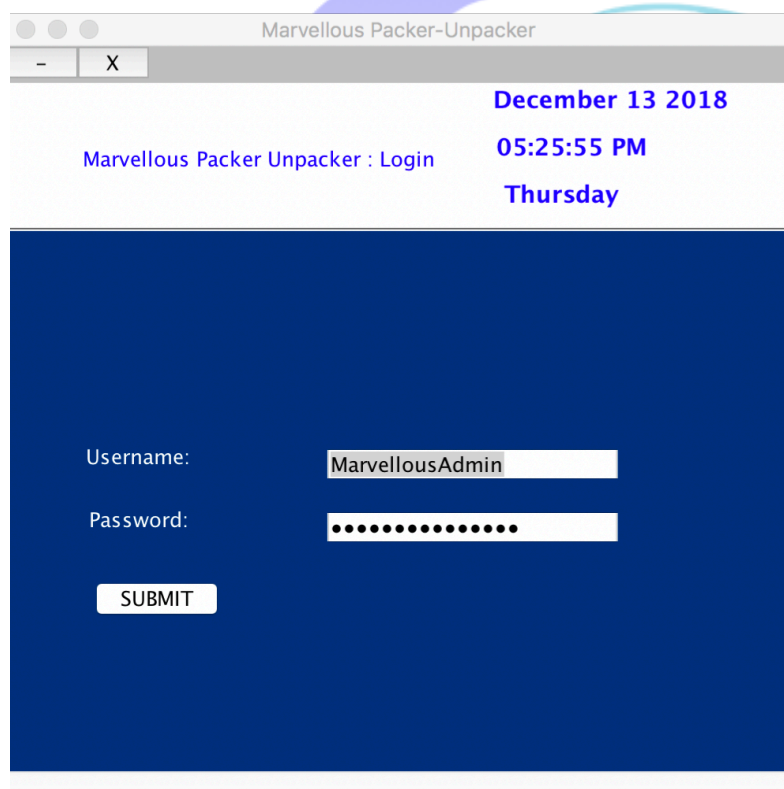


File Packer Unpacker

- This project is used to perform packing and unpacking activity for multiple types of files.
- In case of Packing activity me maintain one file which contains metadata and data of multiple files from specified directory.
- In case of Unpacking activity we extract all data from packed files and according to its metadata we create all files.
- In this project we have to use Java as Front end as well as Backend for platform independency.

Steps to develop above project

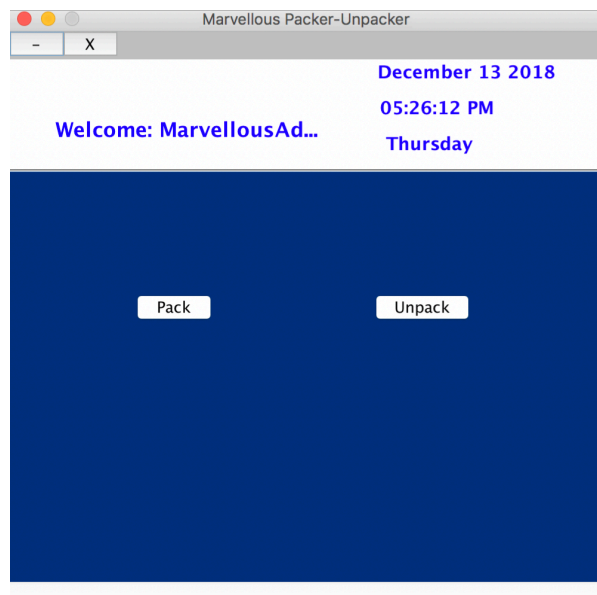
- Design one window which accept username and password from user for authentication purpose.



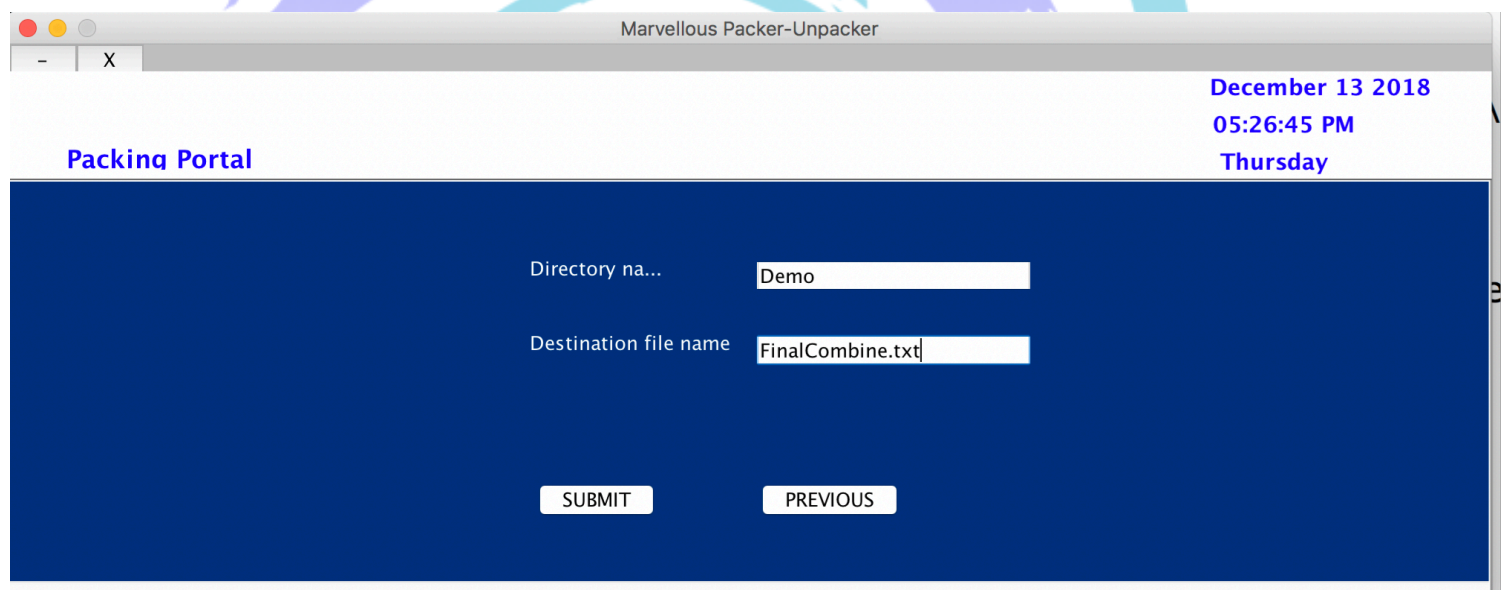
The screenshot shows a Java Swing window titled "Marvellous Packer-Unpacker". The window has a title bar with standard OS controls (minimize, maximize, close) and a menu bar with "-" and "X" options. The main content area has a dark blue background. At the top right, the date and time are displayed in blue text: "December 13 2018", "05:25:55 PM", and "Thursday". Below this, the text "Marvellous Packer Unpacker : Login" is shown. The login form consists of two text input fields: "Username:" with the value "MarvellousAdmin" and "Password:" with masked characters (dots). A "SUBMIT" button is located below the password field.

- When user submit the username and password we have to check whether username is "MarvellousAdmin" and password is "MarvellousAdmin".
- If password or username is incorrect then we have to provide 3 attempts to user. I user is unable to provide correct username and password in 3 attempts we have to close the project.
- For checking whether username and password contains minimum contains 8 letters or not we have to create one thread. That thread also check whether caps lock key is on or not.

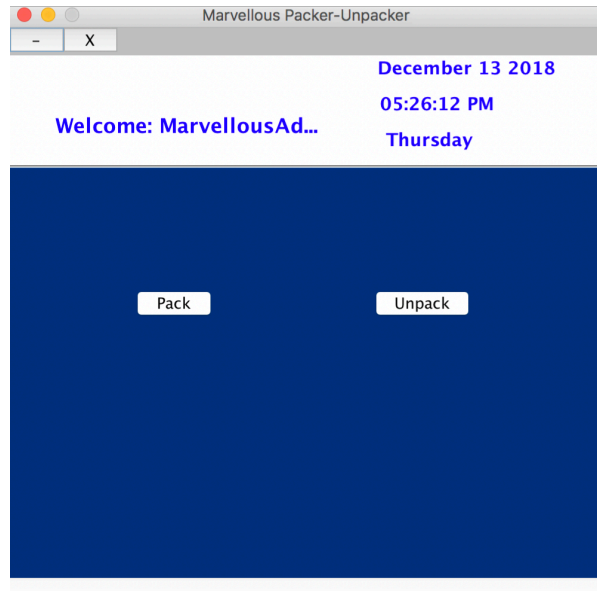
- After successful authentication we have to open new window which displays two options as Pack and Unpack.



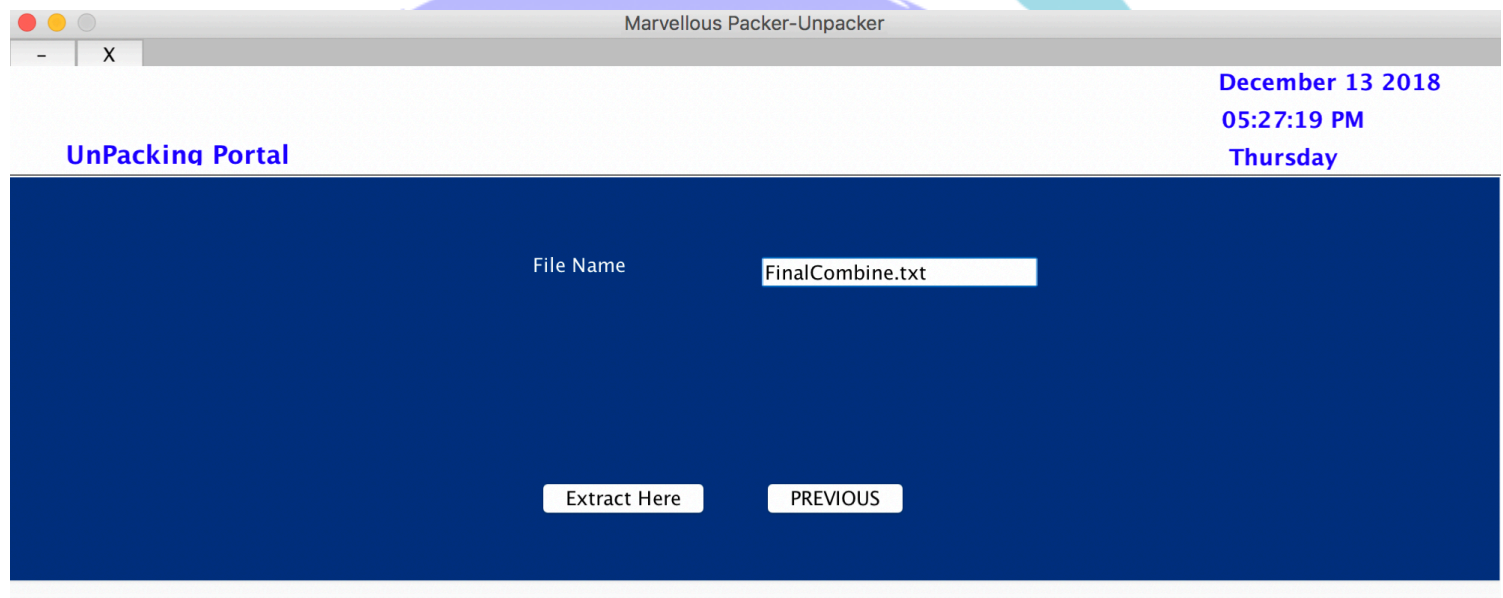
- When user press Pack button we have to open new window which looks like



- From the above window we have to accept name of directory that we want to pack and name of the packed file from user.
- Name of the packed file gets newly created which contains data and metadata of all files from that directory.
- When user click submit button we have to perform "Packing Activity". After that previous window should be displayed as



- When user click Unpack button below window should be displayed as



- From this window accept name of packed file.
- When user click Extract Here button we have to perform "Unpacking Activity".

Backend Logic

Packing Activity :

- In case of Packing activity we accept directory name and file name from user.
- We have to create new regular file as the name specified by the user.
- Now open the directory and traverse each file from that directory. In newly created file write Metadata as header and actual file data in sequence.
- While writing data perform encryption.
- Each name of file ,its size and checksum should be written in log file which gets created in system directory.
- After packing display packing report.

UnPacking Activity :

- In case of UnPacking activity we accept packed file name from user.
- for authentication of packed file use any logic like Magic Number.
- Open the packed file in read mode and perform below activity as
 - Read header
 - From the name specified in header create new file.
 - Write data into newly created file from packed file.
 - Repeat all above steps till we reached at end of the file unpacked file.
- After unpacking display unpacking report.