ACCEPTANCE TESTING UAT INITIATION AND DESIGN

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| **TEAM ID** | PNT2022TMID46309 |
| **PROJECT DOMAIN** | INTERNET OF THINGS |
| **PROJECT TITLE** | IoT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE |
|  | 24 NOV 2022 |
| **MAXIMUM MARKS** | 4 MARKS |

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| **Test case ID** | **Feature type** | **Component** | **Test Scenario** | **Pre- Requisite** | **Steps to Execute** | **Expected result** | **Actual result** | **Status** | **Executed by** |
| TC\_OO1 | Functional | IBM cloud | Create the IBM Cloud services which are being used in this project. | IBM  Cloud Login ID & Password | 1. IBM Cloud signup page 2. Enter e-mail id and other credentials | User should sign up IBM cloud and details should be verified | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_OO2 | Functional | IBM Cloud | Configure the IBM Cloud services which are being used | IBM  Cloud Login ID & Password | 1. Go to Cloud login 2. Enter user ID & Password 3.Verify login | User login to IBM Cloud and should be navigated to IBM Cloud dashboard page | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |

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|  |  |  | in completing this project. |  |  |  |  |  |  |
| TC\_OO3 | Functional | IBM  Watson IoT Platform | IBM Watson IoT platform acts as the mediator to connect the web application to IoT devices, so create the IBM Watson IoT platform. | IBM  Watson IoT Platform Login ID & Password | 1.IBM Cloud 2.Click Catalog   1. Search IoT and click create 2. Resource list and search Internet of Things platform 3. Press Launch and click Sign in IBM Watson Platform | User should be navigated to IBM IoT Watson Platform | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_OO4 | Functional | IBM  Watson | In order to connect the IoT device to the IBM cloud, create a device in the IBM Watson IoT platform and get the device credentials. | IBM  Watson IoT Platform Login ID & Password | 1. Login to IBM Watson Platform 2. Click Add Device 3. Enter the details and click Finish. 4.Turn on Device Simulator and click simulation running. Enter the values.Click Send. | Temperature, Humidity , Soil moisture sensor values should be randomly generated | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |

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| TC\_OO5 | Functional | IBM  Cloud(Node Red) | Configure the connection security and create API keys that are used in the Node-RED service for accessing the IBM IoT  Platform. | Node Red Installation | 1. Install node red and open node red in command prompt 2. Select IBM input in IoT | User should be able to see the Node Red page | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_OO6 | Functional | Node Red | Create a Node- RED service. | Node Red Installation | 1.Select IBM IoT input in Node. In IBM IoT Watson Platform, go to apps and click on generate API keys.2.Copy & paste generated API key and token in the IBM IoT input. 3.Add debug to the IBM IoT and rename as Msg.payload and click on done.   1. Edit function node. 2. Finally add motor ON/OFF buttons to the IBM IoT and debug. Verify the output from NODE RED using Local host link. | Values of sensors and button for motor ON/OFF should be displayed | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |

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| TC\_007 | Functional | Python 3.7.0 | Develop a python script to publish random sensor data such as temperature, humidity level, soil moisture to the IBM IoT platform | Python 3.7.0(64  bit) installation | 1.Download and install Python 3.7.0 2.Develop python code | User should be able to develop a python code | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_OO8 | Functional | Python 3.7.0 | After developing python code, commands are received just print the statements which represent the control of the devices. | Python 3.7.0(64  bit) installation | 1.Downlinstall Python 3.7.0 2.After python code | User should be able to get the results from the developed code | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_OO9 | Functional | IBM  Cloudant DB | Publish Data to The IBM Cloud | IBM  Cloud Login ID & Password | 1. Install node red and open node red in command prompt 2. Select IBM input in IoT | User should be able to see the Node Red page | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |

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| TC\_O10 | Web UI | Node Red & MIT  Inventor | Create Web UI in Node- Red | MIT  Inventor Login ID & password | 1.Go to Node Red. Select http in & http response. Add functions .Connect them to IBM IoT output and function.Print the command statements such as motor ON/OFF and sensor 2.Go to MIT app inventor and create frontend Add blocks and so on to create back end. Verify the output. | Sensors values and command values should be seen in the mobile application | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |
| TC\_O11 | Functional | IBM  Cloudant DB | Configure the Node-RED flow to receive data from the IBM IoT  platform and also use Cloudant DB nodes to store the received sensor data in the cloudant DB | IBM  Cloud Login ID & Password |  |  | Working as expected | Pass | R.Ramyaa V.Pavithra P.Sobana G.Sivaranjani |