

Criterion A: Planning

Defining the problem:

Mr. Daman Babu Shrestha is the CEO of G8 Group (a group of investors to buy stock). His days just go by looking into the ups and downs of the stock market. Currently, he keeps a manual record of the stock he bought throughout the day to let his other group members know about it.

Currently he uses a calculator to calculate the profit or loss he made in stock. He collects all the records at the end of the month and calculates the total profit or loss he made. However, he believes that keeping manual records for him is inefficient and time consuming. He further stated that occasionally documents are misplaced and records are not properly managed, resulting in erroneous statistics. Similarly, manual computation has been more time-consuming, which has an impact on his hectic life as a working father. Considering I was a computer science student, he wanted me to develop a program for him that would handle his portfolio and keep records for him. As a result, I accepted his request and came up with a fantastic proposal for my Computer Science IA.

In an interview, I asked my client a few questions to obtain a general understanding of what he was searching for. Following this interview, I asked him to send me an email outlining the precise criteria or features he desired in the product.

Rationale for solution:

Because of the complexity of communication required between the graphical user interface and the user, I decided that using Java Swing as it would be the best solution for my IA. I normally complete the IAs whenever I have time, thus java allows me to utilize a variety of devices because it is compatible with the majority of them. Its coding style is straightforward and easy to learn, making it ideal for novices like us. The majority of individuals are drawn to Java due to its simplicity and versatility. I've also completed a

couple java online classes, which has given me greater confidence in utilizing this programming language.

Success Criteria

1. The application should support registering multiple user accounts.
2. A signup page to create a new account in guest login only.
3. A login form where the user has to enter a username and password to get access to the program.
4. A forget password page if a user forgets his password.
5. Guest users directed to the statistics page to know the general investment made by the company.
6. An input allows the user to store the stock bought daily for the CEO interface .
7. An output to store the sold stock daily.
8. Update stock when certain units are sold.
9. Delete stock when it is 0.
10. A Calculator to calculate manually if needed.
11. Portfolio summary with profit loss amount and all summary of bought and sold stock.
12. Hyperlink that gives the user easy access to websites required while working on stock management.
13. Despite multiple users using the application, changes to important information like current stock, must be updated in real-time to all users of the application.