**Test Plan**

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Test Type & Test Type ID: White Box - 03

**Requirement Addressed**

Assess the UserStatistics class for handling user statistics, including data fetching, chart generation, and integration into the application.

**Objective**

To ensure that the UserStatistics class correctly fetches user data, generates charts, and displays them within the application, maintaining data accuracy.

**Test cases**

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| **Description** | **Input field** | **Input value** | **Expected Output** | **Actual Output** | **Pass/Fail** |
| Ensure that the fetch\_data() method retrieves and processes user session data from the database correctly. | fetch\_data() | self | * DataFrame user\_data is populated with session IDs, work time, and break time. * All data is correctly parsed and converted to hours. | The DataFrame user\_data is populated with session IDs, work time, and break time and all the data are correctly parsed and converted to hours. | Pass |
| Verify that the create\_bar\_chart() method generates a bar chart of work time over the last 7 sessions. | create\_bar\_chart() | self | * A bar chart is saved as resources/bar\_chart.png. * Chart accurately reflects work time data with a mean line. | The bar chart is saved as bar\_chart.png in the resources folder and the chart accurately reflects work time data with a mean line. | Pass |
| Ensure that the create\_pie\_chart() method generates a pie chart of the latest session's work and break time. | create\_pie\_chart() | Different combinations of work and break times. | * A pie chart is saved as resources/pie\_chart.png. * Chart accurately represents the latest session's data. | The pie chart is saved as pie\_chart.png in the resources folder and the chart accurately represents the latest session's data. | Pass |
| Verify that the display\_user\_stats() method updates the statistics screen with the latest charts. | display\_user\_stats() | self | Charts are correctly displayed on the statistics screen. | The charts are correctly displayed on the statistics screen. | Pass |
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