**Log In**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Input password | Shows the censored password in the display field | Shows the censored password in the display field |
| Input incorrect password | Prompt “Wrong password” error message | Prompt “Wrong password” error message |
| Input incorrect password more than 3 times | Prompt “Access to this account has been temporarily disabled due to many failed login attempts. You can immediately restore it by resetting your password or you can try again later” error message. | Prompt “Access to this account has been temporarily disabled due to many failed login attempts. You can immediately restore it by resetting your password or you can try again later.” |
| Input unregistered email and password | Prompt “user not found” error message | Prompt “user not found” error message |
| Input registered email and password | Successfully logged in and display the home page | Successfully logged in and display the home page |
| Click Forgot your password Button | Direct user to forgot password page | Direct user to forgot password page |
| Click Sign up Here Button | Direct user to Sign Up page | Direct user to Sign Up page |
| Refresh Page | Display login page with empty fields | Display login page with empty fields |
| Test Status | Success | |

**Register for Account**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Clicks “Sign Up Here” | Displays “Sign Up” page | Displays “Sign Up” page |
| Enters email  [Input: [John123@gmail.com](mailto:John123@gmail.com)] | Shows the entered email in the corresponding display field | Shows the entered email in the corresponding display field |
| Enters a password that fulfills requirements  [Input: John123!] | Shows the censored password in the corresponding display field | Shows the censored password in the corresponding display field |
| Enters a password that matches the first  [Input: John123!] | Shows the censored password in the corresponding display field | Shows the censored password in the corresponding display field |
| Clicks “Agree with Terms and Privacy Policy” | Checkbox updates to show it has been selected | Checkbox updates to show it has been selected |
| Clicks “Sign Up” | Returns to “Login” page to allow user to login with their new account | Returns to “Login” page to allow user to login with their new account |
| Enters an invalid email  [Input: John123] | Displays warning text: “Please include an ‘@’ in the email address. ‘John123’ is missing an @.” | Displays warning text: “Please include an ‘@’ in the email address. ‘John123’ is missing an @.” |
| Enters both passwords less than 6 characters  [Input: John123@gmail.com]  [Input: 1234]  [Input: 1234] | Displays error text:  “Firebase: Password should be at least 6 characters” | Displays error text:  “Firebase: Password should be at least 6 characters” |
| Enters second password differently from first password  [Input: [John123@gmail.com](mailto:John123@gmail.com)]  [Input: John123!]  [Input: John124!] | Displays error text: “Passwords do not match.” | Displays error text: “Passwords do not match.” |
| Does not “agree with Terms and Privacy Policy”  [Input: [John123@gmail.com](mailto:John123@gmail.com)]  [Input: John123!]  [Input: John123!] | Displays error text: “You must agree to the terms and conditions to sign up.” | Displays error text: “You must agree to the terms and conditions to sign up.” |
| Test status | Success | |

**Forget Password**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Click “Forgot your password” | Displays “Reset Password” page | Displays “Reset Password” page |
| Enters a valid email address  [Input: [John123@gmail.com](mailto:John123@gmail.com)] |  |  |
| Enters an invalid email address  [Input: invalidaddress@gmail.com] | Displays error message “Error: (auth/user-not-found).” | Displays error message “Error: (auth/user-not-found).” |
| Test status | Success | |

**Discover Best Routes**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Entered an invalid starting point | Suggests alternative locations with similar spelling | Suggests alternative locations with similar spelling |
| Chose a valid starting point | Displays the name of the start point | Displays the name of the start point |
| Chose a valid ending point | Displays name of end point  Generates suggested routes underneath | Displays name of end point  Generates suggested routes underneath |
| Chose one of the suggested routes | Displays the route on the map,  “Start Journey” button appears | Displays the route on the map,  “Start Journey” button appears |
| Click “Start Journey” button | Start Journey button is no longer clickable | Start Journey button is no longer clickable |
| Test status | Success | |

**View Arrival Timings**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Click “View Arrival Timings” | Displays “View Arrival Timings” Page | Displays the “View Arrival Timings” Page |
| Entered an invalid location | Suggests alternative locations with similar spelling | Suggests alternative locations with similar spelling |
| Chose a valid location | Displays map on screen, allowing user to select bus stops | Displays map on screen, allowing user to select bus stops |
| Clicked on a valid bus stop | Displays the buses that go to that stop, color-coded according to crowd level | Displays the buses that go to that stop, color-coded according to crowd level |
| Clicked on another valid bus stop | Displays the buses that go to that stop, color-coded according to crowd level | Displays the buses that go to that stop, color-coded according to crowd level |
| Test status | Success | |

**View Crowd Levels**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Click “View Crowd Levels” | Displays “View Crowd Levels” Page | Displays “View Crowd Levels” Page |
| Click on one of the displayed bus stops | Displays the crowd levels at selected bus stop | Displays the crowd levels at selected bus stop |
| Clicks another displayed bus stop | Displays the crowd levels at selected bus stop | Displays the crowd levels at selected bus stop |
| Click on one of the displayed train stations | Displays the crowd levels at selected train station | Displays the crowd levels at selected train station |
| Test status | Success | |

**Points and Reward**

| Test Input | Expected Output | Actual Output |
| --- | --- | --- |
| Click End Journey Button | Add 10 points for every KM |  |
| Redeem ‘$2 EZLink Wallet Top-up’ with 40 points | Unable to redeem ‘$2 EZLink Wallet Top-up’ reward due to insufficient points | Unable to redeem ‘$2 EZLink Wallet Top-up’ reward due to insufficient points |
| Redeem ‘$2 EZLink Wallet Top-up’ with 60 points | Able to redeem ‘$2 EZLink Wallet Top-up’ reward and left with 10 points | Able to redeem ‘$2 EZLink Wallet Top-up’ reward and left with 10 points |
| Redeem ‘$4 EZLink Wallet Top-up’ with 70 points | Unable to redeem ‘$4 EZLink Wallet Top-up’ reward due to insufficient points | Unable to redeem ‘$4 EZLink Wallet Top-up’ reward due to insufficient points |
| Redeem ‘$4 EZLink Wallet Top-up’ with 90 points | Able to redeem ‘Monthly Lucky Draw’ reward and left with 10 points | Able to redeem ‘Monthly Lucky Draw’ reward and left with 10 points |
| Redeem ‘Monthly Lucky Draw’ with 90 points | Unable to redeem ‘Monthly Lucky Draw’ with 90 points due to insufficient points | Unable to redeem ‘Monthly Lucky Draw’ with 90 points due to insufficient points |
| Redeem ‘Monthly Lucky Draw’ with 110 points | Able to redeem ‘Monthly Lucky Draw’ reward and left with 10 points | Able to redeem ‘Monthly Lucky Draw’ reward and left with 10 points |
| Redeem Rewards (with sufficient points) | Display latest three redemption history under PointsActivity | Displayed latest three redemption history under PointsActivity |
| Redeem Rewards (with sufficient points) | Display latest three Available Coupons | Displayed latest three Available Coupons |
| Relogin/Refresh Page | Points and Redemption History should still be the same | Points and Redemption History remained the same |
| Test Status | Success | |