Course Outline for Software Academy

Prerequisites:

· Visual Studio code installation

· Microsoft Teams/Zoom

· Git bash

· GitHub account (For assignments)

Mode of classes:

· Classes will hold virtually three days a week: Tuesdays, Wednesdays and Thursdays.

· Duration of each class will be 2 hours. One hour for learning new concepts and one hour for solving hands-on exercises.

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| Week | Learning outcomes | Duration |
| 1 | Tutor background/ getting familiar with students  Introduction to software development, software development processes  Getting familiar with visual studio code and downloads of extensions  Dissection of some of the project submissions  Introduction to web development (Creation of first web page) |  |
| 2 | Use of text and paragraphs in HTML  Adding media to web pages (video, audio, vector, images and iframes)  Lists in HTML  Structural elements and navigation  Non semantic elements and comments in HTML  Creation of forms in HTML |  |
| 3 | Tables in HTML  Introduction to CSS  CSS selectors  Creating layouts with float  Styling a navigation menu  Styling a form  Overlapping content and transparent backgrounds |  |
| 4 | Typography in CSS  Styling data tables  How to use the inspect element in the browser  CSS colors and backgrounds  Introduction to responsive web design  Grids and flexbox |  |
| 5 | CSS special effects: box shadows, rounded corners, CSS transformation, CSS transitions, CSS animation  Introduction to bootstrap  Bootstrap tutorials (main) |  |
| 6 | Introduction to SASS  Basics of SASS  Creating a full web page using SASS |  |
| 7 | Introduction to JavaScript: Hello world, linking a JS file, values and variables, data types, let var and const etc  Basic operators in JS, operator precedence, logical operators  Strings and template literals  Conditionals in JS |  |
| 8 | Ternary operators  Functions  Arrow functions  Coding challenges in JS |  |
| 9 | Coding challenges in JS  Introduction to Arrays  Loops in JS  Introduction to objects  Dot notation and square bracket notation  Object Methods |  |
| 10 | Coding challenge in JS  DOM in JS  Manipulating the DOM using JS |  |
| 11 | Introduction to JS frameworks  Vue Js  Data and methods  Data binding  Events and event modifiers  Computed properties  Dynamic CSS  v-for and vue conditionals |  |
| 12 | Components  How to work with refs  Parent and child communication using events and Props  HTTP requests |  |