Ex. 9 FILE HANDLING AND COMMAND LINE ARGUMENTS

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PROGRAM 1

AIM:

To create a Java Application to validate the username and password from a file, and upon successful validation, write command-line input into a new file.

ALGORITHM:

1. Accept username and password input from the user.
2. Read the stored username and password from a separate file.
3. Compare the input credentials with the stored credentials.
4. If the credentials match, allow the user to provide additional input via command-line arguments.
5. Write the contents from the command-line arguments into a new file.
6. If the credentials do not match, print an error message.
7. Use exception handling to manage file I/O operations (reading credentials and writing output).

PROGRAM:

```
package Lab9;
import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.util.Scanner;
import java.io.BufferedReader;
import java.io.IOException;
class DummyCredentials {
   public void writingDummyCredentials(String fileName) {
      File f = new File("/home/snucse/Desktop/Java/Lab9/" + fileName
+ ".txt");
      try (FileWriter fileWriter = new FileWriter(f)) {
         fileWriter.write("ashwin,ashwin2005\nprasad,prasad1971");
         System.out.println("A File with Dummy Credentials is
Created.");
      } catch (IOException e) {
         System.out.println(e);
      }
   }
   public void readingDummyCredentials(String fileName) {
      try (BufferedReader fileReader = new BufferedReader(
            new                                          FileReader(new
File("/home/snucse/Desktop/Java/Lab9/" + fileName + ".txt")))) {
         String line;
```

```
            while ((line = fileReader.readLine()) != null) {
                String credentials[] = line.split(",");
                if (credentials.length == 2) {
                    System.out.println("User Name = " + credentials[0]);
                    System.out.println("Password = " + credentials[1]);
                } else {
                    System.out.println("Invalid Format..");
                }
            }
        } catch (Exception e) {
            System.out.println(e);
        }
    }
    public boolean credentialsChecker(String username, String password, String fileName) {
        try (BufferedReader reader = new BufferedReader(
                new FileReader(new File("/home/snucse/Desktop/Java/Lab9/" + fileName + ".txt")))) {
            String line;
            while ((line = reader.readLine()) != null) {
                String content[] = line.split(",");
                if (content[0].equals(username)) {
                    if (content[1].equals(password)) {
                        System.out.println("Login Credentials are Correct!");
                        return true;
```

```
                }
            }
        }
    } catch (Exception e) {
        System.out.println(e);
    }
    System.out.println("Login Credentials are Incorrect..");
    return false;
}
public void contentWriter(String[] args, String fileName) {
    File f = new File("/home/snucse/Desktop/Java/Lab9/" + fileName
+ ".txt");
    try (FileWriter writer = new FileWriter(f)) {
        for (String con : args) {
            writer.write(con + "\n");
        }
    } catch (Exception e) {
        System.out.println(e);
    }
}
public void contentReader(String fileName) {
    try (BufferedReader reader = new BufferedReader(
            new                                          FileReader(new
File("/home/snucse/Desktop/Java/Lab9/" + fileName + ".txt")))) {
        String line;
```

```
            while ((line = reader.readLine()) != null) {
                System.out.println(line);
            }
        } catch (Exception e) {
            System.out.println(e);
        }
    }
}
public class ex1 {
    public static void main(String[] args) {
        DummyCredentials dc = new DummyCredentials();
        Scanner input = new Scanner(System.in);
        System.out.print("Enter the Name of the File: ");
        String fileName = input.nextLine();
        System.out.println("Going to Write Dummy Credentials in the File.");
        dc.writingDummyCredentials(fileName);
        System.out.println("Printing the Contents of the File:");
        dc.readingDummyCredentials(fileName);
        System.out.println("---------------------------------------------");
        System.out.print("Enter the Username: ");
        String username = input.nextLine();
        System.out.print("Enter the Password: ");
        String password = input.nextLine();
        if (dc.credentialsChecker(username, password, fileName)) {
```

```
        System.out.println("-----------------------------------------");
        System.out.print("Enter the Name of the File: ");
        String outputFile = input.nextLine();
        System.out.println("Writing the Command Line Arguments into the File..");
        dc.contentWriter(args, fileName);
        System.out.println("Reading the Contents of the Output File:");
        dc.contentReader(fileName);
    }
  }
}
```

OUTPUT:

```
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~$ cd Desktop
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop$ cd Java
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java$ cd Lab9
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java/Lab9$ javac ex1.java
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java/Lab9$ ls
DummyCredentials.class  ex1.class  ex1.java
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java/Lab9$ cd
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~$ cd Desktop
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop$ cd Java
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java$ java Lab9.ex1 hello world 123
Enter the Name of the File: credentials
Going to Write Dummy Credentials in the File.
A File with Dummy Credentials is Created.
Printing the Contents of the File:
User Name = ashwin
Password = ashwin2005
User Name = prasad
Password = prasad1971
-----------------------------------------
Enter the Username: ashwin
Enter the Password: ashwin2005
Login Credentials are Correct!
-----------------------------------------
Enter the Name of the File: output1
Writing the Command Line Arguments into the File..
Reading the Contents of the Output File:
hello
world
123
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java$ cd Lab9
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java/Lab9$ ls
credentials.txt  DummyCredentials.class  ex1.class  ex1.java
snucse@snucse-HP-Pro-Tower-400-G9-PCI-Desktop-PC:~/Desktop/Java/Lab9$
```

PROGRAM 2

AIM:

To create a Java Application to create a file with 10 students and their marks, and then generate two new files: one for students scoring above 90 and another for students scoring below 40, with exception handling for file operations.

ALGORITHM:

1. Create a file with the names of 10 students and their marks (randomly assigned between 1 and 100).
2. Read the file and process each student's name and marks.
3. If a student has marks greater than 90, add their name to the best_performers file.
4. If a student has marks less than 40, add their name to the low_performers file.
5. Write the results into the respective files.
6. Use exception handling to ensure proper file reading and writing operations, catching any errors that occur during these processes.

PROGRAM:

```
package Lab9;

import java.io.File;
import java.io.FileReader;
import java.io.FileWriter;
import java.io.BufferedReader;
import java.io.IOException;import java.util.ArrayList;

public class ex2 {
   public void createBestPerformers(ArrayList<String>
bestPerformers) {
      try (FileWriter writer = new FileWriter(new
File("/home/snucse/Desktop/Java/Lab9/best_performers.txt"))) {
         for (String con : bestPerformers) {
            writer.write(con + "\n");
         }
      } catch (Exception e) {
         System.out.println(e);
      }
   }

   public void createLowPerformers(ArrayList<String>
lowPerformers) {
```

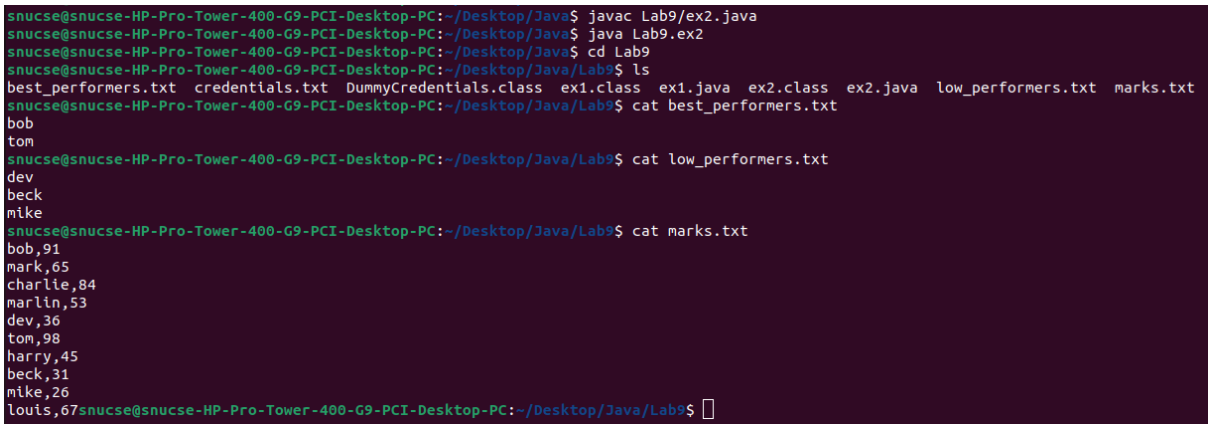
```
        try (FileWriter writer = new FileWriter(new
File("/home/snucse/Desktop/Java/Lab9/low_performers.txt"))) {
            for (String con : lowPerformers) {
                writer.write(con + "\n");
            }
        } catch (Exception e) {
            System.out.println(e);
        }
    }

    public static void main(String[] args) {
        ArrayList<String> bestPerformers = new ArrayList<String>();
        ArrayList<String> lowPerformers = new ArrayList<String>();
        ex2 object = new ex2();
        try (BufferedReader reader = new BufferedReader(
                new                                          FileReader(new
File("/home/snucse/Desktop/Java/Lab9/marks.txt")))) {
            String line;
            while ((line = reader.readLine()) != null) {
                String marks[] = line.split(",");
                if (marks.length == 2) {
                    if (Integer.parseInt(marks[1]) > 90) {
                        bestPerformers.add(marks[0]);
                    } else if (Integer.parseInt(marks[1]) < 40) {
                        lowPerformers.add(marks[0]);
```

```
                }
            }
        }
        object.createBestPerformers(bestPerformers);
        object.createLowPerformers(lowPerformers);
    } catch (Exception e) {
        System.out.println(e);
    }
  }

}
```

OUTPUT:



RESULT:

Thus, different Java Applications to Handle Text Files have been compiled and executed successfully.