

Signature of the student

Name:- Archit Chandrakar

Roll No:-   302902220006

Enroll No:-   BJ9676

DECLARETION

I, **Archit Chandrakar** student of 7th Semester B.Tech, **RSR Rungta College of Engineering & Technology Bhilai,** bearing Enrollment Number **BJ9687** hereby declare that the project entitled **WEB DEVELOPMENT** has been carried out by me under the supervision of my guide submitted in partial fulfillment of the requirements for the award of the Degree B.Tech by Chhattisgarh Swami Vivekanand Techanical University during academic year 2022. This report has not been submitted to any other Organization/University for any award of degree.

Signature:

Name: Archit Chandrakar

University Roll No.: 302902220006

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1 : INTRODUCTION

Web development is a dynamic and rapidly evolving field that encompasses the creation and maintenance of websites and web applications. In the modern digital age, the internet serves as a primary platform for communication, information dissemination, and business transactions. As a result, proficient web development has become integral to the success of businesses, organizations, and individuals seeking to establish a strong online presence.

Key Components of Web Development:

1. **Front-end Development:**

   - Front-end development involves crafting the user interface (UI) and user experience (UX) of a website or web application. This includes designing and implementing the visual elements that users interact with, such as layouts, navigation menus, and interactive features. Front-end developers typically use technologies like HTML, CSS, and JavaScript to create responsive and engaging web interfaces.

2. **Back-end Development:**

   - Back-end development focuses on server-side logic and database management. It involves building the behind-thescenes functionality that powers websites and applications. Back-end developers work with server-side scripting languages (e.g., Python, Ruby, PHP) and databases (e.g., MySQL, MongoDB) to handle data processing, storage, and retrieval.

3. **Full-stack Development:**

   - Full-stack developers have expertise in both front-end and back-end development. They are capable of working on all aspects of a web project, from designing user interfaces to implementing server-side logic and managing databases. Fullstack development provides a comprehensive skill set, allowing developers to tackle projects from end to end.

4. **Web Development Frameworks:**

- Frameworks are pre-built sets of tools and libraries that streamline the web development process. They provide a structured foundation for building web applications, reducing development time and enhancing code maintainability. Popular frameworks include React.js, Angular, Vue.js for front-end, and Django, Ruby on Rails, Express.js for back-end.

5. **Responsive Web Design:**

   - With the increasing variety of devices used to access the internet, responsive web design has become crucial. This approach ensures that websites and applications adapt to different screen sizes and devices, providing a consistent and optimized experience for users on desktops, tablets, and smartphones.

6. **Web Development Tools:**

   - Web developers use a range of tools to streamline their workflow, including integrated development environments (IDEs), version control systems (e.g., Git), package managers (e.g., npm), and task runners (e.g., Gulp, Webpack). These tools enhance collaboration, code quality, and project efficiency.

Conclusion:

In conclusion, web development is a multifaceted discipline that plays a pivotal role in shaping the digital landscape. Whether it's creating a personal blog, an e-commerce platform, or a complex web application, the skills and tools of web development are essential for bringing ideas to life on the internet. As technology continues to advance, web developers will play a crucial role in shaping the online experiences of users around the world.

1.1 : Course Objective

This 8 week programme aims to headstart our foray in to the exciting world of web development both front and back end. This course helped me master my basics as well as implement those basics at advanced level throught various projects throughout the course, i could hone my visualisation better and push the boundaries of development mindset. The course covered initial front end development like HTML,CSS,BOOTSTRAP.JS,DOM, Jquery

as well as back end in depth including databases and advanced topics like RESTful Routing, data association authentication. This course is for all the developers who are looking forward to enhance their development journey, and learn skills & technologies which willhelp them to be a full stack developer faster.

2: TOOLS AND TECHNOLOGIES USED

1.2 : HARDWARE REQUIREMENTS :-

1. **Computer:**

- A modern computer with a multi-core processor (e.g., Intel Core i5 or AMD Ryzen 5) for faster compilation and multitasking.

- Ample RAM (8GB or more) to handle the demands of development tools and virtualization.

- Solid State Drive (SSD) for faster data access and improved overall system performance.

2. **Display:**

   - A high-resolution monitor (at least 1920x1080) for better visibility and to accommodate multiple code editors, terminals, and browser tabs.

3. **Input Devices:**

- A comfortable keyboard and mouse or a trackpad for efficient coding and navigation.

- Optionally, a graphics tablet for designers working on graphical elements.

4. **Internet Connection:**

   - A reliable and high-speed internet connection is essential for downloading dependencies, accessing online resources, and testing web applications on different devices.

5. **Development Environment:**

   - Depending on your preference, you may need additional hardware for specific development environments, such as a VR headset for virtual reality development or a mobile device for mobile app testing.

6. **Virtualization:**

   - If you are working with virtual machines or containers, having a CPU with virtualization support (Intel VT-x or AMDV) can significantly improve performance.

7. **Graphics Card:**

   - A dedicated graphics card may be beneficial for tasks involving graphic-intensive applications or if you're working with technologies like WebGL.

8. **Backup Solutions:**

   - Regularly back up your code and project files to prevent data loss. Consider an external hard drive or cloud storage for backups.

9. **Security Measures:**

   - Ensure that your computer has up-to-date antivirus software and that you follow best practices for securing your development environment.

10. **Meeting System Requirements of Specific Tools:**

   - Check the system requirements of the specific development tools and frameworks you plan to use. For example, some IDEs or development frameworks may have specific hardware requirements.

1.3 : SOFTWARE REQUIREMENTS :-

Operating System Windows 95/98/XP with MS-office or above.

Programming language: JavaScript

IDE VS Code

1.4 :JavaScript:-

JavaScript is a versatile programming language primarily used for web development. It enables the creation of dynamic and interactive content on websites. Key features include a C-based syntax, variables, data types, functions, and objects. It is executed in web browsers and allows developers to enhance user experiences by manipulating HTML, CSS, and handling events. JavaScript is a fundamental technology for building modern, responsive, and engaging web applications.

1.5 VS CODE:-

VSCode, for Visual Studio Code, is a lightweight yet powerful source code editor developed by Microsoft. It's widely used for various programming languages and supports features like syntax highlighting, code completion, debugging, and Git integration. Known for its speed and extensibility, VSCode offers a rich ecosystem of extensions that enhance functionality, making it a popular choice for developers across different platforms.

TECHNICAL CONTENT

Getting hold on development basics

The course covered various basic Topics like how one should and can follow the path of being a full stack developer from basics to advanced level . A lot of problems were solved based on basic knowledge & it's implementation rather than just memorizing stuff.

HTML & CSS

This includes covering commonly used HTML tags. We can refer as well quite early in the course as a reference material. Overall this is a small section. which gets completed soon. We got skimmed through CSS section. There is lot of ground to cover in CSS. We got to learn about Specificity and Cascade, Selectors, Fonts etc. There were 2 projects to give a practical experience in writing CSS.

Bootstrap

This is a huge section where we learn about various Bootstrap(latest version) components such as navs, grids, forms. There is a image gallery project using Bootstrap which was cool.

JavaScript

JS lessons were very good. Syntax. Control Flow, Functions, Arrays, Object Basics were taught in great detail. (Almost 8 hrs content in 40 hrs course). This is mainly because whole backend section rests on JS foundations taught in these sections. There are various tiny coding exercises and quiz to hammer home the JS concepts.

COURSE CONTENT

Basics & Logic building

- **Path to be a full stack developer**
- **Installation & basics**
- **VS Code local environment set up**

Front End

- **HTML**
- **CSS**
- **Javascript +jquery**
- **Bootstrap**

Back end

- **Express JS**
- **PHP**
- **MySql**

ABOUT THE PROJECT

Creating an online jewelry shop for affordable and accessible products is a compelling web development project. Here's an outline of key components and considerations for your project:

1. Project Overview:

- **Objective:** Develop a user-friendly online platform for selling jewelry at affordable prices.

- **Target Audience:** Customers looking for budget-friendly yet stylish jewelry options.

2. Features and Functionality:

- **User Authentication:** Implement secure user authentication for customer accounts.

- **Product Catalog:** Create a well-organized catalog with clear product images, descriptions, and prices.

- **Search and Filters:** Enable users to easily search for products and apply filters based on categories, price range, and other relevant criteria.

- **Shopping Cart:** Implement a robust shopping cart system for users to add and manage selected items.

- **Checkout Process:** Streamline the checkout process with secure payment options and order confirmation.   - **User Accounts:** Allow users to create accounts, view order history, and manage personal information.

- **Responsive Design:** Ensure the website is accessible and looks good on various devices (desktops, tablets, smartphones).

3. Technology Stack:

- **Front-End:** HTML, CSS, JavaScript, and a front-end framework/library like React, Angular, or Vue.js.

- **Back-End:** Choose a server-side language (e.g., Node.js, Python with Django, Ruby with Rails) and a database (e.g., MySQL, MongoDB).

- **Payment Gateway:** Integrate a secure payment gateway (e.g., Stripe, PayPal) for processing transactions.

4. Security:

- Implement secure authentication practices.

- Use HTTPS to encrypt data during transmission.

- Regularly update and patch software to address security vulnerabilities.

5. Performance Optimization:

- Optimize images and assets for fast loading times.

- Implement caching mechanisms to enhance website performance.

6. SEO Considerations:

- Optimize product pages for search engines.

- Implement metadata and use relevant keywords.

7. Testing:

- Conduct thorough testing, including usability testing, security testing, and cross-browser testing.

- Ensure the website is mobile-friendly.

8. Maintenance and Updates:

- Plan for regular maintenance to address issues, update content, and implement new features.

- Monitor and respond to customer feedback for continuous improvement.

9. Legal and Compliance:

- Comply with data protection regulations (e.g., GDPR).

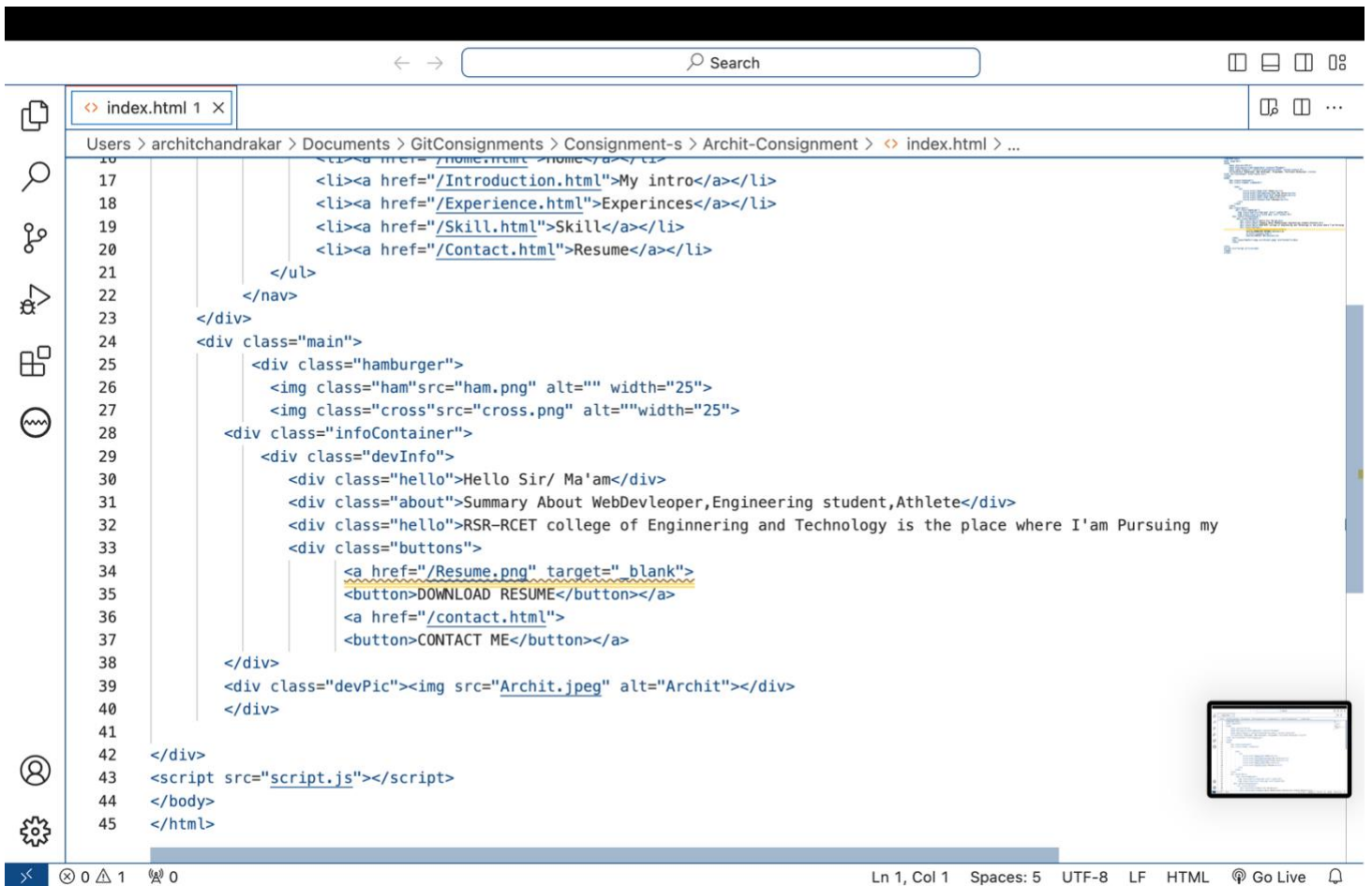- Clearly communicate terms of service, privacy policies, and return/refund policies.

10. Marketing Integration:

- Integrate social media sharing options.

- Consider implementing email marketing features for promotions and updates.

CODEBASE

Index File

```html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta http-equiv="x-UA-Compatible" content="IE=edge">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Archit Chandrakar- Web Developer, Programmer, Fullstack Enthusiast </title>
<link rel="stylesheet" href="style.css">
</head>
<body>
    <div class="container">
    <div class="sidebar sidebarGo">

        <nav>
            <ul>
                <li><a href="/Home.html">Home</a></li>
                <li><a href="/Introduction.html">My intro</a></li>
                <li><a href="/Experience.html">Experinces</a></li>
                <li><a href="/Skill.html">Skill</a></li>
                <li><a href="/Contact.html">Resume</a></li>
            </ul>
        </nav>
    </div>
    <div class="main">
        <div class="hamburger">
          <img class="ham"src="ham.png" alt="" width="25">
          <img class="cross"src="cross.png" alt=""width="25">
        <div class="infoContainer">
            <div class="devInfo">
            <div class="hello">Hello Sir/ Ma'am</div>
            <div class="about">Summary About WebDevleoper,Engineering student,Athlete</div>
```

```html
        <li><a href="/Home.html">Home</a></li>
        <li><a href="/Introduction.html">My intro</a></li>
        <li><a href="/Experience.html">Experinces</a></li>
        <li><a href="/Skill.html">Skill</a></li>
        <li><a href="/Contact.html">Resume</a></li>
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        <div class="devInfo">
          <div class="hello">Hello Sir/ Ma'am</div>
          <div class="about">Summary About WebDevleoper,Engineering student,Athlete</div>
          <div class="hello">RSR-RCET college of Enginnering and Technology is the place where I'am Pursuing my
          <div class="buttons">
              <a href="/Resume.png" target="_blank">
              <button>DOWNLOAD RESUME</button></a>
              <a href="/contact.html">
              <button>CONTACT ME</button></a>
      </div>
      <div class="devPic"><img src="Archit.jpeg" alt="Archit"></div>
      </div>

  </div>
  <script src="script.js"></script>
</body>
</html>
```
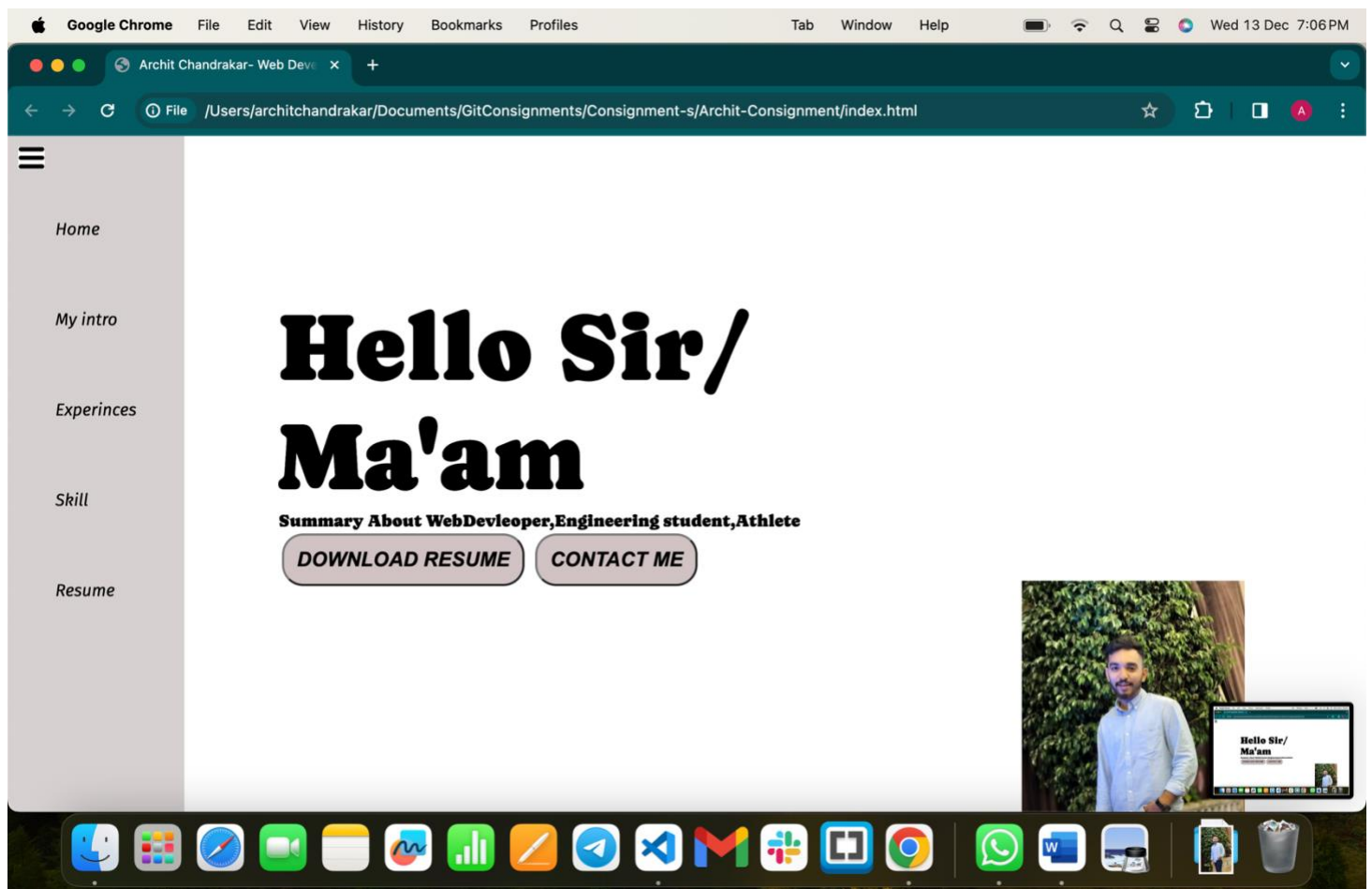
WEBSITES SCREENSHOT

Hello Sir/ Ma'am

Summary About WebDevleoper,Engineering student,Athlete

DOWNLOAD RESUME   CONTACT ME

Google Chrome   File   Edit   View   History   Bookmarks   Profiles   Tab   Window   Help   Wed 13 Dec 7:06 PM

File   /Users/architchandrakar/Documents/GitConsignments/Consignment-s/Archit-Consignment/index.html

Home

My intro

Experinces

Skill

Resume

Hello Sir/ Ma'am

Summary About WebDevleoper,Engineering student,Athlete

DOWNLOAD RESUME   CONTACT ME

RESULTS AND DISCUSSIONS

Overall the training helped me to understand web development & its practical usage in a better way and the project I undertook helped me to solidify these concepts. I learned a lot from the boot camp developer Mr. Pramod Shukla, who himself is an ace developer He has been in this thing since past several years & helped various beginners achieve their dream of being a full- stack developer. I am glad that the Department of Computer Science & Engineering of **RSRRCET** provided me this opportunity to undergo this Vocational Training. I wish to continue working on concepts learnt & further solidifying them in future

WEEKLY REPORT:-1

Description of activity, task, duty or Responsibility	Performed with Team	Performed Alone	Time Spent
HTMLS & CSS3	No	Yes	28 hrs

List one thing that went particularly well this week (area of improvement, new task, etc)

Basics got more cleared, focus was high.

List one thing that was most challenging this week (issue, problem, difficulty, etc.)

Getting over basic mistakes while coding

List one way you can improve your performance - would have given more time to small rather than theory.

WEEKLY REPORT:-2

Description of activity, task, duty or Responsibility	Performed with Team	Performed Alone	Time Spent
Bootstrap & JS Basics	No	Yes	35 hrs

List one thing that went particularly well this week (area of improvement, new task, etc)

learned bootstrap & **JS** from basics to advanced .

List one thing that was most challenging this week (issue, problem, difficulty, etc.)

Getting started with JS was the toughest part of the course .

List one way you can improve your performance - Practising more on platforms.

WEEKLY REPORT:-3

Description of activity, task, duty or Responsibility	Performed with Team	Performed Alone	Time Spent
Advanced **JS** & **J**query	**NO**	Yes	26 hrs

List one thing that went particularly well this week (area of improvement, new task, etc)

Did a lot of problems on JS to get better.

List one thing that was most challenging this week (issue, problem, difficulty, etc.)

Did not give proper time to it.

List one way you can improve your performance - increasing the time spent on problem-solving.

WEEKLY REPORT:-4

Description of activity, task, dutyor Responsibility	Performed with Team	Performed Alone	Time Spent
PHP, MySql Backend basics & Project	No	Yes	48 hrs

List one thing that went particularly well this week (area of improvement, new task, etc)

Tree basics were cleared while developing small games & projects.

List one thing that was most challenging this week (issue, problem, difficulty, etc.)

advanced concepts took a lot of time.

List one way you can improve your performance - By understanding JS better we can do almost anything easily.

CONCLUSIONS & FUTURE SCOPE

Future scope of Web Development

Due to the high technologies evolve rapidly, the requirements to the developers change as well. New trends require new solutions along with approaches. If you crave to get insights into what changes in the industry are yet to come in the near future, then observe what the programmers should know and consider in 2020 to remain competitive and be the

pros in thefield.

   I. The need to know more languages and technologies

There was a time not so long ago when it was enough to learn a single programming language like C++, JavaScript, PHP, or Python for a good salary. However, web development is a quite shifting industry and programmers need to have a broad scope of knowledge today to do the work in the best possible manner. Thus, it's strongly recommended to learn more languages and techniques for the fast and easy switch in case it's needed. Keep in

mind that Python, JavaScript along with WebAssembly will be on the top in 2020.

   2. Adaptability

According to the statistics, 51.98 % of web page views worldwide are mobile internet traffic in February 2020. It makes the experts believe that mobile-friendly sites are a must-have for the year and beyond. Of course, in case you're going to create a trendy website. Today, people don't want to use the site that is limited in functionality,

hard-to-

navigate, and is just unappealing to the mobile audience. That's why web development in the direction will be on- demand. So, pay attention to the adaptability of the site to enhance the customer experience and stay

competitive.

3. Less client work more personal projects

Today more and more developers start to think over making their own apps and starting theirown projects than working for a client. First and foremost, there is a hope to design the next Facebook, Tweeter or something like

those services.

Also working on your own project makes you always learn and learn more, discover newways and approaches. Thus, you're updated on the latest

trends and newest technologies.

4. The Bottomline

The future is here. As you could notice not all the trends 2020 mentioned above are new.Some of them just keep on dominating in the

field that requires lots of tech-savvy pros.

The list of hits is much longer and includes Cybersecurity, Motion UI, Frameworks, Hyper-automation, etc. The range can be enhanced depending on the course of the business.

The market is evolving constantly making the web developers be aware of the trends, changes and new solutions appeared. It's a challenge, but along

with that, it's a driver for progress.

BIBLIOGRAPHY

1. **Books:**

- Flanagan, D. (2011). "JavaScript: The Definitive Guide."

- McFarland, D. (2014). "HTML & CSS: The Complete Reference."

2. **Online Documentation:**

   - MDN Web Docs (https://developer.mozilla.org/): HTML, CSS, and JavaScript documentation.

3. **Frameworks and Libraries:**

- React Documentation (https://reactjs.org/docs/getting-started.html).

- Node.js Documentation (https://nodejs.org/en/docs/).

4. **Articles and Blog Posts:**

- Smashing Magazine (https://www.smashingmagazine.com/): Web development best practices.

- A List Apart (https://alistapart.com/): Articles on web design and development.

5. **Forums and Communities:**

- Stack Overflow (https://stackoverflow.com/): Community for programming questions.

- Reddit - r/webdev (https://www.reddit.com/r/webdev/): Web development discussions.