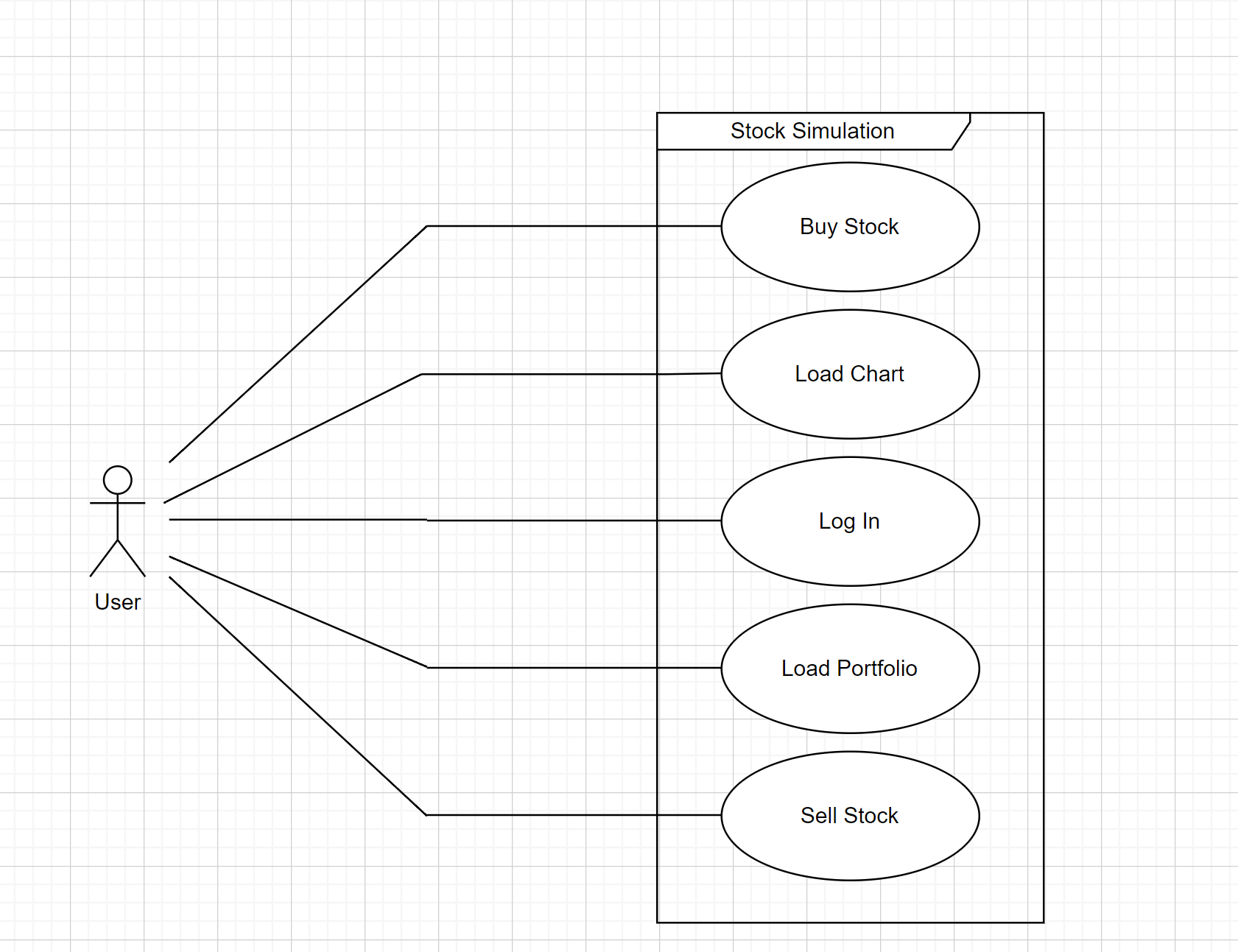
Trading Simulation

**Description**

Our program is intended to be a stock trading trainer/simulator. It is possible to log in as a user and have a personal portfolio. In this project we do not work with databases the portfolio gets saved into a file after the program stops. As a user you can see charts of different stocks and you can buy/sell the stock in order to try gaining money.

**Use Case-Diagramm**



**Use Case-Description**

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| --- | --- |
| **Use Case** | Login |
| **Use Case ID** | 1 |
| **Description** | The user can log into his account |
| **Precondition** | User has an account |
| **Actors (Primary)** | user |
| **Procedure:**   1. Enter username and password into text fields 2. Click “Login” | |
| **Postcondition:** | User has access to his account |
| **Alternative flows:** Wrong credentials | |

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| --- | --- |
| **Use Case** | Wrong credentials |
| **Use Case ID** | 1.1 |
| **Description** | The user tries to log into an account with wrong credentials |
| **Precondition** | none |
| **Actors (Primary)** | user |
| **Procedure:**   1. Enter username and password into text fields 2. Click “Login” 3. User gets informed that his login data was wrong | |
| **Postcondition:** | none |

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| **Use Case** | Load Chart |
| **Use Case ID** | 2 |
| **Description** | The user loads a chart from a stock |
| **Precondition** | The user is authenticated, the stock is available in the system |
| **Actors (Primary)** | user |
| **Procedure:**   1. Search for a stock 2. The chart of the stock should be displayed | |
| **Postcondition:** | none |

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| **Use Case** | Buy a stock |
| **Use Case ID** | 3 |
| **Description** | The user can buy a specific stock |
| **Precondition** | The user is authenticated |
| **Actors (Primary)** | user |
| **Procedure:**   1. Load chart of desired stock 2. Click “Buy Stock” 3. Money is withdrawn from user 4. Share gets transferred to user’s portfolio | |
| **Postcondition:** | User owns shares |
| **Alternative flows:** Not enough money | |

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| **Use Case** | Not enough money |
| **Use Case ID** | 3.1 |
| **Description** | The user buys a specific stock |
| **Precondition** | The user is authenticated |
| **Actors (Primary)** | user |
| **Procedure:**   1. Alternative flow starts after step 2 in the Main flow 2. Money cannot be widthdrawn because user hasn’t enough money 3. Transaction stops | |
| **Postcondition:** | none |

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| **Use Case** | Sell a stock |
| **Use Case ID** | 4 |
| **Description** | The user sells a specific stock |
| **Precondition** | The user is authenticated, owns shares of stock to sell |
| **Actors (Primary)** | user |
| **Procedure:**   1. Load chart of desired stock 2. Click “Sell Stock” 3. Share gets withdrawn from user 4. Money gets transferred to user’s portfolio | |
| **Postcondition:** | none |
| **Alternative flows:** none | |

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| **Use Case** | Load Portfolio |
| **Use Case ID** | 5 |
| **Description** | The user retrieves his own portfolio to see his shares and his balance |
| **Precondition** | The user is authenticated |
| **Actors (Primary)** | user |
| **Procedure:**   1. Load Portfolio 2. The balance and owned share of the user are displayed | |
| **Postcondition:** | none |
| **Alternative flows:** none | |

CRC-Cards

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| --- | --- |
| **Class:** Stock  **Responsibilities**  - Blueprint of Stock | **Collaborators** |

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| --- | --- |
| **Class:** Portfolio  **Responsibilities**  - Holds stocks | **Collaborators**  Share |

|  |  |
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| **Class:** Display  **Responsibilities**  - UI | **Collaborators**  Login  UserDisplay  StockOverviewDisplay  StockDisplay |

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| **Class:** Filehandler  **Responsibilities**  - read and write to file | **Collaborators** |

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| **Class:** Login  **Responsibilities**  - The display of the login page  - validates user date from input | **Collaborators** |

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| **Class:** StockDisplay  **Responsibilities**  - Display a specific stock | **Collaborators**  Stock |

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| **Class:** StockOverviewDisplay  **Responsibilities**  - Displays a list of stocks | **Collaborators**  Stock  Searchbar |

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| **Class:** UserDisplay  **Responsibilities**  - Displays the user and his portfolio | **Collaborators**  User  Portfolio |

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| **Class:** Searchbar  **Responsibilities**  - Option to search for a stock | **Collaborators**  Stock |

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| **Class:** User  **Responsibilities**  - User credentials | **Collaborators**  Portfolio |

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| **Class:** Share  **Responsibilities**  - holds stock, buying price and amount of held stock | **Collaborators**  Stock |