Test Cases

Test ID	001
Category	Username and password pairs stored in DB
Requirements Coverage	The unique ID of the requirement tested
Initial Condition	The login system initialized and run, the user input any username and password pair
Procedure	*1. The user selects login* *2. The user provides a user name* *3. The user provides a password* *4. Combination check fail and pop up a notification* *5. Go back to login retry*
Expected Outcome	The system does not terminate when combination check fail
Notes	*the user should provide only alphanumeric user names and passwords without any special characters*

Test ID	002-01
Category	Countries stored in selected countries list
Requirements Coverage	The functionality of available countries list
Initial Condition	No countries have been selected
Procedure	1. *The user selects a country.* 2. *The user attempts to add that country* 3. *The user repeats this process for every country name that they can procure.*
Expected Outcome	Every major country is added to the analysis list successfully
Notes	A country may exist in the real world but not be available in the external data sources.

Test ID	**002-02**
Category	Validation system for countries selection
Requirements Coverage	Functionality of country selection system
Initial Condition	User is logged in and has access to the analyzer
Procedure	1. *The user attempts to add a country that does not exist* 2. The user attempts to add a country that is already selected
Expected Outcome	The system ignores the request, and returns an error message
Notes	

Test ID	**003-01**
Category	Evaluation of remove country
Requirements Coverage	UC3-Successful-Remove-Country
Initial Condition	System has been initiated and runs. User has logged in. There are countries in the selected countries table.
Procedure	1. User selects a country that is in the selected countries table 2. User presses "Remove"
Expected Outcome	Country is removed from the selected countries table. On-screen list is updated to reflect updated list of selected countries.
Notes	

Test ID	003-02
Category	Evaluation of remove country validation
Requirements Coverage	UC3-Successful-Remove-Country-Validation
Initial Condition	System has been initiated and runs. User has logged in. There are countries in the selected countries table.
Procedure	1. User selects a country that is in not in the selected countries table 2. User presses "Remove" 3. User inputs nothing into the country selection text box 4. User presses "Remove"
Expected Outcome	There are no changes to the selected countries table. Pop-up message notifies user that the country was not a selected country, or that nothing was selected.
Notes	

Test ID	005-01
Category	System which analyzes data for required countries
Requirements Coverage	Functionality of Statistics, RetrieveData API, and Covid Analyzer in tandem
Initial Condition	User is logged in and has access to the analyzer
Procedure	1. *The user adds many countries to the analysis list* 2. The user selects an analysis type 3. The user requests a calculation 4. The user repeats this process for every analysis type
Expected Outcome	The system provides analyzed data sets for every analysis type
Notes	

Test ID	006
Category	Rendering system
Requirements Coverage	Rendering system process tested with one country object
Initial Condition	Data required have been calculated and saved in country object
Procedure	1. Only one country is selected to be rendered 2. Setting a default radius without reference data 3. Setting a default color without threshold checking 4. Generate an appropriate circle on GUI
Expected Outcome	The GUI displays one result circle with default settings
Notes	None

Test ID	007
Category	Updating
Requirements Coverage	Updating system
Initial Condition	Initial condition requires a first analysis request to be complete and evoke a new request from UI class. Country adding and removing must be successful.
Procedure	1. The user receives a notification of completion 2. The user adds a new country to the selected country list. 3. Data for the updated list of countries is retrieved and processed. 4. The GUI renders a new image and updates the text output based on the new data
Expected Outcome	The UI displays new results, changes in proportional radii and position of circles on map are evident.
Notes	None