**Test cases**

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| **Test ID** | 1 |
| **Category** | The log-in function of the system implemented to verify through credential DB and the ability to present user the main window and handle exceptions. |
| **Requirements Coverage** | UC1-User log in |
| **Initial Condition** | The database contains some credential pairs enough for the test, the system has been initialized and ready for input. |
| **Procedure** | 1. The user opens the program. 2. The user input usernames and passwords, correct and wrong pairs should be provided to test the full functionality. 3. The user logs into the system successfully and the program now present the main window. 4. If the user has entered the wrong username or password, the program should be able to request them again or terminate with a button. |
| **Expected Outcome** | 1. The credentials matched with the one in the DB and main windows should be presented with the login panel closed after verification. 2. If the credentials don’t match, the program should inform user and prompt for input again. |
| **Notes** | The program should be able to handle any combination that is in the database. |

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| **Test ID** | 2 |
| **Category** | The functionality of the main window UI |
| **Requirements Coverage** | UC2, UC3, UC4, UC5, UC6  In this test only the functions of the main window UI specified in these use cases will be the main concern. |
| **Initial Condition** | The user had successfully logged in, and the main window now initialized. |
| **Procedure** | 1. Once the main window is presented, test all the functions within the interface (i.e., Ability to select analysis types; countries; years, and to add or remove graph types to be displayed) 2. The test should be looking for any formatting, menu, composition errors and mistakes that might occur to the main window. |
| **Expected Outcome** | The selection and add or remove graphs function should work properly, the size of the window and font should be appropriate. |
| **Notes** | It might be better to prepare some data manually from the world bank website to test some functions such as selection range and the ability to process the data in the raw format. |

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| **Test ID** | 3 |
| **Category** | The evaluation of backstage processes and the cooperation between such functions with the main window UI. |
| **Requirements Coverage** | UC7-Performing analysis, UC8-Displaying the results |
| **Initial Condition** | The user had done the selections and chosen the graph types to be displayed, and clicked the recalculate button. |
| **Procedure** | The list of steps required for this test case (*e.g.*   1. The user made selections and clicked recalculate button. 2. The reader class now visits the world bank and fetch the required data that correspond to user’s selection. 3. The data is processed into better format and sent for analysis for further process and calculation depending on user’s choice. 4. Once the analysis is done, it should be used to generate graphs that user chose, the graphs are then returned to the main window along with the text-based analysis to be displayed. |
| **Expected Outcome** | The graphs of chosen analysis types and options should be displayed properly, the program should be ready for another round of analysis. |
| **Notes** | The test should be performed multiple time with different combinations of selection to ensure the full functionality of the program in all aspect. |

**Activities Plan**

**1.1 Project Backlog and Sprint Backlog**

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| --- | --- | --- | --- |
| Backlog item | Priority | Status | Estimate(days) |
| Reader | High | Completed | 1 |
| Handler | High | Completed | 1 |
| UI | Medium | Completed | 3 |
| Viewer | Medium | Completed | 2 |

**1.2 Group Meeting Logs**

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| --- | --- | --- |
| Present Group Members | Meeting Date | Issues Discussed / Resolved |
| Yumeng Chen, Zhen Yang, Ziqin Shang,Yifei Zhang | 2021/3/30 | Discuss the Priority of each item in the whole project. Assign tasks for each member. |
| Yumeng Chen, Zhen Yang, Ziqin Shang, Yifei Zhang | 2021/4/1 | Report the project completion progress. Discuss parameter transfer types and methods. |
| Yumeng Chen, Yifei Zhang | 2021/4/3 | Discuss how to link with UI and the Viewer. |
| Yumeng Chen, Zhen Yang, Yifei Zhang | 2021/4/5 | Discuss how to connect Handler, UI, and Viewer. |
| Yumeng Chen, Zhen Yang, Ziqin Shang,Yifei Zhang | 2021/4/6 | Test the program and debugs. |
| Yumeng Chen, Zhen Yang, Ziqin Shang,Yifei Zhang | 2021/4/7 | Run final tests on the software and add comments to the code.  The implementation of the project and Delivery. |