Student: Colm Rourke

Group 1

Microsoft

Topics: Typescript, React, MVC pattern

**TypeScript**: This is an open-source programming language developed by Microsoft. It is a superset of Javascript. Typescript is used for developing large scale applications. They developed this to ease the complexity of JavaScript code. JavaScript program is also a valid TypeScript program. JavaScript code and libraries can be used in TypeScript. Node.js modules are available for the TypeScript headers which allows Node.js programs to be developed in TypeScript. There are header files for JQuery and MangoDB which are very common libraries to store and manipulate data.

**React:** React or React.js is a JavaScript library that is used for building user interfaces. It only processes user interfaces and this corresponds the Model-View-Controller pattern found in many new websites. React will update and render the components the developer wants when data changes. It has declarative views which mean is a style of building the structure of computer programs will allow debugging to be easier for the developer. Developers can build encapsulated components that manage their own state. It has Social media giants such as Facebook and Instagram maintain React along with a community of individual developers. Web developers can create and view change of their creation of web applications. React can render on the server using Node.js.

**MVC Pattern**: This is a software architectural pattern. It is used for developing user interfaces. It divides an application in three parts, the model, the view and the controller. The model represents an object carrying data or a structure of objects. The view represents the visualization of the data to the user. It will highlight certain attributes of the model and suppress others. It asks questions to the model component to get necessary data to know what to filter in the presentation. The controller controls the data flow and updates the view on this data. Each are interconnected components to each other. Since MVC is designed such that these components are decoupled, it is easier to reuse the code and to add additional features to the program. Java, PHP and many more popular programming languages have MVC frameworks used for web application development.