OOP_LAB_10

Objectives:

1. To understand file handling in java
2. To understand Exception Handling

Task_01:

Create a method file_read, In this method you are passed a String with the name of a file. This method will read the file in line by line and store each line in a String array. This String array is then returned. An example is shown below.

```
File Contents:
Purple Rain by Prince
I never meant to cause you any sorrow
I never meant to cause you any pain
I only wanted one time to see you laughing
I only want to see you laughing in the purple rain

String Array Contents:
[0]: Purple Rain by Prince
[1]: I never meant to cause you any sorrow
[2]: I never meant to cause you any pain
[3]: I only wanted one time to see you laughing
[4]: I only want to see you laughing in the purple rain
```

Task_02:

Create a method reverse_write which takes a String array that has lines of a file in it and a filename. This method will write the contents of the String array in reverse order to the file passed. Here is an example.

```
String Array Content:
[0]: Purple Rain by Prince
[1]: I never meant to cause you any sorrow
[2]: I never meant to cause you any pain
[3]: I only wanted one time to see you laughing
[4]: I only want to see you laughing in the purple rain

Files Contents:
I only want to see you laughing in the purple rain
I only wanted one time to see you laughing
I never meant to cause you any pain
I never meant to cause you any sorrow
Purple Rain by Prince
```

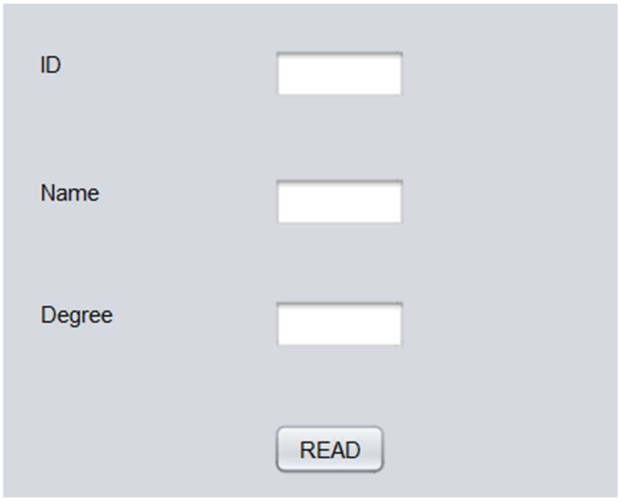
Task_03:

Task: File Copying Write a Java program that copies the contents of one file, "source.txt", to another file, "destination.txt".

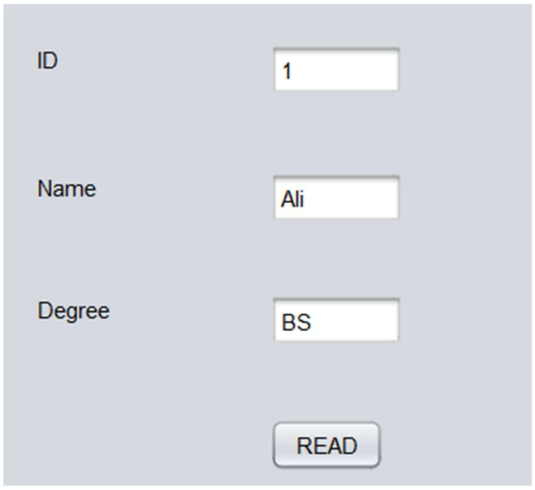
Task_04:

Create a file named student_details, which contains the details of each student (ID,NAME,PROGRAM)

Implement a java application using file handling, As soon as the application is run the following interface is displayed

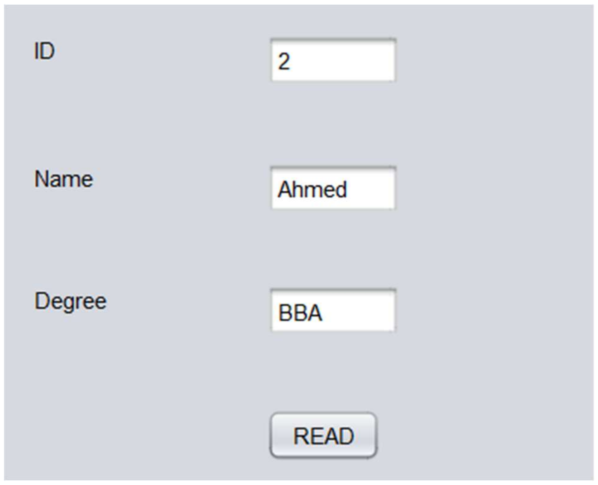


After first click on read button, first record from the file is displayed

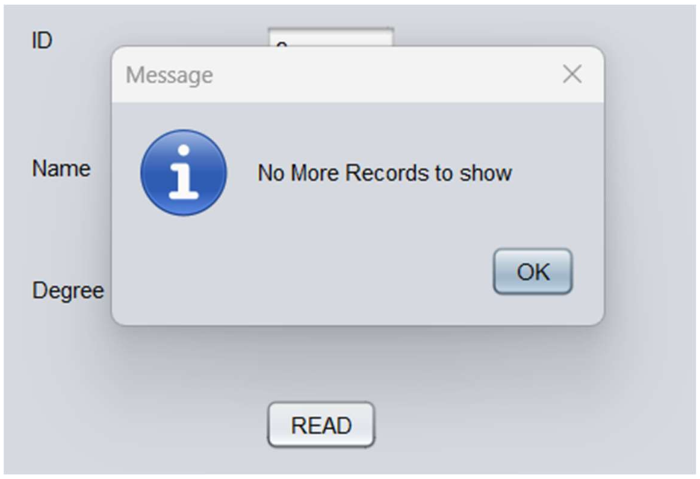


ID	1
Name	Ali
Degree	BS

After Second click on read button, second record is displayed



When there are no more records in the file, and the user clicks on read button, following message is displayed:



No More Records to show

Task_05:

Implement a login Application, User Credentials are stored in a file, when the user clicks on the login button the contents are read from the file and matched with the entered credentials, if the credentials match, Login message is displayed, otherwise Try Again is displayed

Task_06:

Custom Exception Create a custom exception class named "NegativeNumberException". Write a Java program that asks the user to enter a positive number. If the user enters a negative number, throw a "NegativeNumberException" and handle it gracefully.

Task_07:

Create a custom exception class named "InsufficientBalanceException". Write a Java program that simulates a bank account. Implement a "withdraw" method that takes an amount as input. If the account balance is insufficient for the withdrawal, throw an "InsufficientBalanceException" and handle it appropriately.

Task_08:

Task: Student Grading Create a custom exception class named "InvalidGradeException". Write a Java program that takes the grades of students as input and calculates their average. If any of the grades are invalid (e.g., negative or above 100), throw an "InvalidGradeException" and handle it gracefully