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

Answer:

In this code ,we **import java.util.*;** just only to take the input by Scanner class.
str.replace(x,y): to replace the x string by y.

```java
import java.util.*;
public class Practice
{
    public static void main(String args[])
    {
        Scanner sc = new Scanner(System.in);
        System.out.println("Enter the string: ");
        String str = sc.nextLine();
        System.out.println("Enter the string to be replaced: ");
        String old_str = sc.nextLine();
        System.out.println("Enter the new string: ");
        String new_str = sc.nextLine();
        String replaced = str.replace(old_str, new_str);
        System.out.println("replaced string: " + replaced);
    }
}
```

Output:

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter the string:
My name is Tushar
Enter the string to be replaced:
Tushar
Enter the new string:
Tushar Bansal
replaced string: My name is Tushar Bansal

Process finished with exit code 0
```

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

Answer:

```java
public class Practice{
    public static void main(String[] args) {
        String s = "My name is Tushar Bansal , I am from IMS Engineering College (Ghaziabad). My hobbie is playing Badminton.";
        int count;
        //Converting the string into lowercase letters so that 'Tushar' and 'tushar ' will be considered as dublicate.
        s = s.toLowerCase();
        //Spliting the string into words
        String words[] = s.split( regex: " ");//here " space" is used to make the string into words.
        System.out.println("Duplicate words in the string are: ");
        for (int i = 0; i < words.length; i++) {
            count = 1;
            for (int j = i + 1; j < words.length; j++) {
                if (words[i].equals(words[j])) {
                    count++;
                    //Set words[j] to 0 to avoid printing visited word.
                    words[j] = "0";
                }
            }
            //for displaying the duplicate words if exists any.
            if (count > 1 && words[i] != "0")
                System.out.println("'"+words[i]+"' is repeated:"+count+" times");
        }
    }
}
```

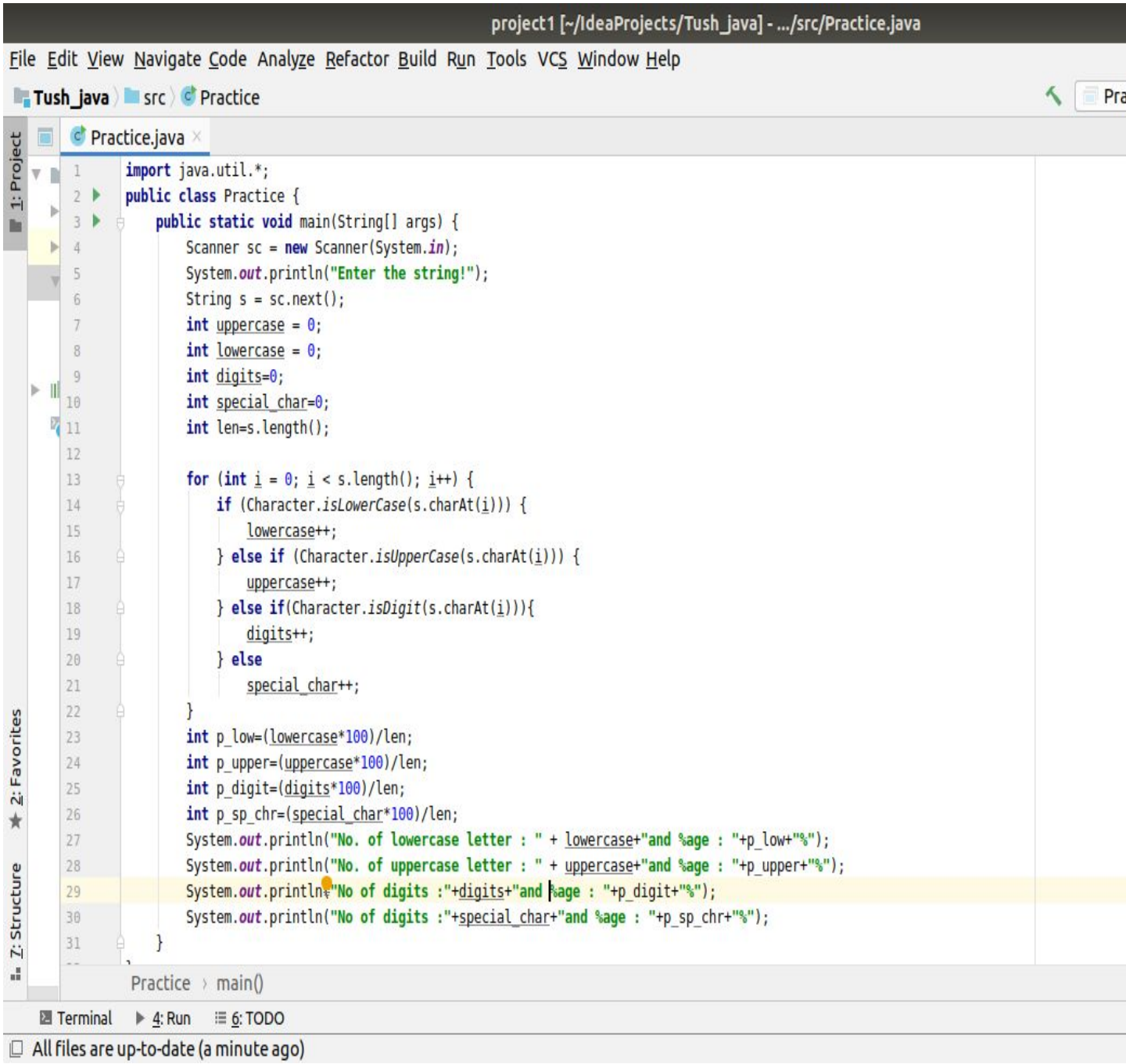
```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Duplicate words in the string are:
'my' is repeated:2 times
'is' is repeated:2 times

Process finished with exit code 0
```

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

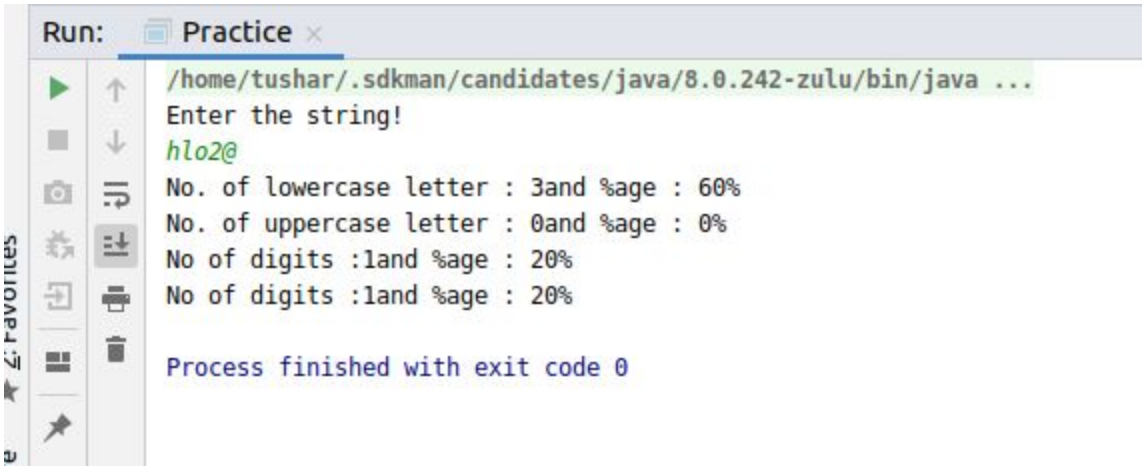
```
ce                                                                    Practice
Practice.java
1   import java.util.*;
2   class Practice
3   {
4       public static void main(String[] args)
5       {
6           Scanner sc=new Scanner(System.in);
7           System.out.println("Enter the string: ");
8           String str=sc.nextLine();
9           System.out.println("Enter the character to find its occurance: ");
10          String chr=sc.nextLine();
11          String str1=str.toLowerCase();
12          int count = str1.length() - str1.replace(chr, replacement: "").length();
13          System.out.println("Number of occurances of "+chr+" in "+str+" = "+count);
14      }
15  }
```

```
Run:  Practice
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter the string:
Hlo! my name is Tushar Bansal
Enter the character to find its occurance:
h
Number of occurances of h in Hlo! my name is Tushar Bansal = 2

Process finished with exit code 0
```

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

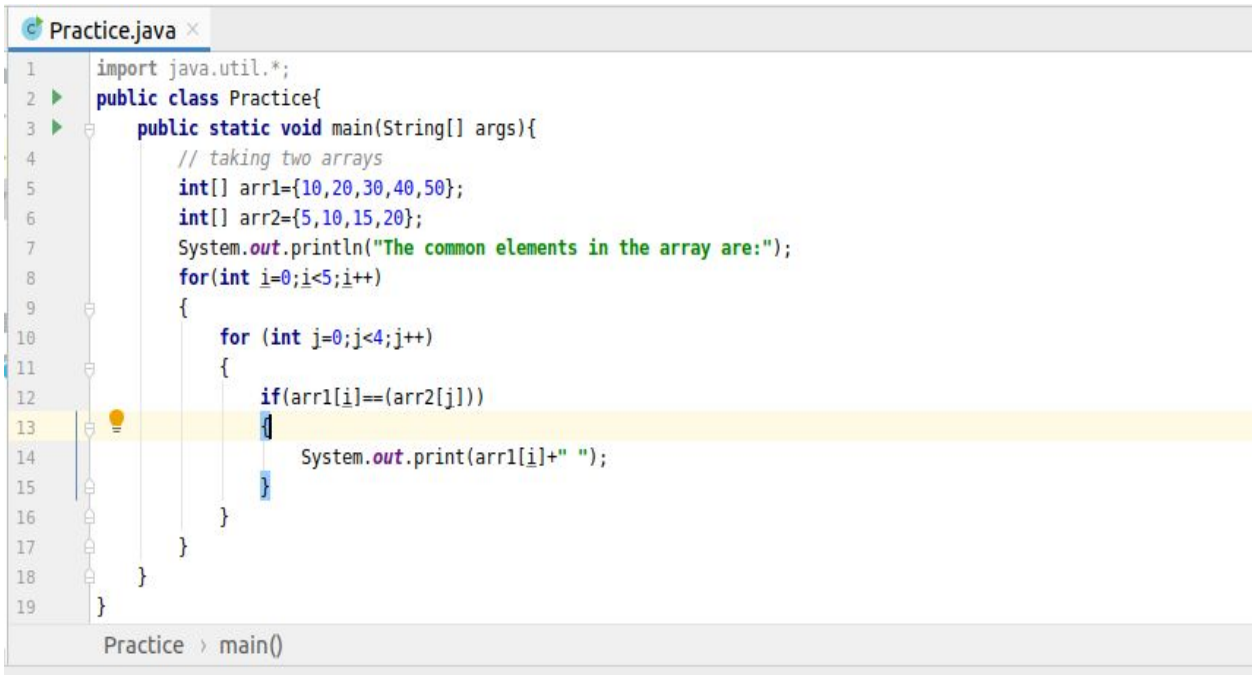

project1 [~/IdeaProjects/Tush_java] - .../src/Practice.java
File Edit View Navigate Code Analyze Refactor Build Run Tools VCS Window Help
Tush_java src Practice
Practice.java
1: Project
2: Favorites
7: Structure
import java.util.*;
public class Practice {
public static void main(String[] args) {
Scanner sc = new Scanner(System.in);
System.out.println("Enter the string!");
String s = sc.next();
int uppercase = 0;
int lowercase = 0;
int digits=0;
int special_char=0;
int len=s.length();
for (int i = 0; i < s.length(); i++) {
if (Character.isLowerCase(s.charAt(i))) {
lowercase++;
} else if (Character.isUpperCase(s.charAt(i))) {
uppercase++;
} else if(Character.isDigit(s.charAt(i))){
digits++;
} else
special_char++;
}
int p_low=(lowercase*100)/len;
int p_upper=(uppercase*100)/len;
int p_digit=(digits*100)/len;
int p_sp_chr=(special_char*100)/len;
System.out.println("No. of lowercase letter : " + lowercase+"and %age : "+p_low+"%");
System.out.println("No. of uppercase letter : " + uppercase+"and %age : "+p_upper+"%");
System.out.println("No of digits :"+digits+"and %age : "+p_digit+"%");
System.out.println("No of digits :"+special_char+"and %age : "+p_sp_chr+"%");
}
Practice main()
Terminal 4: Run 6: TODO
All files are up-to-date (a minute ago)

Output…..



Q5. Find common elements between two arrays.

Answers:



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

Practice.java

```
1   import java.util.*;
2   public class Practice{
3       public static void main(String[] args){
4           // taking two arrays
5           int[] arr1={10,20,30,40,50,10,20,30,40};
6           int size=arr1.length;
7
8               int result = arr1[0];
9               for (int i = 1; i < size; i++)
10                  result = result ^ arr1[i];
11          System.out.println("The single element in array is :"+result);
12      }
13  }
```

Run: Practice

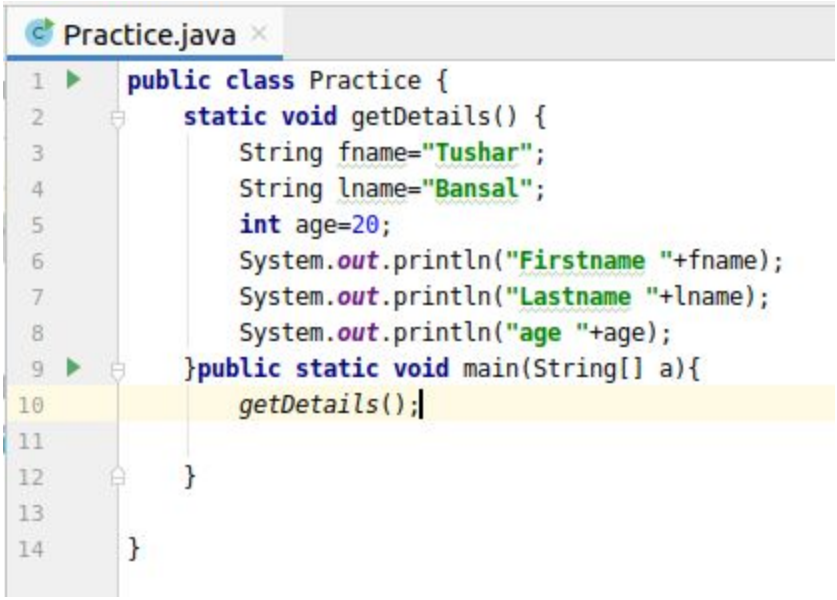
```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
The single element in array is :50

Process finished with exit code 0
```

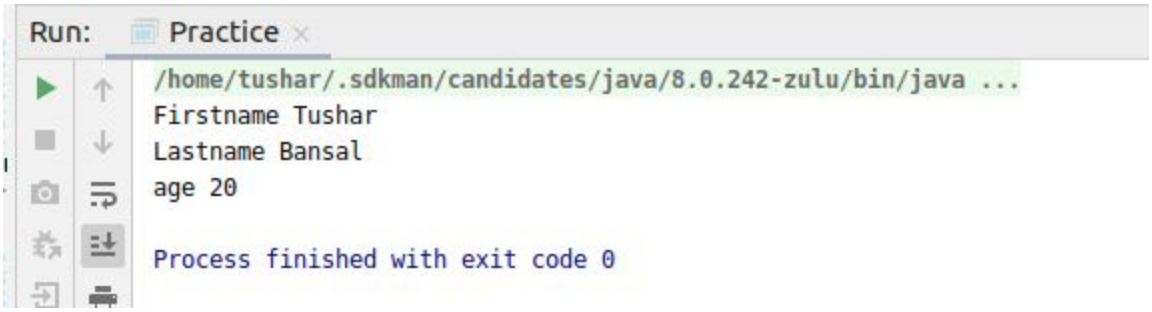
Q7. Write a program to print your Firstname,LastName & age using static block and method.
Answer:
Using static block--->

Practice.java

```
1   public class Practice {
2       static {
3           String fname="Tushar";
4           String lname="Bansal";
5           int age=20;
6           System.out.println("Firstname "+fname);
7           System.out.println("Lastname "+lname);
8           System.out.println("age "+age);
9       }public static void main(String[] a){
10
11      }
12
13  }
```

Using ststic method------>





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

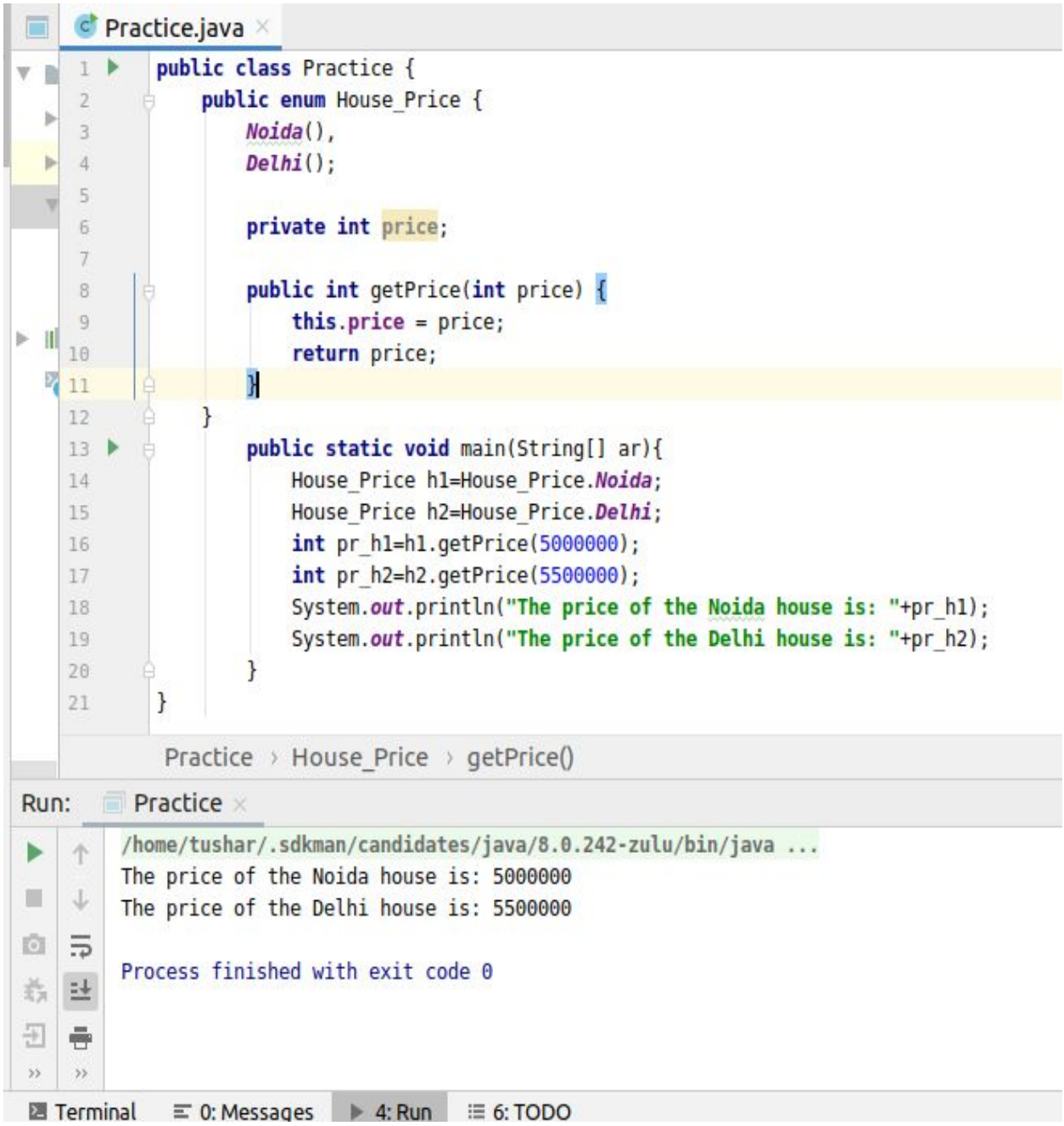
Practice.java

```
1  import java.util.*;
2  public class Practice{
3      public static void main(String[] ar){
4          System.out.println("Enter a string");
5          Scanner sc=new Scanner(System.in);
6          String str=sc.nextLine();
7          StringBuffer sb=new StringBuffer(str);
8          sb.reverse();
9          String str1=sb.toString();
10         System.out.println("reversed string is: "+str1);
11         String replaced = str1.replace(str1.substring(4,9), replacement: "");
12         System.out.println("replaced string: " + replaced);
13     }
14 }
15
```

Run: Practice

```
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter a string
hhhhhhhheeeeeee
reversed string is: eeeeeeehhhhhhhhh
replaced string: eeeehhhhhhh

Process finished with exit code 0
```

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



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

Answer:

```
public class Practice {
  public static void main(String[] ar) {
     calculation a = new calculation();
     System.out.println("add in int: " + a.add(20, 40));
     System.out.println("add in double: " + a.add(19.22233, 33.1122));
     System.out.println("multiply in int: " + a.multiply(12, 14));
     System.out.println("multiply in float: " + a.multiply((float) 1.9, (float) 2.3));
     System.out.println("Concate 2 string: " + a.concat("hlo ", "Tushar"));
     System.out.println("concate 3 strings: :" + a.concat("hlo ", "my name is", " Tushar"));
  }
}
class calculation {
  int result;
  double answer;
  float ans;
  String res;
  public int add(int num1, int num2) {
     result = num1 + num2;
     return result;
  }
  public double add(double num1, double num2) {
     answer = num1 + num2;
     return answer;
  }
  public float multiply(float num1, float num2) {
     ans = num1 * num2;
     return ans;
  }
  public int multiply(int num1, int num2) {
     result = num1 * num2;
     return result;
  }
  public String concat(String s1, String s2) {
     res = s1.concat(s2);
     return res;
  }
  public String concat(String s1, String s2, String s3) {
     res = s1.concat(s2);
     res = res.concat(s3);
     return res;
  }
}
```

Output:

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

Answer:

```
 public class Practice
{
  public static void main(String[] ar){
     SBI a=new SBI();
     BOI b=new BOI();
     ICICI c=new ICICI();
     System.out.println("The SBI bank interest is : "+a.getDetails((float)3)+"%");
     System.out.println("The SBI bank interest is : "+a.getDetails((float)2.5)+"%");
     System.out.println("The SBI bank interest is : "+a.getDetails((float)3.8)+"%");
  }
}
class SBI{
  float interest;
  public float getDetails(float interest)
  {
     this.interest=interest;
     return interest;
  }
}
class BOI{
  float interest;
  public float getDetails(float interest)
  {
     this.interest=interest;
     return interest;
  }
}
class ICICI{
  float interest;
  public float getDetails(float interest)
  {
```

```
        this.interest=interest;
        return interest;
    }
}
```