Country Statistics Analysis System

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Version	Date	Authors	Summary of Changes
1	7th of April 2021	Group 53	Final (Deliverable 4)

Document Sign-Off

Name (Position)	Signature	Date
Paul Scoropan	PS	7th of April 2021
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6   Test Cases

Test ID	Use Case 1.1
Category	Evaluation and Validation of user credential
Requirements Coverage	UC1-Successful-User-Login
Input Data	Username: admin Password: password
Procedure	The list of steps required for this test case *1. The user provide a username* *2. The user provides a password* *3. The user presses Login* *4. The credentials are verified against the Database* 5. The user is logged in and main window displayed
Expected Outcome	The Login window is removed and Main window is shown
Notes	The User should provide valid credentials with usernames with no special character

Test ID	Use Case 1.2
Category	Evaluation and Validation of user credential
Requirements Coverage	UC1-Invalid-User-Login
Input Data	Username: password Password: admin
Procedure	The list of steps required for this test case *1. The user provide a username* *2. The user provides a password* *3. The user presses Login* *4. The credentials are not found in the database* *5. The user is displayed an Invalid Credential Message on the login window*
Expected Outcome	The Login window is not removed, and Invalid Credential Message is displayed
Notes	The User should provide invalid credentials for this outcome

Test ID	Use Case 1.3
Category	Evaluation and Validation of user credential
Requirements Coverage	UC1-Unsuccessful-User-Login
Input Data	Nothing; Just press Login
Procedure	The list of steps required for this test case

	1. The user presses Login (without filling the username and password) 2. The user is displayed an Invalid Credential Message on the login window
Expected Outcome	The Login window is not removed, and Invalid Credential Message is displayed
Notes	The users should not put anything in the username and password but only presses/click the login button

Test ID	Use Case 2.1
Category	Selecting the analysis to be performed
Requirements Coverage	UC2-Successful-Selection-of-different-analysis-type
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area (% of land area) Country: United Arab of Emirates Start Year:1997 End Year: 2001 View: report
Procedure	The list of steps required for this test case 1. The user successfully logs in 2. Display the different 'Types of analysis using a drop down/up menu 3. The User also input the country, year, and view. 4. The User presses recalculate button 5. The User presses the "+" Button
Expected Outcome	The expected outcome is for the analysis to be shown with the desired information
Notes	If the user does not press the recalculate button and does not press the "+" button, then the display will not be shown regardless of whether the user changes the analysis type or not.

Test ID	Use Case 2.2
Category	Selecting the analysis to be performed
Requirements Coverage	UC2-Unsuccessful-Selection-of-different-analysis-type
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs Time required to start a business (days) Country: United Kingdom Start Year:1997

	End Year: 2002 View: Line Chart
Procedure	The list of steps required for this test case 1. The user successfully logs in 2. Display the different 'Types of analysis using a drop down/up menu 3. The User also input the country, year, and view. 4. The User presses recalculate button 5. An invalid message is displayed
Expected Outcome	The expected outcome is for no update in information and an error message is displayed to the user
Notes	It does not matter it the user presses the recalculate button in this case, there should be no analysis done in this case and the display should remain the same

Test ID	Use Case 3.1
Category	Countries Drop Down
Requirements Coverage	UC3-Successful-Choosing-Drop-Down-Country
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area (% of land area) Country: United Arab of Emirates Start Year:1991 End Year: 1995 View: report
Procedure	The list of steps required for this test case 1. The user successfully login 2. The user selects a country 3. The user also select year, type of analysis and views. 4. The user press recalculate and "+" 5. The system checked the validity of country 6. The data fetching and visualization can proceed
Expected Outcome	The data fetching and visualization can proceed
Notes	It will be successful if the type of analysis, views and the year is correct

Test ID	Use Case 3.2
Category	Countries Drop Down

Requirements Coverage	UC3-Unsuccessful-Choosing-Drop-Down-Country
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs Military expenditure (% of GDP) Country: Falkland Islands Start Year:2010 End Year: 2020 View: Report
Procedure	The list of steps required for this test case *1. The user successfully login* *2. The user selects a country* *3. The user also select year, type of analysis and views.* *4. The user press recalculate* *5. The system checked the validity of country* *6. The system presence the user with a text stating that there is a missing data for the selected country*
Expected Outcome	The data processing and visualization cannot be proceed and an error message will be shown to the user
Notes	Considering that the type of analysis and the year is correct

Test ID	Use Case 4.1
Category	Selecting Years
Requirements Coverage	*UC4-Successful-Choosing-Start-and-End-Year*
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1991 End Year: 1995 View: report
Procedure	The list of steps required for this test case *1. The user successfully login* *2. The user selects a start and end year* *3. The user also select country, type of analysis and views.* *4. The user recalculate*

	5. The system checked the validity of start and end year 6. The data visualization can proceed and when press "+", the visualization will be display
Expected Outcome	Data visualization can proceed
Notes	If the chosen type of analysis, views and country is correct

Test ID	Use Case 4.2
Category	Selecting Years
Requirements Coverage	*UC4-Unuccessful-Choosing-Start-and-End-Year*
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1995 End Year: 1991 View: report
Procedure	The list of steps required for this test case *1. The user successfully login* *2. The user selects a start and end year* *3. The user also select country, type of analysis and views.* *4. The user press recalculate* *5. The system checked the validity of start and end year* *6. The system shows an invalid message to the user*
Expected Outcome	Invalid message is displayed to the user
Notes	Must be run from the start of the program and fill in the input data correctly.

Test ID	Use Case 5.1
Category	Adding a user selected viewer to an overall list of viewers
Requirements Coverage	UC5-Successful-User-Addition-Of-Viewer
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1995

	End Year: 1999 View: report, Line Chart, Bar Chart
Initial Condition	User must have already logged in, selected a type of analysis, country, start and end year
Procedure	The list of steps required for this test case *1. The User successfully Login* *2. The User have chose type of analysis, country, start and end year* *3. The user click on viewer drop down* *4. The user selects a viewer to add* *5. The user presses the recalculate button* *6. The user presses "+" button* *7. The viewer is added to list*
Expected Outcome	The selected viewer is added to the list of viewer and it is displayed.
Notes	Must be run from the start of the program and fill in the input data correctly.

Test ID	Use Case 5.2
Category	Adding a user selected viewer to an overall list of viewers
Requirements Coverage	UC5-Unsuccessful-User-Addition-Of-Viewer
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1995 End Year: 1999 View: report
Procedure	The list of steps required for this test case *1. The User successfully Login* *2. The User have chose type of analysis, country, start and end year* *3. The user click on viewer drop down* *4. The user selects a viewer to add* *5. The user presses the recalculate button* *6. The user presses the "+" button* *7. The viewer is added to list and displayed* *8. The user presses the "+" button again* *9. The viewer is NOT added to list and an invalid message is displayed stating that the viewer has already been added*
Expected Outcome	The viewer has been added but an invalid message is displayed because the user is trying to add the same viewer again

Notes	The test case must be run from the start of the program and input the correct data

Test ID	Use Case 6.1
Category	Removing a user selected viewer from an overall list of viewers
Requirements Coverage	UC6-Successful-User-Removal-Of Viewer
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1995 End Year: 1999 View: report
Procedure	The list of steps required for this test case *1. The User successfully Login* *2. The User have chosen the type of analysis, country, start and end year* *3. The user click on viewer drop down* *4. The user selects a viewer to add* *5. The user presses the recalculate button and add the viewer to the displayed* *6. The user presses the "-" button* *7. The viewer is removed from the overall list*
Expected Outcome	The selected viewer is present in the overall list of viewers and is successfully removed
Notes	The test case must be run from the start of the program and input the correct data

Test ID	Use Case 6.2
Category	Removing a user selected viewer from an overall list of viewers
Requirements Coverage	UC6-Unsuccessful-User-Removal-Of Viewer
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: United Arab of Emirates Start Year:1995 End Year: 1999 View: report
Procedure	The list of steps required for this test case

	1. The User successfully Login 2. The User have chosen the type of analysis, country, start and end year 3. The user click on viewer drop down 4. The user selects a viewer to add 5. The user presses the recalculate button and the viewer have been added to be displayed 6. The user presses the "-" button 7. The viewer is removed from the overall list 8. The user presses the "-" button again 9. An error message is displayed stating that the viewer have already been removed
Expected Outcome	The selected viewer is NOT present in the overall list of viewers and an invalid message is displayed to the user
Notes	The test case must be run from the start of the program and input the correct data

Test ID	Use Case 7.1
Category	Analysis of selected parameters
Requirements Coverage	UC7-Successful-Analysis
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area (% of land area) Country: United Arab of Emirates Start Year:1996 End Year: 2001 View: report, Line Chart, Bart Chart, Scatter Plot
'Procedure	The list of steps required for this test case The list of steps required for this test case 1. The user successfully login 2. The user select a type of Analysis 3. The user select a country 4. The user select start and end year 5. The user select visualization graphs 6. The user presses the recalculate button 7. The analysis is initialized 8. Requirement is identified based on parameters 9. API request for required data made to database 10. The data is returned to the analysis 11. The required values are computed 12. The output is sent to populate an object in main window

Expected Outcome	The analysis is performed in the background and the output sent to be displayed
Notes	Valid data must be returned from the world data repository for this outcome

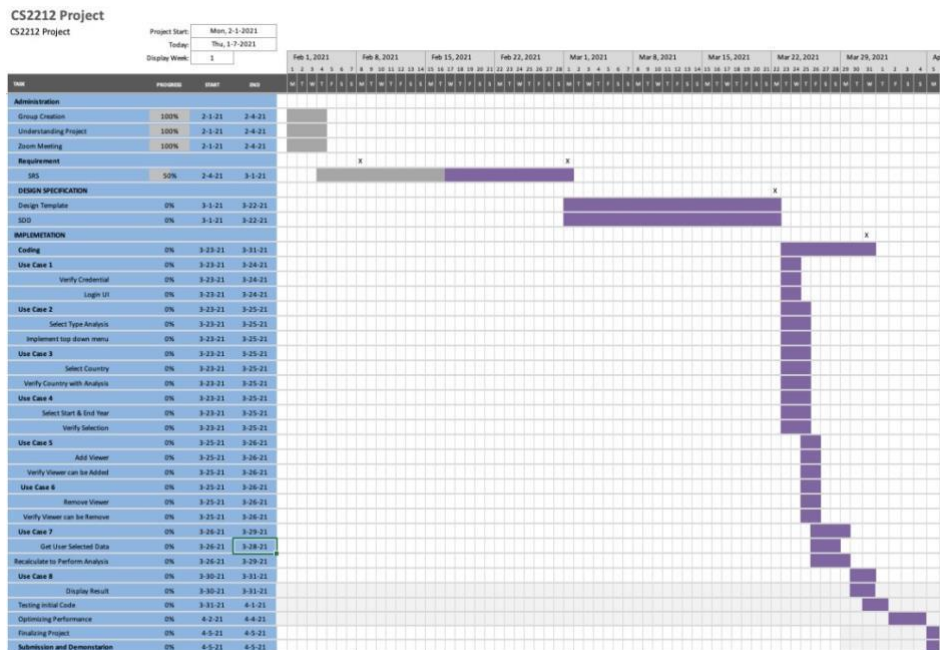|	
Test ID	Use Case 7.2
Category	Analysis of selected parameters
Requirements Coverage	UC7-Data-Not-Found
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area (% of land area) Country: French Southern Territories Start Year:1996 End Year: 2001 View: report, Line Chart, Bart Chart, Scatter Plot
Procedure	The list of steps required for this test case The list of steps required for this test case *1. The user successfully login* *2. The user select a type of Analysis* *3. The user select a country* *4. The user select start and end year* *5. The user select visualization graphs* *6. The user presses the recalculate button* *7. The analysis is initialized* *8. Requirement is identified based on parameters* *9. API request for required data made to database* *10. the API call does not returned data made to database* *11. A Data Not Found message is displayed on the main window*
Expected Outcome	The analysis is not performed and a Data Not Found error message is displayed to the user
Notes	The world data repository must return an error or null value for this, incomplete data can be displayed

Test ID	Use Case 8.1
Category	Displaying result
Requirements Coverage	UC8-Successful-Display-Of-Analysis-Information
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area (% of land area)

	Country: United Arab of Emirates Start Year:1997 End Year: 2001 View: report, bar chart, Line Chart
Procedure	The list of steps required for this test case *1. The user successfully login* *2. The user select a type of Analysis* *3. The user select a country* *4. The user select start and end year* *5. The user select visualization graphs* *6. The user presses the recalculate button* *7. The user presses "+" button*
Expected Outcome	The expected outcome for the data to be analyzed based on the user's selection and be displayed on the screen
Notes	The user have already Login, and the user must input all data required and then

Test ID	Use Case 8.2
Category	Displaying result
Requirements Coverage	UC8-Unsuccessful-Display-Of-Analysis-Information
Input Data	Username: password Password: admin (For Login to be successful) Type of Analysis: Forest area vs GDP(Annual %) Country: French Southern Territories Start Year:1992 End Year: 1995 View: report
Procedure	The list of steps required for this test case *1. The user successfully login* *2. The user select a type of Analysis* *3. The user select a country* *4. The user select start and end year* *5. The user select visualization graphs* *6. The user presses the recalculate button* *7. The User is presented with an error message*
Expected Outcome	The expected outcome is to display an invalid message and to ask the user to select other options to be able to populate the display with the analysis information
Notes	The user have already Login, and the user must input all data required and then presses recalculate

7   Activities Plan

7.1   Gantt Chart

7.2   Project Backlog and Sprint Backlog

Backlog Item	Estimate (days)
Create SRS for project	28
Create Design Template	24
SDD	24
display the login UI	0.5
Allow user to enter credentials and verify them	0.5
Allow user to select the desired type of analysis	1
Implement drop down menu for analysis selection	1
Allow user to select a country for analysis	1
Verify country and implement menu	1
Allow user to select start and end years for analysis	2
Verify selected years and implement UI	2
Allow user to add a viewer to the viewer list	1
Implement menu for viewers	1
Allow user to remove viewer	1
Allow user to perform analysis with their selected data	3
Allow user to recalculate to perform a new analysis	4
Display the results of the analysis to the user	2
Perform tests of initial code	3
Optimize performance of code	3
Finalize and submit project	1

Product: Country Statistic Analysis System	Sprint #2
Goal: The main goal of this sprint is to finish all the code required for the implementation and to finish all the Javadoc and test case for the requirement. The goal is important because it will be the final and it will give us the final product software completed on time.	
Method: This goal will be met in a similar fashion as the other deliverables have. The team will meet over zoom and discuss the tasks and requirements of the deliverable before splitting up the work. More zoom meetings will be scheduled as needed in order to compile it together and work on the code together to be able to help each other in live time to each other and have a sync code.	
Metric: The goal will have been considered met when a final system has been created and passes all the test cases satisfactorily.	

7.3   Group Meeting Logs

In this Section you write minutes of each meeting, listing the attendance, what the topics of discussion in the meeting were, any decisions that were made, and which team members were assigned which tasks. These minutes must be submitted with the project report in each deliverable and will provide input to be used for the overall assessment of the project.

Present Group Member	Meeting Date	Issues Discussed / Resolved
All members	31st of March 2021	Briefly Discussed the requirement and how to use Jira and BitBucket. Met for 1 hour
All members	3rd of April 2021	Reviewed each other's progress and answered questions. Met for 1 hours and 30 minutes
All members	4th of April 2021	Reviewed each other's progress and answered questions. Met for 2 hour and 30 minutes
All members	6th of April 2021	Reviewed each other's progress and answered questions. Met for 1 hours and 30 minutes
All members	7th of April 2021	Review each other's work for a final time and compiled the work into the final good copy. Met for 2 hour.