**Unit testing:**

In this test, we will be testing individual units of the system separately to ensure that each unit performs as designed. This system has been divided into three modules, so in unit testing each module will be tested individually.

**Main menu (Module 1) testing**:

In this test, we will perform scenario based test case design for Start Tour Guide Use-Case:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Scenario | Test Case Description | Precondition | Test Steps | Test Data | Expected Results | Actual Result |
| TC\_001 | Starting the tour guide for the water cycle | Testing start tour guide functionality by looking at the button for 2 seconds | Open the app. | Look at the Tour Guide button for 2 seconds. | - | Tour guide Started | Tour Guide started |
| TC\_002 | Starting the tour guide for the water cycle | Testing start tour guide functionality by not looking at the tour guide button | Open the app | Look anywhere but not on the Tour Guide button | - | Tour Guide does not start. i.e. no action taken | Tour guide does not start |
| TC\_003 | Starting the tour guide for the water cycle | Testing Start tour guide functionality by looking at start Game button | Open the app. | Looks at the start game button for 2 seconds. | - | Game starts | Game starts and tour guide does not start |

In this test, we will perform scenario based test case design for Start Game Use-Case:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Scenario | Test Case Description | Precondition | Test Steps | Test Data | Expected Result | Actual Result |
| TC\_001 | Starting the Game. | Testing start Game functionality by looking at the start Game button for 2 seconds. | Open the app. | Look at the Start Game button for 2 seconds. | - | Game is started | Game is started |
| TC\_002 | Starting the Game. | Testing start Game functionality by not looking at the Start Game button | Open the app | Look anywhere but not on the Start Game button | - | Game does not start. i.e. no action taken | Game does not start |
| TC\_003 | Starting the Game. | Testing Start Game functionality by looking at Tour Guide button. | Open the app. | Looks at the Tour Guide button for 2 seconds. | - | Tour Guide starts | Game does not start but instead tour guide starts |

In this test, we will perform scenario based test case design for Exit Use-Case:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Test Case ID | Test Scenario | Test Case Description | Precondition | Test Steps | Test Data | Expected Results | Actual Result |
| TC\_001 | Exiting the app. | Testing Exit functionality by looking at the Exit button for 2 seconds. | Open the app. | Look at the Exit button for 2 seconds. | - | App is closed. | App is closed. |
| TC\_002 | Exiting the app. | Testing Exit functionality by not looking at the Exit button | Open the app | Look anywhere but not on the Exit button | - | App does not close. i.e. no action taken | App does not close. |