



DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING

EVENT – Prototype/Process Design and Development

Venue : Tejas Seminar Hall, NHCE

Time : 10 AM to 4 :30PM



Institution's Innovation Council

in association with

Department of Artificial Intelligence and Machine Learning

Organises

Workshop on

Prototype/Process Design and Development

 21 & 22 May 2024 | (9 Hours - 18 Hours)

 Tejas Seminar Hall, NHCE

Speaker

Mr. Kiran M

Digital Private Limited,
California, US

Student Coordinators

Vibha N R - 8867014336

Seema R - 7899438462

Faculty Coordinators

Dr. Sowmya H K

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Dr. Sonia D Souza
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Registration Link

<https://forms.gle/fLFxQthzAgDdnn7y5>

INTRODUCTION

On the 21st of May, 2024, the Tejas Seminar Hall at New Horizon College of Engineering (NHCE) was the venue for an eagerly anticipated web development workshop. The workshop was conducted by Mr. Kiran M, a distinguished expert in web development, who aimed to provide attendees with a comprehensive understanding of full-stack web development. This report details the structure of the workshop, the topics covered, and the interactive nature of the sessions.

Workshop Overview

The workshop was meticulously structured into two main sessions to ensure a thorough understanding of full-stack web development. The first half focused on theoretical and practical components essential for full-stack development, while the second half was dedicated to hands-on practice in building a simple website.

FIRST HALF: UNDERSTANDING FULL-STACK WEB DEVELOPMENT COMPONENTS

The morning session commenced with Mr. Kiran M introducing the fundamental concepts of web development. He emphasized the importance of understanding both front-end and back-end technologies to become a proficient full-stack developer. The following components were discussed in detail:

- 1. HTML & CSS:** Mr. Kiran M began with the basics of HTML (Hypertext Markup Language) and CSS (Cascading Style Sheets). He explained how HTML forms the backbone of web content, providing structure and semantics, while CSS is used for styling and layout, ensuring that websites are visually appealing and responsive.
- 2. JavaScript:** Moving on, the session covered JavaScript, the scripting language that brings interactivity to web pages. Mr. Kiran M elaborated on basic programming concepts, such as variables, functions, and control structures, and demonstrated how JavaScript can manipulate the Document Object Model (DOM) to create dynamic content.
- 3. Front-End Frameworks:** An introduction to popular front-end frameworks like React.js was provided. Mr. Kiran M explained the advantages of using frameworks to manage complex user interfaces and state management, making development more efficient and scalable.
- 4. Back-End Technologies:** The session also delved into server-side programming with an introduction to Node.js. Mr. Kiran M discussed how Node.js, with its event-driven architecture, is well-suited for building scalable network applications. He also touched upon Express.js, a minimal and flexible Node.js web application framework that provides robust features for web and mobile applications.

To ensure that students were well-prepared for the practical session, Mr. Kiran M guided them through the installation process of Node.js and provided the necessary documents and resources. These resources included sample code snippets, configuration files, and a curated list of useful libraries and tools.

SECOND HALF: BUILDING A SIMPLE WEBSITE

The afternoon session was highly interactive and focused on the practical application of the concepts learned in the morning. Participants were guided step-by-step in building a simple, yet functional, website using both front-end and back-end technologies.

1. **Setting Up the Development Environment:** Students were instructed to set up their development environment by installing Node.js and the necessary packages. Mr. Kiran M provided a walkthrough of setting up a basic project structure, initializing npm (Node Package Manager), and installing dependencies.
2. **Front-End Development:** The first task involved creating the front end of the website. Using HTML and CSS, students built a basic web page layout. They then enhanced the interactivity and user experience by integrating JavaScript. Mr. Kiran M demonstrated how to create responsive designs and handle user inputs effectively.
3. **Back-End Development:** Next, the focus shifted to the back-end. Participants learned how to set up a server using Node.js and Express.js. They created routes to handle HTTP requests and responses, making their website functional. Mr. Kiran M explained how to connect the front end with the back end, enabling data exchange and dynamic content rendering.
4. **Building the Simple Website:** With the guidance of Mr. Kiran M, participants combined their front-end and back-end skills to build a simple, fully functional website. The website featured basic interactivity, such as form submissions, data display, and basic CRUD (Create, Read, Update, Delete) operations. This hands-on experience allowed students to see the complete process of web development from start to finish.

INTERACTIVITY AND ENGAGEMENT:

The workshop was characterized by a high level of interactivity, which significantly enhanced the learning experience. Mr. Kiran M encouraged participants to ask questions and engage in discussions throughout the sessions. Real-time problem-solving and coding exercises allowed students to apply the concepts they were learning immediately. The interactive nature of the workshop ensured that participants were actively involved, making the sessions dynamic and engaging.

Q&A SESSION:

The workshop concluded with a dedicated Q&A session where participants could ask questions and clarify doubts. Mr. Kiran M patiently answered queries, providing additional insights and tips based on his extensive experience in the field. Topics ranged from debugging common issues to exploring advanced features of web development frameworks.

FEEDBACK FROM PARTICIPANTS:

The feedback from participants was overwhelmingly positive. Students appreciated the clear, step-by-step instructions and the practical approach of the workshop. Many expressed their excitement about the newfound skills and their eagerness to apply them in their personal projects and future coursework. The hands-on nature of the workshop, combined with Mr. Kiran M's engaging teaching style, was particularly praised.

CONCLUSION:

The web development workshop conducted by Mr. Kiran M at NHCE was a resounding success. It provided students with a solid foundation in both front-end and back-end web development, equipping them with the skills necessary to build complete web applications. The workshop's structure, combining theoretical knowledge with practical application, ensured that participants gained a comprehensive understanding of full-stack web development.

ACKNOWLEDGEMENT:

We extend our heartfelt thanks to Mr. Kiran M for his time and effort in conducting this workshop. His expertise and dedication significantly contributed to the success of the event. Special thanks are due to the student and faculty coordinators who played an essential role in organizing and facilitating the workshop. Their efforts ensured that the event ran smoothly and successfully. We also thank the organizing committee, the faculty, and the students of NHCE for their support and participation, making this event a grand success.







Faculty Coordinators

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