Exercise

Q1. Write a program to replace a substring inside a string with other string ?

CODE:

```
import java.util.Scanner;
class Stringrep
{
	static String str="welcome to java session";
	public static void main(String[] args)
	{
	Scanner sc= new Scanner(System.in);
	System.out.println("enter substring: ");
	String sub = sc.nextLine();
	System.out.println("substring you entered is:" +sub);
	String repString=str.replace("java",sub);                    //replacement
	System.out.println(repString);
	}
}
```

OUTPUT:

Q2. Write a program to find the number of occurrences of the duplicate words in a string and print them ?

CODE:

```
class Dupwordss {

        static int occ(String str, String word)
        {
        String a[] = str.split(" ");
        int count = 0;
        for (int i = 0; i < a.length; i++)
        {
        if (word.equals(a[i]))
                count++;
        }
        return count;
        }
        public static void main(String args[])
        {
        String str = "she sell sea shell on the sea shore";
        String word = "sea";
        System.out.println(word + " occurs " + occ(str, word) + " times");
        }
}
```

OUTPUT:

```
preeti@preeti:~/IdeaProjects/assessment$ javac Dupwordss.java
preeti@preeti:~/IdeaProjects/assessment$ java Dupwordss
sea occurs 2 times
```

Q3. Write a program to find the number of occurrences of a character in a string without using loop?

CODE:

```
class Dupchar
{
        public static void main(String args[])
        {
        String str = "Assessment";
        int count = str.length() - str.replace("s","").length();
        System.out.println("number of occurance of s in " + str + " is " + count);
        }
}
```

OUTPUT:

```
preeti@preeti:~/IdeaProjects/assessment$ javac Dupchar.java
preeti@preeti:~/IdeaProjects/assessment$ java Dupchar
number of occurance of s in Assessment is 4
```

Q4. Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special Characters In A String

CODE:

```
import java.util.Scanner;
public class Numper
{
	static float a=0;
	static float b=0;
	static float c=0;
	static float d=0;
	public static void main(String args[])
	{
	Scanner sc=new Scanner(System.in);
	System.out.println("enter a string:");
	String str=sc.nextLine();
	char ch[]=new char[str.length()];
	for(int i=0;i<str.length();i++)
	{
	ch[i]=str.charAt(i);
	}
	for(int i=0;i<str.length();i++)
	{
	if(ch[i]>='a'&&ch[i]<='z')
	{
		a++;
	}
	else if(ch[i]>='A'&&ch[i]<='Z')
	{
		b++;
	}
	else if(ch[i]>='0'&&ch[i]<='9')
	{
		c++;
	}
	else
	{
		d++;
	}
	}

	System.out.println("Number of lowercase character: "+a);
	System.out.println("Percentage of lowercase letter: "+(a/(a+b+c+d)*100));
```

```
        System.out.println("Number of uppercase character: "+b);
        System.out.println("Percentage of uppercase letter: "+(b/(a+b+c+d)*100));

        System.out.println("Number of digits: "+c);
        System.out.println("percentage of digits: "+(c/(a+b+c+d)*100));

        System.out.println("Number of special character: "+d);
        System.out.println("Percentage of special characters: "+(d/(a+b+c+d)*100));

        }
}
```

OUTPUT:

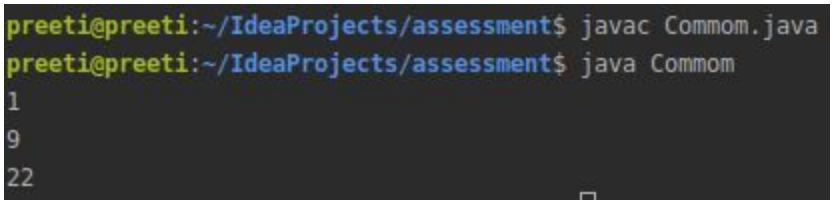
```
preeti@preeti:~/IdeaProjects/assessment$ javac Numper.java
preeti@preeti:~/IdeaProjects/assessment$ java Numper
enter a string:
Preeti@123
Number of lowercase character: 5.0
Percentage of lowercase letter: 50.0
Number of uppercase character: 1.0
Percentage of uppercase letter: 10.0
Number of digits: 3.0
percentage of digits: 30.000002
Number of special character: 1.0
Percentage of special characters: 10.0
```

Q5. Find common elements between two arrays.

CODE:

```
class Commom{
	public static void main(String args[])
	{
		int[] arr1={1,2,9,22,76,5};
		int[] arr2={22,99,908,9,1};
		for(int i=0;i<arr1.length;i++)
		{
			for(int j=0;j<arr2.length;j++)
				if(arr1[i]==arr2[j])
					System.out.println(arr1[i]);
		}
	}
}
```

OUTPUT:



Q6. There is an array with every element repeated twice except one. Find that element

CODE:

```
class Uncommon{
	public static void main(String args[])
	{
	int[] arr1={1,99,8,1,99,8,7};
	int count=0;
	for (int i=0;i<arr1.length;i++)
	{
	count=1;
	for(int j=i+1;j<arr1.length;j++)
	{
		if(arr1[i]==arr1[j])
		{
		count++;
		arr1[j]='0';
		}
	}
	if(arr1[i]!='0' && count==1)
	{
		System.out.println("single element is "+arr1[i]);
	}
	}

	}
}
```

OUTPUT:

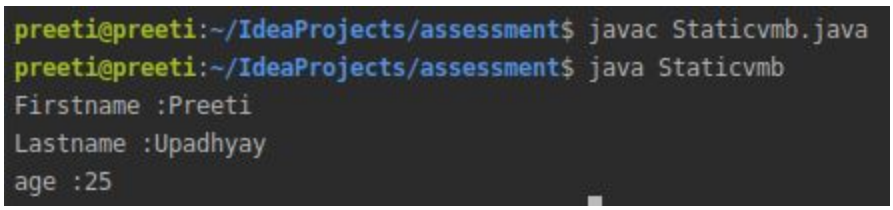
```
preeti@preeti:~/IdeaProjects/assessment$ javac Uncommon.java
preeti@preeti:~/IdeaProjects/assessment$ java Uncommon
single element is 7
```

Q7. Write a program to print your Firstname,LastName & age using static block,static method & static variable respectively

CODE:

```
public class Staticvmb
{
  static int age=25;                                    //static
variable
  static
      {                                                 //static block
        System.out.println("Firstname :Preeti");
      }
  static void Lastname()                                //static method
      {
        System.out.println("Lastname :Upadhyay");
      }
  public static void main(String args[])
      {
        Lastname();
        System.out.println("age :" +age);
      }
}
```

OUTPUT:

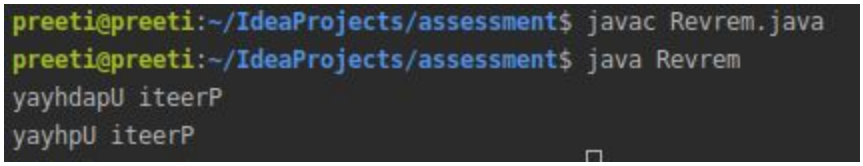


Q8. Write a program to reverse a string and remove character from index 4 to index 9 from the reversed string using String Buffer

CODE:

```
class Revrem
{
	public static void main(String args[])
	{
	String str1=("Preeti Upadhyay");
	StringBuffer str2=new StringBuffer();
	str2.append(str1);
	str2=str2.reverse();
	System.out.println(str2);
	str2.delete(4,6);
	System.out.println(str2);
	}
}
```

OUTPUT:



Q9.Write a program to display values of enums using a constructor & getPrice() method (Example display house & their prices)

CODE:

```
public class Enums{
        public enum houseName{
        NORTH(7898),SOUTH(98723),EAST(56789),WEST(43562),CENTRAL(65432);
        private int p;
        houseName(int price)
        {
        p=price;
        }
        int getprice()
        {
        return p;
        }
        }
        public static void main(String[] args)
        {
        System.out.println("house name:price");
        System.out.println(houseName.NORTH +": "+houseName.NORTH.getprice()+" rupees");
        System.out.println(houseName.SOUTH +": "+houseName.SOUTH.getprice()+" rupees");
        System.out.println(houseName.EAST +": "+houseName.EAST.getprice()+" rupees");
        System.out.println(houseName.WEST +": "+houseName.WEST.getprice()+" rupees");
        System.out.println(houseName.CENTRAL +": "+houseName.CENTRAL.getprice()+"
rupees");

        }
}
```

OUTPUT:

```
preeti@preeti:~/IdeaProjects/assessment$ javac Enums.java
preeti@preeti:~/IdeaProjects/assessment$ java Enums
house name:price
NORTH: 7898 rupees
SOUTH: 98723 rupees
EAST: 56789 rupees
WEST: 43562 rupees
CENTRAL: 65432 rupees
```

Q10.Write a single program for following operation using overloading

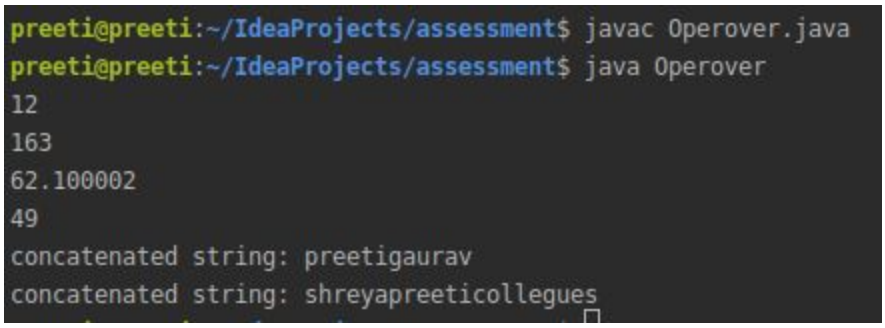
A) Adding 2 integer number
B) Adding 2 double
C) multiplying 2 float
D) multiplying 2 int
E) concate 2 string
F) Concate 3 String

CODE:

```
class Operover
{
	public int add(int x,int y)
	{
	return(x+y);
	}
	public double add(double x,double y)
	{
	return(x+y);
	}
	public float multiply(float x,float y)
	{
		return(x*y);
	}
	public int multiply(int x,int y)
	{
		return(x*y);
	}
	public String concate(String str1,String str2)
	{
		String str3=str1.concat(str2);
		//System.out.println("concatenated string:");
		return("concatenated string: "+str3);
	}
	public String concate3(String str1,String str2, String str3)
	{
	String str4=str1+str2+str3;
	//System.out.println("concatenated string:");
	return("concatenated string: "+str4);
	}
public static void main(String args[])
{
	Operover o=new Operover();
	System.out.println(o.add(5,7));
```

```
        System.out.println(o.add(65,98));
        System.out.println(o.multiply(6.9f,9.0f));
        System.out.println(o.multiply(7,7));
        System.out.println(o.concate("preeti","gaurav"));
        System.out.println(o.concate3("shreya","preeti","collegues"));
}
}
```

OUTPUT:



Q11.Create 3 sub class of bank SBI,BOI,ICICI all 4 should have method called getDetails which provide there specific details like rate of interest etc,print details of every banks.

CODE:

```
class Bank
	{
	void getDetails()
	{
		System.out.println("rate of interest = 2%");
		System.out.println("number of employees = 200");
		//System.out.println("this is parent class");
	}
	}
	class SBI extends Bank
	{
	void getDetails()
	{
	System.out.println("branch: SBI-north delhi");
	}
	void display()
	{
	getDetails();
	super.getDetails();
	}
	}

	class BOI extends Bank
	{
	void getDetails()
	{
	System.out.println("branch: BOI- south delhi");
	}
	void display()
	{
	getDetails();
	super.getDetails();
	}
	}

	class ICICI extends Bank
	{
	void getDetails()
	{
```

```
System.out.println("branch: ICICI- east delhi");
}
void display()
{
getDetails();
super.getDetails();
}
}
class Banking
{
public static void main(String args[])
{
SBI s = new SBI();
s.display();
BOI b = new BOI();
b.display();
ICICI i = new ICICI();
i.display();
}
}
```

OUTPUT: