

Project Proposal

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Prompt:

- **Team formation:** You are not asked to keep exactly the same team membership. However, in each team, the chosen project has to be one that some of the team members, if not everyone, had completed in SE 370. Those team members who had worked on the chosen project have the responsibility of helping other team members to understand the project.
- Java is the selected programming language for the chosen project. All team members should contribute to the (re-)design and (re-)implementation of the project. At the end of the semester, you should reflect on the quality improvement of the project as compared with the version completed in SE 370 (so, keep the original version)
- Requirements for this assignment (Project Proposal):
 - a) First of all, make sure you have a working system with a GUI. This is your starting point.
 - b) Provide sufficient information to introduce the existing system, and summarize the main features and defects (or room for improvement).
 - BookEZ is a program that makes bookkeeping easier for eBay sellers by organizing profits into an ROI (Return On Investment) table and calculating the user's net profit.
 - The main features include a login system so multiple users can run the same program, a pdf upload page to upload order receipts for different products and an ROI table page that organizes price, shipping, and tax costs.
 - Provides an import pdf image function to print the receipt data on the GUI.
 - c) Select at least 4 design patterns (not including fundamental design patterns) that fit well to your project, and provide a one-paragraph justification for each chosen design



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pattern. Note that as we learn more design patterns, you may change your selections later.

- Proxy: To enforce that the user account does not get accessed easily from other users going into other accounts. In other words, the accounts saved within the program should not be breached easily. Securing accounts is the main priority for launching the program and providing proxy gains access with other objects that are called within. This is important to note that proxy is serviceable with the certain type of users who are authorized to certain features inside the application.
- Singleton: Ensuring that a single login-account is used without calling multiple instances when needed. Furthermore, it provides a synchronized feature for using more than one object. This also ensures that resources are properly utilized with extended use of the program, which makes it much more consistent and efficient.
- Object Pool: Can use an object pool to reuse certain objects instead of recreating them when switching panels in the program, which is important for reducing the number of service objects from being lost or wasted. With this design pattern, storing an object to be tasked for a certain state (wait, release, ready, etc.) is impactful to keep data on standby upon being called.
- Filter: By filtering the raw data from PDFs and input from the source files, the program will be able to provide a simple dashboard display to show relevant expenditure analysis information for either each transaction, or for transactions within a timeframe. Known for its organization, it acts as a chain to connect with an interface.

Solution:

- Paste a few screenshots of the working system.



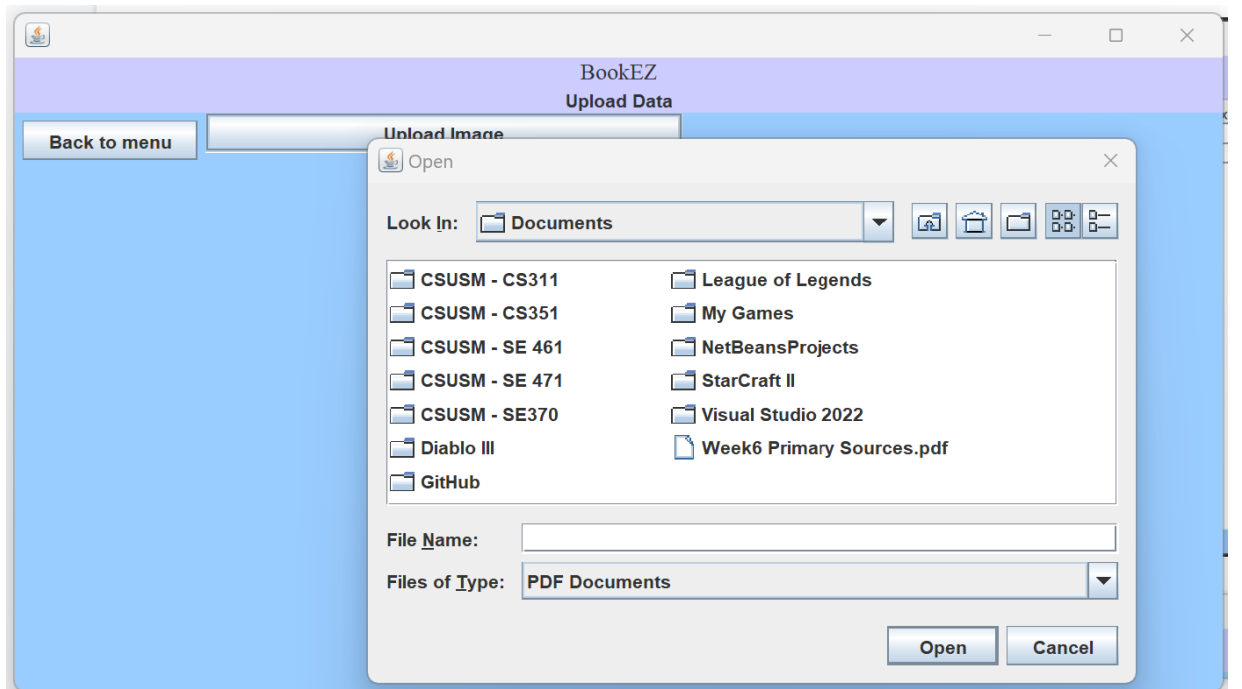
BookEZ

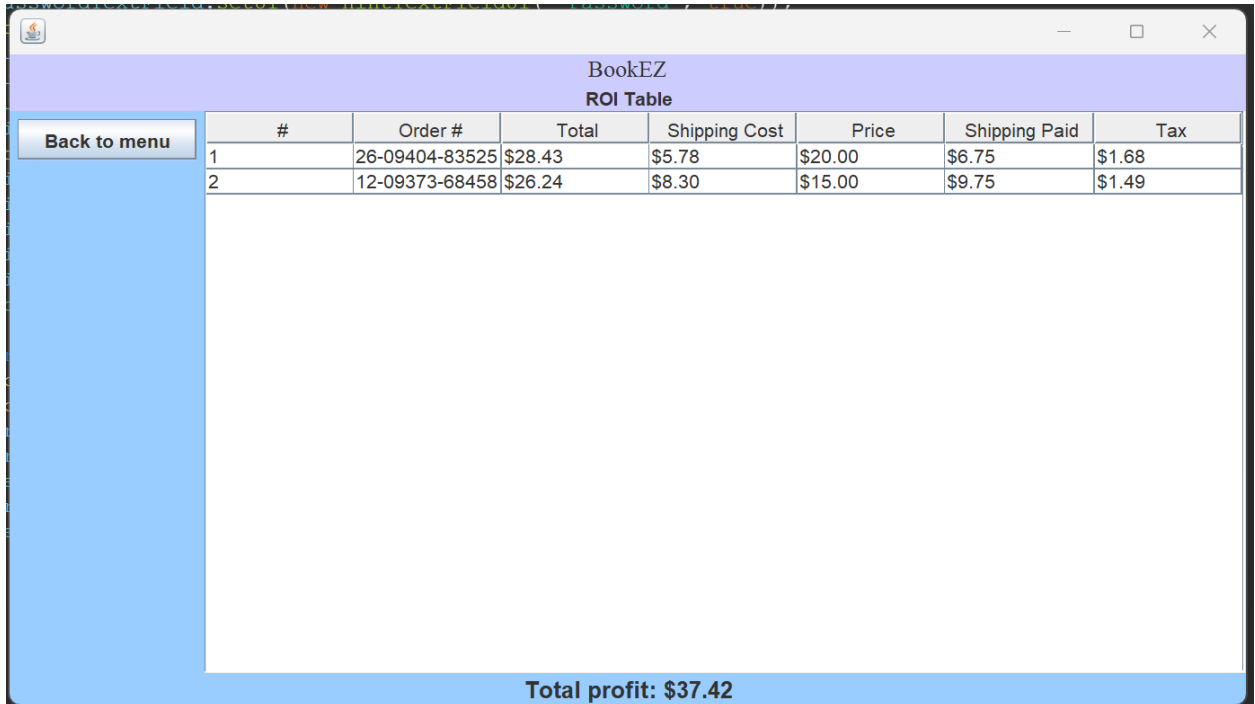
Please enter username and password

Username:

Password:

Register Login





The screenshot shows a web application window titled "BookEZ ROI Table". The window has a light blue header bar with the title. Below the header is a table with 8 columns: #, Order #, Total, Shipping Cost, Price, Shipping Paid, and Tax. The table contains 2 rows of data. To the left of the table is a vertical blue bar with a "Back to menu" button. At the bottom of the window, a blue bar displays "Total profit: \$37.42".

#	Order #	Total	Shipping Cost	Price	Shipping Paid	Tax
1	26-09404-83525	\$28.43	\$5.78	\$20.00	\$6.75	\$1.68
2	12-09373-68458	\$26.24	\$8.30	\$15.00	\$9.75	\$1.49

Back to menu

Total profit: \$37.42

- Your responses to (b) and (c)
- Save this report in PDF, then **each team** needs to submit the pdf report to the “Project Proposal” submission folder.