

A REPORT
ON
CO-OP INTERNSHIP (Industrial Training)
AT
Team computers Pvt. Ltd.



Submitted in accordance with the curriculum requirement,
for fifth semester of the
Diploma In Engineering
In the Branch
INFORMATION TECHNOLOGY
of
Dayalbagh Educational Institute,
DEEMED-TO-BE-UNIVERSITY
(DAYALBAGH, AGRA)



By:
Ashwani Kant
Roll Number - 2104939

Under the guidance of

Industrial Instructor
Vinay Pratap singh
Sr. Engineer IT

Department of Electrical Engineering
D.E.I TECHNICAL COLLEGE
DAYALBAGH AGRA-5

Acknowledgement

Co-Op Internship (Industrial Training) is an integral part of Diploma Program and for that purpose I had joined a company what else can be as good as Team computers Pvt. Ltd. , India's premier service enabling company.

I take the opportunity to express my gratitude to all of them who in some or other way helped me to accomplish this challenging project in Team computers Pvt. Ltd.. No amount of written expression is sufficient to show this my deepest sense of gratitude to them.

I thank my Institute, and our course teachers who has given me an opportunity to show my skills.

I also thank all my beloved family, for their understanding & whose support this project would not been possible.

I am very thankful to external guide **Vinay Pratap singh sir** without whose knowledge and assistance this study would not have been successful.

I am deeply grateful to **Shri. V.P. Malhotra, Principal, T.C., Dr. K. Pritam Satsangi, H.O.D. (Electrical Department), T.C.,** and **Shri Ankit chauhan sir , Dayalbagh Educational Institute, Deemed-To-Be-University, Dayalbagh, Agra** for their everlasting support and guidance on the ground of which I have acquired a new field of knowledge. The curriculum created has benefited from the inclusion of recent developments in the organizational and managerial aspects.

CERTIFICATE OF INTERNSHIP



Team Computers Pvt. Ltd.
No.1, Mohammadpur, Bhikaji
Cama Place, New Delhi-110066

T +91 11 4200 4200
F +91 11 4200 4206
CIN U74899DL1987PTC028384 www.teamcomputers.com

HRD/05/2023

Dated: - 30/05/2023

To,
D E I Technical College
Dayal Bagh
Agra

Dear Sir/Ma'am,

With reference to your request vide mail dated **20/05/2023**, we are pleased to inform you that **Mr. Ashwani Kant** has been accepted to do his internship with us with effect from **30/05/2023 till 28/08/2023**.

He will be undergoing his internship with Mr. Prince. He is requested to report to our office on 30/05/2023.

Please note that during the above training period he will not be entitled to any stipend or any other expenses incurred during the training period.

He would have to follow the rules and regulations of the organization and also maintain confidentiality of the information he comes across / acquires during the training period.

With Best Wishes,

For Team Computers Pvt Ltd.

Amulya Sah
Head- Human Resources

Ahmedabad	Bhubaneswar	Dehradun	Hyderabad	Kolkata	Patna
Bhopal	Chennai	Delhi NCR	Jaipur	Ludhiana	Pune
Bengaluru	Cochin	Guwahati	Jamshedpur	Mumbai	Raipur

D.E.I. TECHNICAL COLLEGE

DAYALBAGH AGRA



CERTIFICATE OF ORIGINALITY OF WORK

SESSION: 2023

I Ashwani Kant Roll No. **2104939** student of Diploma in Engineering, Branch

Information technology have undergone the Three-month Co-Op Internship or industrial training at '**Team computers Pvt. Ltd. No. 1, Mohammadpur, Bhikaji Cama Place new Delhi-110066 india**'. I have done the following project/s during my training period: -

1. Calculator
2. Age calculator
3. Tic Tac Toe game
4. ToDo list
5. Project tracker(Not complete)

I hereby declare that the work is an original one and has not been submitted earlier to D.E.I Technical College, Dayalbagh, Agra for fulfilment of the requirement of a course of study.

Shri. Ankit Chauhan

Name: Ashwani Kant

Roll No. 2104939

Branch: Information technology

Semester: Fifth

Table of Contents

S. No.	Topics	Page No.
1.	Cover Page	1
2.	Acknowledgement	2
3.	Company Training Certificate	3
4.	Certificate of Originality of work	4
5.	Table of Contents	5
6.	Table of Figures	6
7.	Introduction of Organization/Company	7-9
8.	About Internship	10
9.	Module-1 [Dated: 30-May-2023 to 30-June-2023]	11-17
10.	Module-2 [Dated: 01-July-2023 to 31-July-2023]	18-23
11.	Module-3 [Dated: 01-August-2023 to 28-August-2023]	24-27
12.	Conclusion	27
13.		
14.		
15.		
16.		

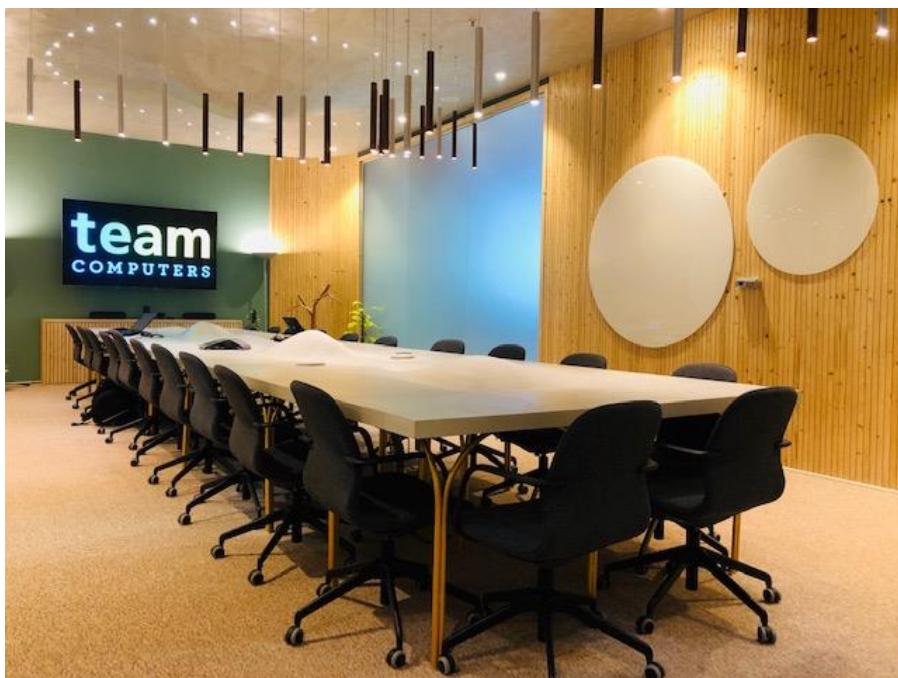
Table of Figures

S. No.	Figure Description	Page No.
1.	ORGANIZATION	7
2.	JavaScript website	11
3.	HTML file of calculator	15
4.	Css file of calculator	16
5.	Screenshot of calculators	17
6.	Screenshot of Age calculator	17
7.	ToDo app screenshot	23
8.	Tic Tac Toe Game ScreenShot	25
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		

INTRODUCTION OF ORGANIZATION

Founded in 1987 by **Ranjan Chopra**, an alumnus of IIT-Kanpur, it has emerged as a leading IT Infrastructure and Information Solution Provider in the last three decades. Team Computers is a bridge between business needs and the world of IT solutions. They see themselves as trusted solutions partners. They understand customer needs, Identify-Integrate-Support High quality, affordable IT Solutions in Hardware, Software, Services, Mobility, Analytics, and Cloud with Speed, Flexibility, and an attitude of Service.

Team Computers Pvt. Ltd. is an industry leader in providing End-to-End IT Services and Solutions. With a turnover of 1500+ Cr, having 10 offices across India, and a 3,000+ workforce, they serve 2000+ customers across different verticals.



BRIEF HISTORY OF ORGANIZATION

Ranjan Chopra, an alumnus of IIT Kanpur felt that there was a growing demand for IT solutions & services. This led to the founding of Team Computers Pvt. Ltd, an IT infrastructure solutions company, in 1987. Team Computers has seen phenomenal growth in the last five years and is now aiming at hitting INR 5000 crores in revenue by 2023. The company has already clocked over 1500 crores revenue in the last financial year and expects a 2.5X growth in the next two years as they are betting big on India's growing economy and market.

It has been an incredible journey for this company as it jumped on the bandwagon early, and has been riding the IT wave in India. Now it has emerged as a leader in the system integrators segment in India. Team Computers Pvt Ltd provides IT solutions and services to India's leading companies across pharma, auto, manufacturing, FMCG, and startup industry verticals.

India is one of the fastest-growing economies in the world and is currently in its golden phase of growth in the area of IT system integrators as companies are accelerating their digital transformation journey. All sectors including healthcare, auto, manufacturing, FMCG, and retail are actively focusing on digital transformation and need a technology partner on this journey.

As Ranjan Chopra, Founder and Managing Director of Team Computers Pvt Ltd put it, "It makes me proud to share that we have crossed another milestone – this year we turned 34 years young. What began as a small company with just 20 employees has grown to stand tall among the top IT companies in India today with more than 3000 employees. Back then from 1987 to now, a few factors have been constant - Innovation & Imagination. Team Computers Pvt Ltd has seen more than 50% growth in the past few years and we expect it to become a 5,000 crores company by 2023."

Based out of New Delhi, Team Computers Pvt Ltd has six verticals: end-user computing, storage servers & networking solutions, security solutions, cloud solutions, software and analytics, and infrastructure managed services. The company also has two RIMCC (Remote Infrastructure Managed Command Centre) located in Gurgaon and Bengaluru which offer 365x24x7 support to the customers ensuring zero downtime in their businesses. In addition, there are two modern experience centres located in Bengaluru and Delhi that offer customers the opportunity to experience technology in a live environment in which they can make informed decisions.

The System Integration Market is expected to achieve significant growth in the next 5 years with advancements in Cloud Adoption, Robotic Process Automation (RPA), AI/ML, Edge Computing and Cyber Security. The digital transformation story in India has quite a distance to travel and Team Computers Pvt. Ltd expects to play an active role in this exciting journey that is set to propel India as a nation towards a new growth trajectory. They know the pulse of the customers and have decades of experience to back them. They are ready for a sharp spurt in growth over the next two years and are equipped to handle the migration of customers to the cloud. Backed by a visionary leader and an efficient pool of talented resources, Team Computers is ready and excited to take on the challenge.

ABSTRACT:

This internship report provides an overview of the experiences, challenges, and achievements during a dynamic internship focused on the development and implementation of web applications using the MEAN stack. The MEAN stack, comprising MySql, Express.js, Angular, and Node.js, served as the foundational technologies for various projects undertaken during the internship.

The report begins with an introduction to the MEAN stack and its significance in modern web development. It then delves into the roles and responsibilities undertaken during the internship, including database design with MySql, server-side development with Node.js and Express.js, and client-side development using Angular.

A significant portion of the internship was dedicated to hands-on experience in building scalable projects. This involved the design and implementation of RESTful APIs, integration of real-time features, and the utilization of the Angular framework for creating dynamic user interfaces. Challenges encountered and problem-solving approaches are discussed, providing insights into the learning curve associated with the MEAN stack.

The report also highlights specific projects worked on during the internship, showcasing the practical application of MEAN stack technologies.

Additionally, the report touches upon the collaborative nature of the internship, emphasizing teamwork and effective communication in a development environment. The exposure to industry best practices, version control systems, and agile methodologies is outlined to provide a holistic view of the professional growth achieved during the internship.

In conclusion, this internship report serves as a reflection on the valuable experiences gained while working with the MEAN stack. The integration of MySql, Express.js, Angular, and Node.js not only expanded technical skills but also fostered a deeper understanding of full-stack web development.

ABOUT INTERNSHIP

During the internship period, I engaged in a comprehensive exploration of MEAN stack technologies, encompassing MySql, Express.js, Angular, and Node.js, Bootstrap and GIT & GitHub etc.

And I made some projects like ‘Age calculator’, ‘Tic tac toe game’, ‘Calculator’, ‘Project Tracker’ during this Internship.

Time period: 30-05-2023 to 28-08-2023

Module-1

[Dated: 30-May-2023 to 30-June-2023]

Prerequisites:-

Before I started, I have a basic understanding of the following

- HTML
- CSS
- JavaScript
- Bootstrap

Then I started learning these techniques advanced.

• JavaScript

Why we use JavaScript ?

By the way I learned JavaScript from <https://javascript.info/> and I'll discuss what I learned-

The screenshot shows the homepage of javascript.info. At the top, there are three main navigation links: 'PART 1 The JavaScript language' (which is highlighted in red), 'PART 2 Browser: Document, Events, Interfaces', and 'PART 3 Additional articles'. Below these, the title 'The JavaScript language' is displayed in bold. A brief introduction states: 'Here we learn JavaScript, starting from scratch and go on to advanced concepts like OOP. We concentrate on the language itself here, with the minimum of environment-specific notes.' Under the heading 'An introduction', there are two columns of links: '1.1 An Introduction to JavaScript', '1.2 Manuals and specifications' in the first column, and '1.3 Code editors', '1.4 Developer console' in the second column. Further down, there are sections for 'JavaScript Fundamentals', 'Code quality', and 'Objects: the basics', each with its own set of numbered links. The overall layout is clean and organized, typical of a modern educational website.

Figure: JavaScript website

JavaScript is a versatile and widely used programming language that plays a crucial role in web development. Developed by Netscape, it was initially created to make web pages interactive and dynamic. Over the years, JavaScript has evolved into a powerful, general-purpose language with applications extending beyond the web browser. Here's a comprehensive overview:

Introduction:

JavaScript is a high-level, interpreted programming language known for its lightweight syntax and dynamic typing. It is primarily used to enhance the interactivity and user experience of web pages.

Core Features:

Dynamic Typing: Variables in JavaScript are not explicitly typed, allowing flexibility but also requiring careful handling.

Prototypal Inheritance: JavaScript uses a prototype-based object model, where objects inherit properties and behaviors from other objects.

First-Class Functions: Functions are treated as first-class citizens, meaning they can be assigned to variables, passed as arguments, and returned as values.

Usage in Web Development:

Client-Side Scripting: JavaScript is mainly employed for client-side scripting to make web pages interactive. It manipulates the Document Object Model (DOM) to dynamically update content.

Event Handling: JavaScript is used to respond to user actions like clicks, form submissions, and keyboard inputs, enhancing user interactivity.

ECMAScript:

Standardization: JavaScript follows the ECMAScript (ES) standard. ECMAScript specifications are regularly updated to introduce new features and improve language consistency.

Server-Side Development:

Node.js: JavaScript can be executed on the server side using Node.js, enabling developers to use a single language (JavaScript) for both client and server-side development.

Frameworks and Libraries:

Front-End Frameworks: Popular front-end frameworks like React, Angular, and Vue.js are built on top of JavaScript, simplifying the development of complex user interfaces.

Back-End Frameworks: For server-side development, frameworks like Express.js (Node.js), Nest.js, and others provide a structured approach.

Asynchronous Programming:

Callback Functions: JavaScript uses callbacks to handle asynchronous operations, and this approach has evolved into more sophisticated patterns like Promises and Async/Await.

Data Structures and Types:

Dynamic Objects: JavaScript supports dynamic creation and manipulation of objects.

Primitive Types: These include strings, numbers, booleans, null, and undefined. Objects and functions are also types in JavaScript.

Security:

Same-Origin Policy: JavaScript is subject to security measures like the Same-Origin Policy, which restricts web pages from making requests to a different domain than the one that served the web page.

Modern JavaScript:

ES6 and Beyond: Modern JavaScript, starting with ECMAScript 2015 (ES6), introduced features like arrow functions, classes, template literals, and destructuring assignments.

Tools and Package Managers:

npm (Node Package Manager): JavaScript projects commonly use npm for package management, allowing developers to share and reuse code easily.

Community and Resources:

Active Community: JavaScript has a vibrant and active developer community, contributing to numerous open-source projects and providing extensive documentation and tutorials.

The Future:

WebAssembly (Wasm): JavaScript's role in web development is evolving with the introduction of WebAssembly, enabling high-performance execution of code written in languages other than JavaScript.

In conclusion, JavaScript is a foundational technology in web development, playing a crucial role in both front-end and back-end development. Its continuous evolution and widespread use make it an essential language for developers building modern web applications.

- **Bootstrap:** A Front-End Framework

I learned Bootstrap from <https://getbootstrap.com/> and implemented in our code for better design template for forms, typography, buttons, navigation, tables, modals, image carousels, and many other components along with other optional JavaScript plugins.

Introduction:

Bootstrap is a free and open-source front-end framework initially developed by Twitter. It includes HTML, CSS, and JavaScript components for designing responsive and visually appealing web pages.

Key Features:

Responsive Design: Bootstrap is built with a mobile-first approach, ensuring that websites look good on devices of all sizes.

Pre-styled Components:

It offers a set of pre-styled components like navigation bars, buttons, forms, and more, making it easy to create a consistent and polished user interface.

Navigation Bar:

Bootstrap simplifies the creation of navigation bars with customizable options and responsive behavior.

Buttons and Forms:

It provides styled buttons and form controls that can be easily customized.

Grid System:

Bootstrap's grid system is based on a responsive, 12-column layout, facilitating the creation of complex and flexible page structures.

It supports different column sizes for various screen sizes, improving the adaptability of web pages.

Customization:

Bootstrap can be customized to meet specific project requirements. Developers can choose components and styles to include, resulting in a more lightweight and tailored framework.
Integration with JavaScript Libraries:

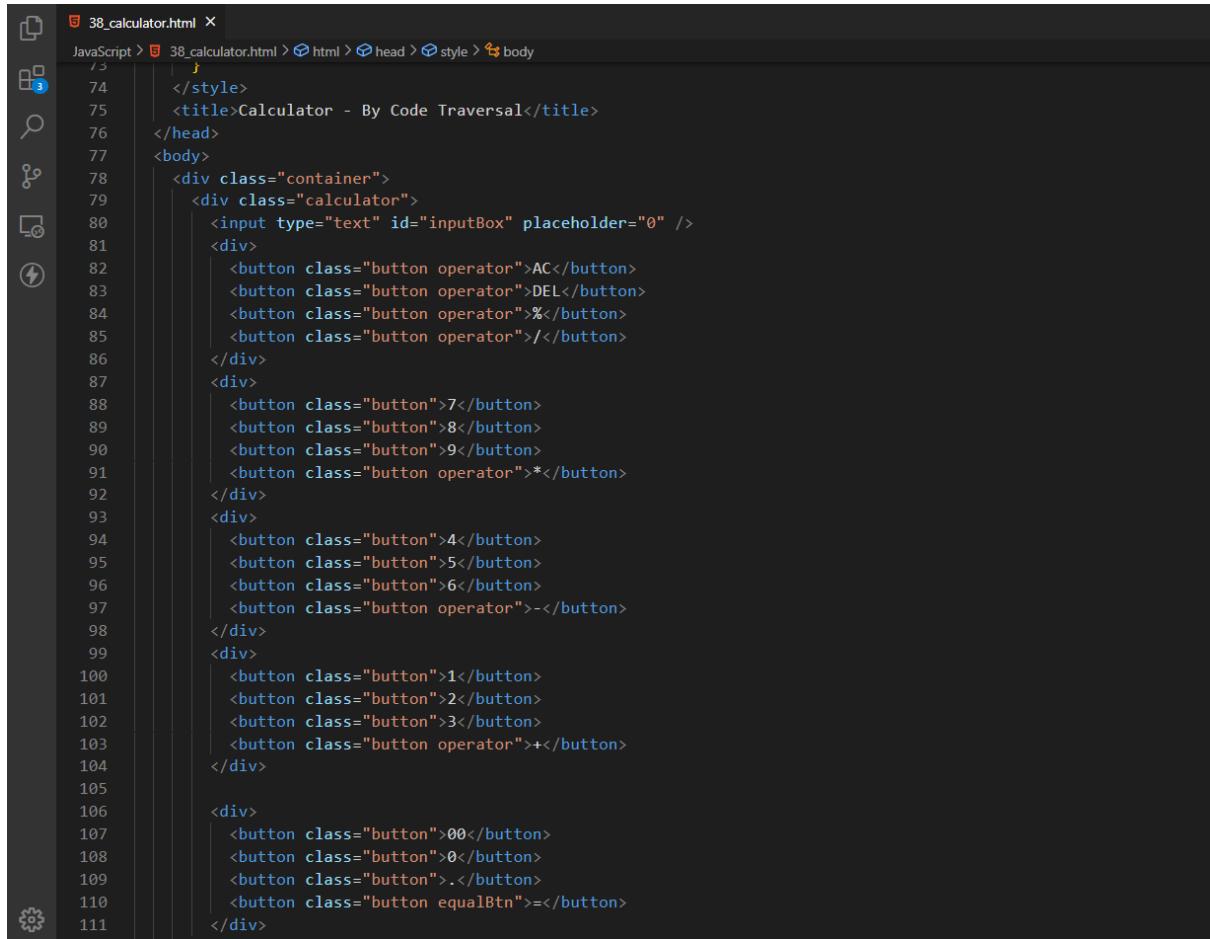
Project-1. Calculator Using HTML, CSS, JavaScript

Creating a calculator involves using HTML for the structure, CSS for styling, and JavaScript for the functionality. Let's outline the theoretical steps for building a simple calculator:

1. HTML Structure:

Create the basic structure of your calculator using HTML. Use `<div>` elements to organize the calculator into sections, such as display, buttons, and rows.

Include an input or a `<div>` to display the calculator's input and results



The screenshot shows a code editor window with the file '38_calculator.html' open. The code is a basic HTML structure for a calculator. It includes a title, a container div, and a calculator div containing an input field and various button elements. The code is numbered from 73 to 111. The code editor has a dark theme with icons for file operations on the left.

```
38_calculator.html
JavaScript > 38_calculator.html > html > head > style > body
73   }
74   </style>
75   <title>Calculator - By Code Traversal</title>
76   </head>
77   <body>
78     <div class="container">
79       <div class="calculator">
80         <input type="text" id="inputBox" placeholder="0" />
81         <div>
82           <button class="button operator">AC</button>
83           <button class="button operator">DEL</button>
84           <button class="button operator">%</button>
85           <button class="button operator">/</button>
86         </div>
87         <div>
88           <button class="button">7</button>
89           <button class="button">8</button>
90           <button class="button">9</button>
91           <button class="button operator">*</button>
92         </div>
93         <div>
94           <button class="button">4</button>
95           <button class="button">5</button>
96           <button class="button">6</button>
97           <button class="button operator">-</button>
98         </div>
99         <div>
100           <button class="button">1</button>
101           <button class="button">2</button>
102           <button class="button">3</button>
103           <button class="button operator">+</button>
104         </div>
105         <div>
106           <button class="button">00</button>
107           <button class="button">0</button>
108           <button class="button">. </button>
109           <button class="button equalBtn">=</button>
110         </div>
111       </div>
```

Figure- HTML file

2. CSS Styling:

Style your calculator using CSS to make it visually appealing.

Use CSS Grid or Flexbox for the layout, and style the buttons to make them look like a traditional calculator.

```

18 body {
19   width: 100%;
20   height: 100vh;
21   display: flex;
22   justify-content: center;
23   align-items: center;
24   background: linear-gradient(45deg, #0a0a0a, #3a4452);
25   /* background-color: #3a4452; */
26 }
27
28 .calculator {
29   /* border: 1px solid #717377; */
30   padding: 20px;
31   border-radius: 16px;
32   background: transparent;
33   box-shadow: 0px 3px 15px rgba(113, 115, 119, 0.5);
34 }
35
36 input {
37   width: 320px;
38   border: none;
39   padding: 24px;
40   margin: 10px;
41   background: transparent;
42   box-shadow: 0px 3px 15px rgbs(84, 84, 84, 0.1);
43   font-size: 40px;
44   text-align: right;
45   cursor: pointer;
46   color: #ffffff;
47 }
48
49 input::placeholder {
50   color: #ffffff;
51 }
52
53 button {
54   border: none;
55   width: 60px;
56   height: 60px;
57   margin: 10px;
58   border-radius: 50%;
59   background: transparent;
60   color: #ffffff;
61   font-size: 20px;
62 }

```

Figure- CSS file

3. JavaScript Functionality:

Write JavaScript functions to handle button clicks, perform calculations, and update the display.

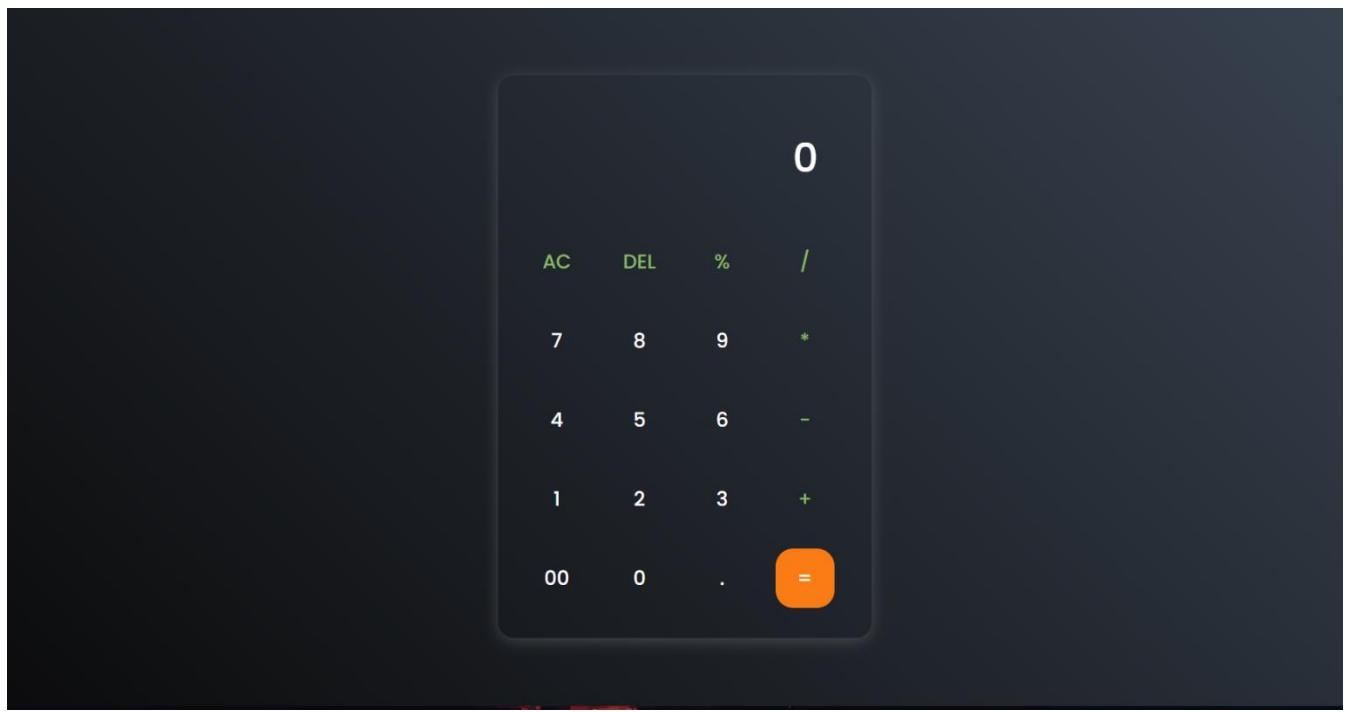
Use event listeners to capture button clicks and execute the appropriate function.

```

115 <!-- <script src="script.js"></script> -->
116 <script>
117   let input = document.getElementById("inputBox");
118   let buttons = document.querySelectorAll("button");
119
120   let string = "";
121   let arr = Array.from(buttons);
122   arr.forEach((button) => {
123     button.addEventListener("click", (e) => {
124       if (e.target.innerHTML == "=") {
125         string = eval(string);
126         input.value = string;
127       } else if (e.target.innerHTML == "AC") {
128         string = "";
129         input.value = string;
130       } else if (e.target.innerHTML == "DEL") {
131         string = string.substring(0, string.length - 1);
132         input.value = string;
133       } else {
134         string += e.target.innerHTML;
135         input.value = string;
136       }
137     });
138   });
139 </script>
140 </body>
141 </html>
142

```

Final output:



Project-2. Age calculator Using HTML, CSS, JavaScript

Step-1: Made two date selections for select current date and Birth date.

Step-2: Make sure that current date should not be select after current day.

Step-3: If Birth date is greater than current date then through A error.

Step-4: Else substrate the date from current date(With some rules) and show output.

Final Output:

Select current date
04-12-2023

Select your birth
26-06-2005

Show output
Year-18 Month-5 Days-8

Figure- Final Output

Module-2

Module-3 [Dated: 01-July-2023 to 31-July-2023]

Node.js Introduction:-

Node.js is an open-source, cross-platform JavaScript runtime environment that allows developers to execute JavaScript code server-side. It is built on the V8 JavaScript runtime engine, which is the same engine that powers Google Chrome. Node.js enables the execution of JavaScript code outside of a web browser, making it suitable for server-side development.

Features of Node.js – Here are some key aspects of Node.js:

JavaScript Runtime:

Node.js allows developers to use JavaScript to write server-side scripts. This unifies the development language across both the client and server, enabling full-stack JavaScript development.

Asynchronous and Event-Driven:

One of the defining features of Node.js is its event-driven, non-blocking I/O model. This means that instead of waiting for I/O operations to complete, Node.js continues executing other tasks. This asynchronous nature makes it well-suited for handling a large number of concurrent connections.

Libraries and Modules:

Node.js has a rich ecosystem of built-in modules and a package manager called **npm (Node Package Manager)**. Developers can easily include external libraries and modules to extend the functionality of their applications.

Single-Threaded, Non-Blocking:

Node.js operates on a single-threaded event loop, but it uses non-blocking I/O operations. This allows it to handle many concurrent connections without the need for multithreading, making it efficient for scalable network applications.

Common Use Cases:

Node.js is commonly used for building server-side applications, APIs, real-time applications (like chat applications), and scalable network applications. It excels in scenarios where a large number of connections need to be handled simultaneously.

Scalability:

The non-blocking, event-driven architecture of Node.js makes it scalable and suitable for applications that require high concurrency. It can handle a large number of simultaneous connections with low latency.

Cross-Platform:

Node.js is designed to be cross-platform, meaning it can run on various operating systems such as Windows, macOS, and Linux. This flexibility is advantageous for developers working in diverse environments.

Active Community:

Node.js has a large and active community of developers, contributing to its continuous improvement and the creation of numerous third-party modules and libraries available through npm.

Frameworks:

Several frameworks are built on top of Node.js, simplifying the process of building web applications. Examples include Express.js, Koa.js, and Nest.js.

Installation of Node.js –

Step 1: Download the Windows Installer from NodeJs official website.

Step 2: Install Node.js and NPM

After choosing the path, double-click to install .msi binary files to initiate the installation process. Then give access to run the application.

We will get a welcome message on your screen and click the “Next” button. The installation process will start.

Choose the desired path where you want to install Node.js.

By clicking on the Next button, We will get a custom page setup on the screen. Make sure choose npm package manager , not the default of Node.js runtime . This way, we can install Node and NPM simultaneously.

The following features will be installed by default:

- Node.js runtime
- Npm package manager
- Online documentation shortcuts
- Add to Path

The setup is ready to install Node and NPM. Let's click on the Install button

Step 3: Check Node.js and NPM Version

If we have a doubt whether you have installed everything correctly or not, let's verify it with "Command Prompt".

To confirm Node installation, we can type **node -v** command.

To confirm NPM installation, we can type **npm -v** command.



```
Administrator: Command Prompt
C:\>node -v
v14.15.3
C:\>npm -v
6.14.9
C:\>
```

Folder Structure with Express:

- Download, install and open VSCode
- Create a folder in my desktop... Name it MyNodeJsProject so as to locate it easily In your VSCode,
- Open the MyNodeJsProject folder. I can open the folder by clicking the file tab located at the upper left corner of VSCode.
- After clicking on file I'll see the Open Folder option... Click on it and locate My MyNodeJsProject folder in My desktop, then open the folder.
- Still in VSCode, Open the VSCode terminal by clicking the **terminal** tab located at the upper part of VSCode,
- Then click the **New Terminal** option. A new panel would pop up at the bottom part of your VSCode:

In the terminal, run the command below:

```
npm init -y
```

After running the above command, a package.json and package-lock.json file would be created automatically in my MyNodeJsProject folder.

The package.json file can be referred to as the Metadata of your project as it contains information that identifies the project as well as handling the project's dependencies. While the package-lock.json file is solely used to lock dependencies to a specific version number.

- In MyNodeJsProject folder, create a **index.js** file, that'll be the entry point of project. I can create the **index.js** file manually, or just run the command below in terminal:

```
type NUL > index.js
```

Creating a server using ExpressJs:

- In terminal that's navigated to the MyNodeJsProject folder, run the command below to install express:

```
npm install express
```

If express was installed successfully, a new folder called **node_modules** that'll be holding all your dependencies would be created automatically, and also get a message in the terminal indicating that you've successfully installed express.

- Now, Open **index.js** file
- In **index.js** file enter the following lines of code below and save:

```
// Importing the express module
const express = require('express');
// calling the express function
const app = express();

// Creating a "/home" route for sending "Hello World!" to the clientSide(Browser)
app.get("/home", (req, res)=>{
    res.status(200).send("<h1>Hello World!</h1>")
})

// declaring our Port number variable
const PORT = process.env.PORT || 4000;

// Creating a server with the PORT variable declared above
app.listen(PORT, ()=>{
    console.log(`Listening to Port ${PORT}`)
});
```

- After saving those lines of codes to index.js file, I'll need to get server running first, before I can access the "/home" route. Now, to get server running, run the following command in terminal:

```
node index.js
```

- Open browser, and enter "localhost:4000/home" in the url field

And that's all.... My Server is Up and Running!

AngularJS Introduction:-

Angular is a development platform, built on TypeScript.

As a platform, Angular includes:

- A component-based framework for building scalable web applications
- A collection of well-integrated libraries that cover a wide variety of features, including routing, forms management, client-server communication, and more
- A suite of developer tools to help you develop, build, test, and update your code

With Angular, we're taking advantage of a platform that can scale from single-developer projects to enterprise-level applications. Best of all, the Angular ecosystem consists of a diverse group of over 1.7 million developers, library authors, and content creators.

AngularJs Advantages:

1. Open source
2. Easy to extend
3. Easy to test
4. Great MVC
5. Google supported
6. No Pre-requisite knowledge
7. Easy to customize
8. single page application (SPA)

After Node.js and Express.js setup, we'll setup Angular:-

- Open new PowerShell to install Angular CLI
- And type > npm install -g @angular/cli
- Next > **ng --version** for check version
- To Create an initial Workspace for the application run command **ng new my-app**
- To run the Angular Application in Browser type **cd my -app**
- Then, start the development server by running the command> **ng serve**

This command compiles Angular application and starts a development server. By default, the server runs on port 4200.

Open preferred web browser and navigate to **http://localhost:4200/**. And boom new Angular application running in the browser.

Project-3. ToDo list Application Using HTML, CSS, JavaScript and AngularJs

Features:

1. We can add task with Description
2. We can do mark as done any task
3. And We can also delete task after done.
4. It can store our data so we can read after close the application.

Final Output:

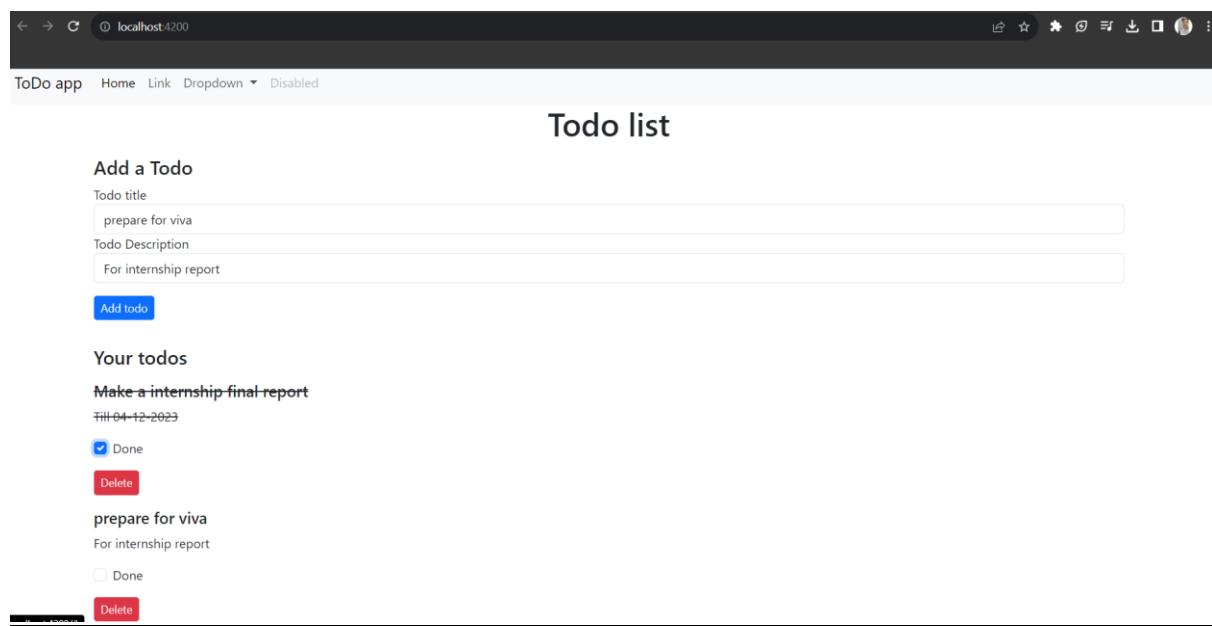


Figure- ToDo app Screenshot

Module-3

[Dated: 01-August-2023 to 28-August-2023]

Till now, I have a little knowledge of MySql database, after this I learned advance MySql.

MySql:

MySQL is the world's most popular open source database. According to DB-Engines, MySQL ranks as the second-most-popular database, behind Oracle Database. MySQL powers many of the most accessed applications, including Facebook, Twitter, Netflix, Uber, Airbnb, Shopify, and Booking.com.

Since MySQL is open source, it includes numerous features developed in close cooperation with users over more than 25 years. So it's very likely that your favorite application or programming language is supported by MySQL Database.

Project-4. Tic Tac Toe game

Then I made Tic Tac Toe game with Nice UI design.

Features of this game:

- Two players can play game.
- Users can choose their name and symbol
- After choosing name and symbol, Game board will be visible for playing
- And according to name players can fill their box with their symbol
- Automatically players will Toggle
- And if any player win the game, their name will be Pop Up
- And **Restart** button will be visible
- If Nobody won, It'll show **Draw the Game.**

Output:

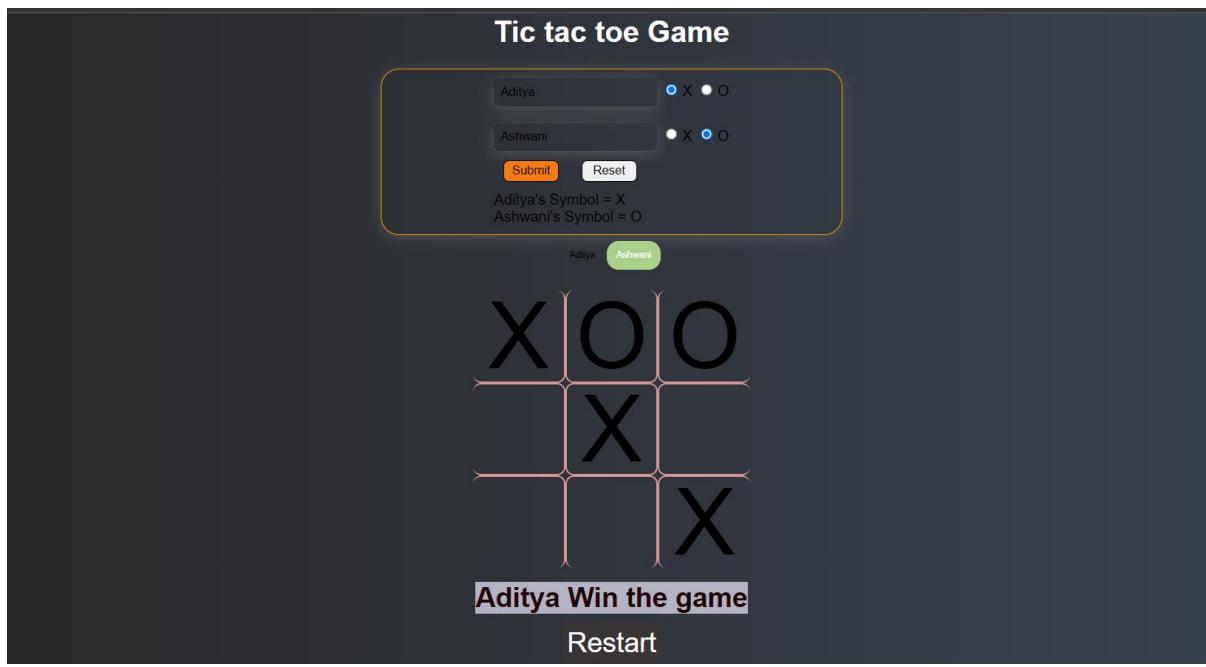


Figure- Tic Tac Toe game

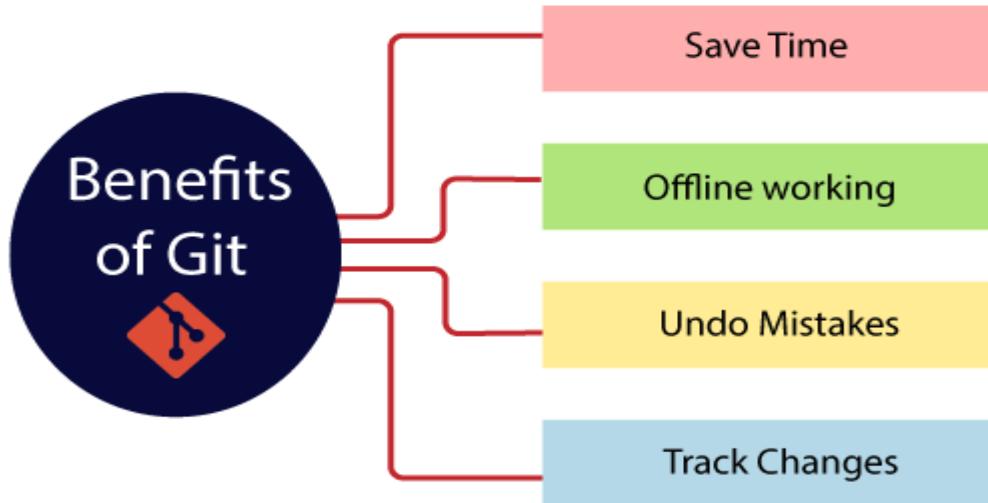
After this, I learn about Git & GitHub.

What is Git: Git is a modern and widely used **distributed version control** system in the world. It is developed to manage projects with high speed and efficiency. The version control system allows us to monitor and work together with our team members at the same workspace.

Git was created by **Linus Torvalds** in **2005** to develop Linux Kernel. It is also used as an important distributed version-control tool for the **DevOps**.

Features of Git:

- Open Source
- Scalable
- Distributed
- Security
- Speed
- Supports non-linear development
- Branching and Merging
- Staging Area
- Maintain the clean history



After learning Git commands like :-

- **git init:** The command git init is used to create an empty Git repository.
- **git add:** Add command is used after checking the status of the files, to add those files to the staging area.
- **git commit:** The commit command makes sure that the changes are saved to the local repository.
- **git status:** The git status command tells the current state of the repository.
- **git config:** The git config command is used initially to configure the user.name and user.email. This specifies what email id and username will be used from a local repository
- **git branch:** The git branch command is used to determine what branch the local repository is on.
- **git checkout:** The git checkout command is used to switch branches, whenever the work is to be started on a different branch.
- **git merge:** The git merge command is used to integrate the branches together. The command combines the changes from one branch to another branch.
- **git remote:** The git remote command is used to create, view, and delete connections to other repositories.
- **git clone:** The git clone command is used to create a local working copy of an existing remote repository.

- **git pull** : The git pull command is used to fetch and merge changes from the remote repository to the local repository.
- **git push**: The command git push is used to transfer the commits or pushing the content from the local repository to the remote repository.
- **git log**: The git log command shows the order of the commit history for a repository.

After Git, learned about GitHub-

GitHub:

GitHub is an online software development platform. It's used for storing, tracking, and collaborating on software projects. It managed by **Microsoft**.

It makes it easy for developers to share code files and collaborate with fellow developers on open-source projects. GitHub also serves as a social networking site where developers can openly network, collaborate, and pitch their work.

Conclusion

In conclusion, my internship experience with the MEAN stack has been an invaluable journey that has significantly enhanced my skills and understanding of full-stack web development. Over the course of the internship, I had the opportunity to work with MySQL, Express.js, Angular, and Node.js, gaining practical insights into each component of the MEAN stack.

One of the major highlights of the internship was the hands-on experience in designing and implementing scalable web applications. Working on real-world projects allowed me to apply theoretical knowledge to solve practical challenges, deepening my understanding of each technology within the MEAN stack.

The collaborative environment fostered effective teamwork, communication, and agile development practices. Engaging with experienced developers provided me with mentorship and exposure to industry best practices, contributing significantly to my professional growth.

• • •