SWEP REPORT FOR SOFTWARE DEVELOPMENT

AIM:

1. To understand to concept of software development

2. To understand some basic concept/terms used in JavaScript

3. Write some program using JavaScript programming language

4. Learn How to use React Native and expo to deploy a mobile app

5. Set up your environment

6. Create and Deploy a mobile app of your choice

7. Introduction to Blockchain

Brief Introduction to software Development

Software development is the process of creating, designing, programming, testing, and maintaining computer programs and applications. It encompasses a broad range of activities that involve turning an idea or a set of requirements into a functional software product. Software development is a crucial aspect of modern technology, powering the software applications and systems that run on computers, mobile devices, and various other platforms.

Some of the basic concept I learnt:

1. What is a variable and the different methods of declaring a variable: , a variable is a symbolic name (identifier) for a value. Variables are used to store and manage data in a program. You can think of a variable as a container that stores a value. The following are the different method of declaring a variable in javascript:

I. var: It has function-level scope, which means it is scoped to the nearest function block and is not block-scoped. Example

var x = 10

ii. let: It has block-level scope, which means it is scoped to the nearest enclosing block (typically a pair of curly braces {}). Use let when you need to reassign the variable. Example

let x = 10

iii. Const: It stands for "constant" and is used for values that should not be re-assigned. Example

const x = 10

2. Function: a function is a reusable block of code that performs a specific task or set of tasks. Functions allow you to organize your code into modular and reusable units, making it easier to manage and understand. Functions can accept input parameters, perform computations, and return a result.

Below contains the syntax to define a function:

function myfunction(parameter1, parameter2, …) {

// The block of code will be written here

}

3. Object: an object is a complex data type that allows you to store and organize data using key-value pairs. Objects are one of the fundamental building blocks in the language and are used to represent real-world entities, concepts, or structures. Objects can store properties and methods, making them versatile and powerful for modeling various types of data.

Below contain the syntax to create an object in javascript:

let myobject = {

“key1”: value1,

“key2”: value2,

“key3”: value3,

}

4. Types of Datatypes in javascript: there are two main categories of datatypes in javascript. They are primitive and object data types.

Example of primitive datatypes: string, number, undefined, null, boolean, symbols

Example of Object datatypes: object, functions, array.

What is the main use of the React Native and how to set up your environment for react native to work on?

React Native is a popular open-source framework developed by Facebook that allows you to build mobile applications using JavaScript and React. The main use of React Native is to enable the development of cross-platform mobile applications with a single codebase.

Below are the prerequisite required to use react native on your pc:

1. Nodejs must be installed on your pc

2. Vs Code must be installed as well.

3. Install Bluestack

How to set up your environment:

step 1: install the required program and frameworks, to confirm if nodejs as been installed on your pc, open your vs code, at the menu bar, click on terminal and then click on new terminal. Then type node –version in the terminal. If it displays the version on the nodejs installed then nodejs is installed otherwise install nodejs.

Step2: create a new folder, with the name you intend on giving to your application. Then open that folder on Vs Code.

Step3: On your terminal, type the following command to start your application.

npx create-expo-app then enter

a prompt will show which will ask you what name you want to give to your app. Simply type ‘.’ indicating that you want to use your current folder. Then wait till it finish installing the required dependencies.

Step4: Open your bluestack, go to settings, and click on advance settings. Turn on Android Debugger Bridge, and note the ip address and the port number under it. This will allow the bluestack to connect to your vscode

Step5: on your bluestack, open the google playstore and download Expo Go. Then open the application.

Step6: in your VsCode, type the following code in your terminal and press enter

npx expo start

then copy the link it provide and paste it in expo go application you opened in bluestack.

Then wait for the connection to complete.

You’ve successfully set up your environment to deploy your application.

MOBILE APP CALCULATOR:

In the course of this swep, I was able create a mobile calculator from scratch using what I learn from the swep.