Practical-10

Hybrid Mobile Application Development

Installing Node.js

Step 1: Here is the link where you can easily install it -> http://nodejs.org

- You can install Node 12.14.0 LTS

Step 2: Select the features that you want to add in your application.

Step 3: You can install some additional tools that are necessary to compile native modules.

Step 4: Click on the Install button to begin the installation.

To test the installation, you can write following command on the command prompt:

- node –version

Installing Git:

Step 1: To install the Git, you can visit its official website that are as follows: http://git-scm.com.

Step 2: Click on the latest release version 2.24.1 for Windows. Accept the license agreement and click on the Next Button to continue.

Step 3: Here, you can select the path where you want to install Git and then click on the Next button to continue.

Step 4: After that, you can specify the shortcut name that is displayed for the Start Menu folder and then click on the Next button to continue.

Step 5: Default components required for installation are automatically selected. You can also select your additional components.

Step 6: You can choose the editor for using the Git. By default, Vim editor is being used.

Step 7: You can adjust the path environment of Git from the below three options. The default path for the Git installation is from the command line and 3rd party software.

Step 8: The default library is being selected for the HTTPS connections.

Step 9: Select line ending options and then click on the Next button.

Step 10: Select the terminal emulator that is to be used with Git Bash and click on the Next button to continue.

Step 11: This is the last step that provides some additional feature that you want to add in your Git application.

Installation Will be Done and Click to finish.

Installing Cordova:

You can run the following command in command prompt to install the Cordova application on Windows:

- C: \>npm install -g cordova

If you want to check the version of cordova

- cordova –version

Creating first Cordova Application

Step 1: First of all, check the node.js version in command prompt to check whether it is properly installed or not.

- Type the following command in command prompt -> node –version

Step 2: Then, type npm on the command prompt.

Step 3: We have already installed Cordova in our system.

If you did not install it, you can simply do that by this specific command->

- npm install -g cordova.

Step 4: Now, create the Cordova application on the desktop. First, we have to change our default directory to the desktop.

Type the below command on command prompt to change the default directory.

- cd Desktop

Step 5: To create our first Cordova application, we have to write the below command on the command prompt.

- cordova create app com.xyz.app app

Step 5.1 : we have to move to that directory that we have created for building the application i.e., app and type dir for showing the current directory.

Step 6: By adding a new platform, we can simply deploy our application. Type the below command to create an Android platform.

- cordova platform add android --save

Step 7: We also need to install PhoneGap for serving the application. To install the PhoneGap module, we must have to type the below command:

- npm install -g phonegap

Step 8: After installing PhoneGap, we also need to install the Android SDK for adding a platform to our application. We can install it from its official website https://developer.android.com/studio.

Step 9: Go to that folder where you have installed Android SDK in your system and click on tools folder and copy its path.

Step 10: Now, open environment variables in your system and click on the path variable.

Step 11: Add a new path by pasting the path in the path variable.

Step12: After that, copy the platform-tools path and paste it into the path variable.

Step 13: Once you done all of that, run your app in the browser by typing the following command in command prompt:

- phonegap serve

Config.xml file

The config.xml file is the place where we can change the configuration of the app. When we created our app in the last tutorial, we set reverse domain and name. The values can be changed in the config.xml file. When we create the app, the default config file will also be created

Elements Used In The Config.Xml File:

Elements	Description
Widget	It defines the reverse domain value of an app that should be specified when creating the app.
Name	It defines the name of an app.
Description	It represents the description of an app.
Author	It represents the contact information that can be shown within app-store listings.
Content	It represents the starting page of an app at the top-level web assets directory. The default value is index.html that appears at the top-level www directory.
Plugin	It is an additional feature for enhancing the capabilities of Cordova. It can be defined as a package of code that helps to communicate with the native platforms.
Access	It is used to control access for a specific network domain. It has the default origin value *, which shows that the access is opened to any domain.
Engine	It specifies the details about the platform, which is restored during the implementation.
allow-intent	It is used for enabling the specific URLs to ask the app to open.
Hook	It represents your custom script that is called by Cordova when a particular action occurs. It is useful for extending the default Cordova functionality.
Platform	It represents a platform where we build our application.
resource-file	It installs the resource file into the system