**Designing and Validating Test Cases for “Introduction to Python” portion of the Sololearn App**

| Test Case ID | Test Case Description | Test Steps | Test Data | Expected Results | Actual Results | Success/ Failed |
| --- | --- | --- | --- | --- | --- | --- |
| T01 | Check “Introduction to Python” course is selected and user is taken to the selected course page when he/she clicks on it | 1.Open app  2.Create account  3.Login  4. Click choose A Course  5.Select answer for the given questions  5.Courses that match my need are shown  6.Choose Introduction to Python  7.Click Select this course  8.select How fast you want to learn |  | User should be taken to “Introduction to Python” course | As Expected | Success |
| T02 | Check if user click on the unlocked module “Getting Started” and select the only unlocked lesson “Writing Code” | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the first lesson “Writing Code” |  | User should be entered into the lesson | As expected | Success |
| T03 | Check if clicking on the locked lesson (“Memory & Variables”) gives the error message “Lesson Locked” | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the lesson “Memory & Variables” |  | User should not be entered into the lesson and should be shown an error message saying “Lesson Locked” | As expected | Success |
| T04 | Check if clicking on the locked lesson (“Game Messages”) gives the error message “Lesson Locked” | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the lesson “Game Messages” |  | User should be shown an error message saying “Lesson Locked” | User is prevented from entering lesson but no error message shown | Failed |
| T05 | Check if clicking on the locked lesson (“Shopping Prices”) gives the error message “Lesson Locked” | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the lesson “Shopping Prices” |  | User should be shown an error message saying “Lesson Locked” | User is prevented from entering lesson but no error message shown | Failed |
| T06 | Check if clicking on the Pro lesson (“The Semester Grade”) gives the error message “Go Pro to access this Lesson” | 1.Open App  2. Click on the Learn Tab  3.Under getting started Module, click on the “Learn” button of the lesson “Shopping Prices” |  | User should be shown an error message saying “Go Pro to access this Lesson” | User is shown an error message saying “Lesson Locked” | Failed |
| T07 | Check if user is taken to the next page when they click Continue button | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the first lesson “Writing Code”  4.Click Continue button |  | User should be taken to the next page | As Expected | Success |
| T08 | Check if the progress bar is empty at the beginning of the lesson | 1.Click/choose a lesson |  | User should see no progress in the progress bar | The progress bar already has a partial green progress line. | Failed |
| T09 | Check if the progress bar increases after the user correctly answers a question | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the first lesson “Writing Code”  4.Click Continue button  5.Give correct answer of the asked question  6.Click “Check” button  7.Click Continue Button |  | User should see increase in the greenline in the progress bar | As Expected | Success |
| T10 | Check if user goes to the next page after giving a correct answer and returns back to the previous page, the correct answer is saved | 1.Open App  2. Click on the Learn Tab  3.Under “getting started” Module, click on the “Learn” button of the first lesson “Writing Code”  4.Click Continue button  5.Give correct answer of the asked question  6.Click “Check” button  7.Click Continue Button to go to next page  8. Slide left to return to the previous page |  | User should be able to see their chosen correct answer | The user sees empty box in place of answer | Failed |
| T11 | Check if user goes to the previous page after giving a correct answer without pressing check and returns back to the page, the chosen option is saved | 1..Under “getting started” Module, click on the “Learn” button of the first lesson “Writing Code”  2.Click Continue button  3.Choose answer of the asked question  4. Slide left to the previous page  5.Return to the next page |  | User should be able to see their chosen answer | The user sees empty box in place of answer | Failed |
| T12 | Verify if users can see the comments | 1.start a lesson  2. Give correct answer to a question  3. View comments |  | The user should be able to see the comments | As Expected | Success |
| T13 | Check if the number of comment shown on top of Comments page is correct | 1.start a lesson  2. Give correct answer to a question  3. View comments |  | The number of comments written on top of the page should be equal to the number of comments present in that page | The number of comments written on top of the page is not equal to the number of comments present in that page | Failed |
| T14 | Check if the user gets a mail to activate his/her account | 1.Go to email  2.Click on mail that was sent by sololearn.  3. Click on the Get Started Button |  | User account should be activated | User account is not activated | Failed |
| T15 | Check if the user is able to message other users found in the comment section | 1.View Comments  2. Select a user profile  3.Click on message |  | User should be able to send message to the chosen account | User gets an error message saying “Please activate your account and keep on learning to enable messages” | Failed |
| T16 | Check if the user can write new comment in the comment section | 1.View Comments  2.Click on the Add (“+” ) button  3.Write comment  4.Click on the send icon | Comment “Hello! I am new to this app.” | User should be able to see his/her own comment | As expected | Success |
| T17 | Check if the user can delete his/her own comment | 1.View Comments  2. Click on the users own comment  3.Click the “more” icon  4.Select the “delete” option | Comment “Hello! I am new to this app.” | User should no longer be able to see his/her message | As expected | Success |
| T18 | Check if the user can edit his/her own comment | 1.View Comments  And click on the users own comment  2.Click the “more” icon  3..Select the “edit” option and edit comment  4.Click on the send icon | Comment “Hello! My name is Dante. I am new to this app.” | User should be able to see his/her edited message | As expected | Success |
| T19 | Check if the user can copy his/her own comment | 1.View Comments  And click on the users own comment  2.Click the “more” icon  3..Select the “copy” option |  | User’s comment should be copied to the clipboard | As expected | Success |
| T20 | Check if a single heart decrease if user clicks check after giving a wrong answer | 1.Go to a lesson  2.Give a wrong answer  3.Click “Check” |  | A single heart should decrease after giving a wrong answer | As expected | Success |
| T21 | Check if the user can see the correct answer if he/she decides to use 20 bits | 1.Go to a lesson  2.When a question is given, click on “Answer” button  3.Click on “Unlock for 20 bits” button  4.Click check |  | User is shown a comment that the answer is correct | As expected | Success |
| T22 | Check if the progress bar is filled when all the questions are answered | 1.Go to a lesson  2. Answer all questions |  | User sees that the whole progress bar has turned green | As expected | Success |
| T23 | Check if the user can continue playing even after loosing 3 hearts | 1.Go to a lesson  2. Give wrong answers to 3 questions |  | User should see a message that says “Oops! That wasn’t correct.You ran out of Hearts.” | As expected | Success |
| T24 | Check if the user can leave the lesson after giving 3 wrong answers | 1.Go to a lesson  2. Give wrong answers to 3 questions  3.Click on leave the lesson  4.Click on quit anyway |  | User should be taken to the Introduction to Python page | As expected | Success |
| T25 | Check if the user can quit lesson anytime | 1.Go to a lesson  2.Click on the exit (“X”) icon  3.Click on Quit Anyway button |  | User should be able to leave the lesson and return to homepage | As expected | Success |
| T26 | Check if user can start a lesson after loosing all hearts | 1.Go to a lesson  2. Give wrong answers to 3 questions  3.Leave the lesson  4.Click on a previous/new lesson |  | User should see a warning saying “ You ran out of all hearts. Try again after 4 hours” | As expected | Success |
| T27 | Check if hearts are refilled after 4 hours | 1.Go to a lesson  2. Give wrong answers to 3 questions  3.Leave the lesson  4. Check number of hearts after 4 hours |  | The number of hearts should be 3 | As expected | Success |
| T28 | Check if the user can write on the code playground | 1.Tap on the code playground  2.Write Code |  | The user should be able to write code | As expected | Success |
| T29 | Check if the user can run code on the code playground | 1.Tap on the code playground  2.Write Code  3.Click run button |  | The user should be able to run the code | As expected | success |
| T30 | Check if the user can save the code written on the code playground | 1.Tap on the code playground  2.Write code  3.Click on the more icon  4.Click on the save button  5.Give a code name and hit save button |  | The user should be able to save the code | As expected | success |
| T31 | Check if user can view details of the saved code | 1.Tap on the code playground  2.Write code  3.Click on the more icon  4.Save code  5.Ciick on more button and choose details option |  | The user should be able to view code details | As expected | success |
| T32 | Check if the Line count in the code details is accurate | 1.Click on  details |  | The user should be shown correct number of line counts | Line count is 2 more than the actual line count | Failed |
| T33 | Check if warning shows in the output when user clicks run without writing any code | 1.Tap on the code playground  2.Click run code |  | The user should get a output saying “no output” | As expected | success |
| T34 | Check if user gets a warning message when tries to save code without a code name | 1.Tap on the code playground  2.Write code  3.Tap on the more icon  And click Save code  4. Press save without giving a code name |  | User should get a warning message saying “code name can not be empty” | As expected | success |
| T35 | ;  Check if the user can delete a saved code | 1.Tap on the code playground  2.Write code  3.Tap on the more icon  4.Save code  5.Click on Delete button |  | User should be able to delete saved code | As expected | success |
| T36 | Check if user can see a solution if he needs help in Practice coding | 1.Go to practice  2. Click start solving  3.Click see a solution |  | User should be able to view solution | As expected | success |
| T37 | Check if user can reset a code | 1.Tap on the code playground  2.Write code  3.Tap on the more icon  4.Click on Reset button |  | User should be able to reset code | As expected | successful |
| T38 | Check if the user is proceeded to the next learning module after finishing the Quiz of the previous module. | 1.Go to the 2nd module  2.Complete all the lessons  3.Click on “Proceed to the next Learning MOdule” |  | User should be able to proceed to the next module | As expected | successful |
| T39 | Check if the user has access to “ai generated practice” without having pro account | 1.Go to the 2nd module  2.Complete the 1st lesson  2. Click on ”Compete against ai”  3.Answer the questions |  | User should not be able to enter ai generated practice | User can answer the questions in the ai generated practice | Failed |
| T40 | Check if the user gets a pop up message when reaches a new level | 1.Go to the 2nd module  2.Complete all the lessons |  | User should get a pop up message | As expected | Success |
| T41 | Check if user can accept challenge from AI | 1.Go to the 2nd module  2.Complete all the lessons  3.Click on “Accept challenge by AI” |  | User should be able to enter the challenge | As expected | Success |
| T42 | Check if user can decline challenge from AI | 1.Go to the 2nd module  2.Complete all the lessons  3.Click on “Decline challenge by AI” |  | User should be able to decline the challenge | As expected | Success |
| T43 | Check if user can continue after passing AI Challenge | 1.Go to the 2nd module  2.Complete all the lessons  3.Click on “Accept challenge by AI”  4.Complete the challenge  5.Click continue |  | User should be returned to the lessons page where he/she can start the next lesson | As expected | Success |
| T44 | Check if the user can complete the lesson even if he/she gives a wrong answer and continues without retrying and giving the correct answer | 1.Click on a lesson  2.give wrong answer and click continue  3.Answer next questions |  | User should not be allowed to proceed if he/she does not retry and give correct answer after giving the wrong answer | User is not forced to retry for proceeding to next question after giving a wrong answer | Failed |
| T45 | Check if the user gets same points as giving all correct answers when he/she makes some mistakes | 1.Click on a lesson  2.Give wrong answers to 2 questions and click continue  3.Answer next questions |  | The user should not get same points when he/she gives some wrong answers | User gets same points | Failed |
| T46 | Check that one of the given options contain the correct answer to the question | 1.Go to 3rd module  2.Answer question no.5 |  | The user should have one correct option among the 2 options | In the 5th question of 3rd module, both options result in wrong answer | Failed |
| T47 | Check that the user can get the right answer after using 20 bits to unlock the answer | 1.Go to 3rd module  2.Unlock the answer of question no.5 |  | The user should get a message saying correct answer and get option to check | User gets a message saying “wrong answer” | Failed |
| T48 | Check if the user is allowed to continue lesson after clicking “Use 1 remaining heart to continue lesson” | 1.Click on a lesson  2.Click on the message “use remaining 1 heart to continue the lesson ” |  | User should get access to the lesson | User can not view the lesson | Failed |
| T49 | Check if user can view the profile of other users in the comment section | 1.Click on a lesson  2.Click on comments  3.Tap on a profile |  | User should be able to view the selected profile | As expected | Success |
| T50 | Check if user can view course progress of other users | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click “show all” button under course progress |  | User should be able to view the course progress of the selected profile | As expected | Success |
| T51 | Check if users can view activities of other users | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click “SEE ACTIVITY” button under course progress |  | User should be able to view the activities of the selected profile | As expected | Success |
| T52 | Check if user can view Certificates of other users | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click on certificates |  | User should be able to view the certificates of the selected user | As expected | Success |
| T53 | Check if user can save Certificates of other users | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click on certificates  5.Click on “Save” button |  | User should not be able to save the certificates of the selected user | User user can save Certificates of the selected user | Failed |
| T54 | Check if user can save Certificates of other users | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click on certificates  5.Click on “Save” button |  | User should not be able to save the certificates of the selected user | User user can share Certificates of the selected user | Failed |
| T55 | Check if the user is congratulated if he/she clicks on any other user’s certificate | 1.Click on a lesson  2.Click on comments  3.Tap on a profile  4.Click on certificates |  | User should not be congratulated when he/she clicks on some other user’s account | User is congratulated when he/she clicks on the other user’s certificate. | Failed |
| T56 | Check if in the coding playground the date and time of last modified is correct. | 1.Tap on the code playground  2.Write code  3.Tap on the more icon  4.Save code  5.Click on Details button |  | The user should get the correct date- time of last modified code | As expected | Success |