Name: Akash Kumar Banik   Reg. no: 24MCA0242

SCHOOL OF COMPUTER SCIENCE ENGINEERING AND INFORMATION SYSTEMS

FALL SEMESTER 2024-2025

PMCA502P - JAVA PROGRAMMING LAB

LAB ASSESSMENT: 5

SUBMITTED ON: 23RD AUGUST 2024

1. Write a Java file program to get a directory name and type of a file as input. Then list those files of the directory along with the size of each file. If the provided input is not directory or the file type is wrong, display the error message.

Code:

Import java.util.Scanner;

import java.io.*;

import java.lang.*;

class Directory

{

        public static void main(String []args)

        {

                String fileType, directoryName, s;

                Scanner sc= new Scanner(System.in);

                System.out.println("Enter the Directory: \n");sc.nextLine();

                directoryName= sc.nextline();

                System.out.println("Enter the file type: \n");sc.nextLine();

                fileType= sc.nextLine();

                File f= new File(directoryName);

                try

                {

                        if(f.isDirectory(directoryName)==0)

                        {

                                throw new FileNotFoundException("Directory not found!");

                        }

                        else if(fileType!='txt' || fileType!='.pdf' || fileType!='.java' || fileType!='.class')

```
                        {

                                        throw new FileNotFoundException("File type not found!");

                        }



                }

                catch(FileNotFoundException e)

                {

                        System.out.println("Exception thrown: ",e);

                }

                File []FileArray= f.listFiles();

                for(int i=0;i<FileArray.length;i++)

                {

                        s=FileArray[i];

                        if(s.endsWith(FileType)==1)

                        {

                                        System.out.println("File name: "+FileArray[i]+" File size:
"+FileArray[i].length(),"\n");

                        }

                }

                f.close();

        }

}
```

Output:

2. Create a Java program to get a student's register number and check it is valid or not. Here the register number should follow the VIT format i.e. 2 digits followed by 3 Alphabets and then 4 digits. Finally, display the result.

Code:

```java
import java.util.Scanner;

class RegisterNumberError extends Exception
{
    String errorMessage;

    public RegisterNumberError(String s)
    {
        errorMessage=s;
    }

    public String getMessage()
    {
        return(errorMessage);
    }
}

class CheckRegisterNumber
{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);

        System.out.print("Enter the student's register number: ");

        String RegisterNumber = sc.nextLine();

        try
        {
```

```java
    boolean isValid= isValidRegisterNumber(RegisterNumber);

    if(isValid)

    {

        System.out.println("Registration number format is correct!");

    }

    else

    {

        throw new RegisterNumberError("Registration number is incorrect!");

    }

    }

    catch(RegisterNumberError rne)

    {

        System.out.println(rne.getMessage());

    }

}

public static boolean isValidRegisterNumber(String registerNumber)

{

    if (registerNumber.length() != 9) {

        return false;

    }


    for (int i = 0; i < 2; i++) {

        if (!Character.isDigit(registerNumber.charAt(i))) {

            return false;

        }
```

```
        }


    for (int i = 2; i < 5; i++) {

        if (!Character.isLetter(registerNumber.charAt(i))) {

            return false;

        }

    }


    for (int i = 5; i < 9; i++) {

        if (!Character.isDigit(registerNumber.charAt(i))) {

            return false;

        }

    }


    return true;

  }
}
```

Output:

```
Enter the student's register number: 24MCA0252
Registration number format is correct!
PS C:\Users\batch1>
```