

LEARNING OUTCOME FOR WEB DEVELOPMENT

MONTH 1

INTRODUCTION TO WEB DEVELOPMENT AND INTRODUCTION TO HTML

Objective:

The students learn the meaning of building responsive and functional apps and websites and also learn about the various tools and technologies needed to do it.

They are also introduced to the first technology which is HTML. They learn the function of HTML as a tool to structure and define the layout of our web apps. They learn about the various tags of HTML and their respective functions.

Project:

- (i) Building a Static “Students’ Discovery Form” web page using HTML
- (ii) Using the form tags and the various input tags

Learning Outcome:

At the end of the month, the students should have a solid grasp of HTML and they should be comfortably able to build fresh static websites or/and clones of their favorite websites using HTML

MONTH 2

HTML/CSS

Objective:

The students are taught more advanced features of HTML such as the meta tags and how they are used, and so on. They are also introduced to CSS (Cascading Style Sheet). They are taught the meaning and function of CSS. They are introduced to the various selectors, properties and property values of CSS.

Project:

Adding professional and excellent styling to the static webpage project built in the previous month

Learning outcome:

At the end of this section, the students can apply basic styling to the static webpages they have built using HTML.

MONTH 3

CSS (CASCADING STYLE SHEET)

Objective:

The students, at the end of this section, would have been taught more advanced features and elements of CSS (selectors, properties and property values). They should be able to independently style any web page using CSS various instructions.

Project:

- (i) CSS positioning projects (The Box model)
- (ii) Float and Display types
- (iii) Laying out with Flex box

Learning Outcome:

At the end of this section, the student will become to get really comfortable with designing a professional looking responsive websites which work well on multiple devices using their CSS skills

MONTH 4

Advanced CSS and Bootstrap Library

Objective

The students should now be deft with CSS and applying their skills to create highly responsive and professional websites. They are now introduced to CSS frameworks such as bootstrap which help to create fast and more efficient CSS codes

Project:

Learning of the Bootstrap classes

Building a professional website from scratch

Learning Outcome:

At the end of this section, the students will be able to build a professional websites with the Bootstrap CSS framework

MONTH 5

Introduction to JavaScript

Objective:

The students learn about the most common programming language for web. They are taught the general principles of coding and instructing the computer through programming languages. They are taught about the basic types and syntaxes in JavaScript.

Project:

Create various objects, arrays, nested objects and arrays which are stored in the “let” and “const” bindings

Write functions (by declarations and expression) which solve simple Maths problems. Display answer in the prompt

Learning Outcome:

At the end of the section, the students should be able to have a decent grasp of the basic types such as Numbers, Boolean, Arrays, Objects, etc. of JavaScript

They should be able to create basic functions which solve simple problems.

MONTH 6

JavaScript

Objective:

At this point, the students, gets to more concepts in JavaScript. They are taught on how to manipulate the data in objects and arrays. They learn different array methods such as splice, concat, mapping etc. and also for objects. They are also taught more about functions. They are taught conditional operations such as “if” and “if-else” statements. They are taught loops.

Project:

Building more complex functions that solve multiple problems at the same time using advanced logic.

Building a simple Facebook app without the DOM.

Learning Objectives:

The students, at the end of this section, should now be able to manipulate their way around comfortably using JavaScript various syntaxes and applying advanced logic to create simple apps which are tested with the prompt and debugged at the console

MONTH 7

JavaScript (contd.)

Objective:

At this juncture, the students are taught the Document Object Model concepts. They are taught how they can manipulate the DOM (and the HTML document) right from the JavaScript file. They are taught how to consummate all they have been taught so far in JavaScript to build fully functional apps.

Project:

Write functions which manipulate the DOM

Fetch data from API which are rendered into the DOM

Learning Outcomes:

The students, by now, should be able to build real apps using the various concepts in JavaScript and using the DOM to render their projects.

MONTH 8

React JS

Objective:

The students are introduced to one of the most popular JavaScript library known as React. With React they will be able to build more complex websites easily using components and taking advantage of the declarative nature. Also, they will be introduced to the terminal and how to use it.

Project

Using the terminal to control the computer

Creating at least five components which are linked and rendered at the UI

Build a dynamic Todo List with React

Learning Outcome:

At this stage, the students should be able to build various components of a dynamic websites which are linked together and rendered. They will be able to pass data using props and to use alter the state of their apps.

MONTH 9

React Js

Objective:

At this juncture, the students will be able to combine all they have learnt to build a fully standard, world class app using React. They are also introduced to state management library such as Redux.

Project:

Build an e-commerce site for ordering items

Learning Outcome :

The students can totally build a fully functional dynamic website on their own.