



UNIVERSITY OF DELHI



Atma Ram Sanatan Dharma College

B.Sc (Hons.) Computer Science
Programming in Java (2nd Semester)

Assignment

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Q1. Write a program in Java (using try-with-resources functionality) to do the following:

- i) open two files "exam1.txt" and "exam2.txt". Accept file names through command-line arguments.**
- ii) exit the program if any of the two files is unable to open.**
- iii) append contents of "exam1.txt" to "exam2.txt".**
- iv) re-write contents of "exam2.txt" after removing all white spaces from the updated content (without using built-in methods).**

Answer.

```
import java.io.*;
import java.io.IOException;
class main
{
    public static void main(String args[])throws
        IOException,FileNotFoundException
    {
        try {
            FileInputStream fin=new FileInputStream(args[0]);
            FileOutputStream fout=new FileOutputStream(args[1]);
            int b;
            while((b=fin.read())!=-1)
            {
                fout.write(b);
            }
            System.out.println("File copies successfully");
            fin.close();
            fout.close();

            File femni = new File("temp.txt");
            FileOutputStream temp = new FileOutputStream("temp.txt");
            FileInputStream fout1=new FileInputStream(args[1]);
            while((b=fout1.read())!=-1)
```

```
{
if (b!=32)
temp.write(b);

}
fout1.close();
    temp.close();

FileInputStream q=new FileInputStream("temp.txt");
    FileOutputStream w=new FileOutputStream(args[1]);
while((b=q.read())!=-1)
{
w.write(b);
}
System.out.println("File copies successfully after removing all white
spaces");
q.close();
w.close();

} catch(IOException e) {
    System.out.println("Files Not Found...");
    System.exit(0);
}
}
}
```

Q2. Write a program in Java to do the following:

i) define a class Person having three private instance variables: name, age and emailid; a private class variable count (that keeps count of total number of instances), all having appropriate data types.

ii) define a parameterized constructor; and two methods- displayCount() and toString().

iii) define a custom exception class InvalidEmailIdException having a toString() method that prints appropriate exception details. The exception object is thrown when an emailid of a person is invalid.

iv) define a custom exception class ExcessMembersException having a toString() method that prints appropriate exception details. The exception object is thrown when the variable count (count of instances of class Person) is greater than 5.

v) define a class Demo having main method with appropriate code to show working of the above classes.

Answer.

```
import java.util.*;
import java.lang.*;
import java.io.*;
```

```
class InvalidEmailIdException extends Exception {
    public String toString(String emailid) {
```

```
        return "Invalid Email Id. ( Missing @)";
    }
}
```

```
class ExcessMembersException extends Exception {
    public String toString(String emailid) {
```

```
        return ("Excess Members in Class ( More than 5)");
```

```
}  
}
```

```
class Person {  
    // Private Data Member  
    private int age;  
    private String name,emailid;  
    static int count =0;  
    // Paramterized Constructor  
    Person(int x) {  
        count++;  
    }  
    public void displayCount()  
    {  
        System.out.println("No. of Members are - "+count);  
    }  
  
    public String toString(String emailid) throws  
        InvalidEmailIdException,ExcessMembersException{  
  
        if ((emailid.contains("@"))==false) {  
            throw new InvalidEmailIdException();  
        }  
        if (count>5) {  
            throw new ExcessMembersException();  
        }  
        return "Normally";  
    }  
}
```

```
class demo{
    // Driver Code

    public static void main(String[] args) {
try{
    Person x= new Person(1);
x.toString("Fagafagmail");
    Person y= new Person(1);
y.toString("Fagafa@gmail");
    Person xx= new Person(1);
xx.toString("Fagafa@gmail");
    Person xq= new Person(1);
xq.toString("Fagafagmail");
    Person qx= new Person(1);
qx.toString("Fagafa@gmail");
    Person qqx= new Person(1);
qqx.toString("Fagafa@gmail");
    }
    catch(InvalidEmailldException e)
        {
            System.out.println("caught " + e);
        }
    catch(ExcessMembersException e)
        {
            System.out.println("caught " + e);
        }

}
}
```