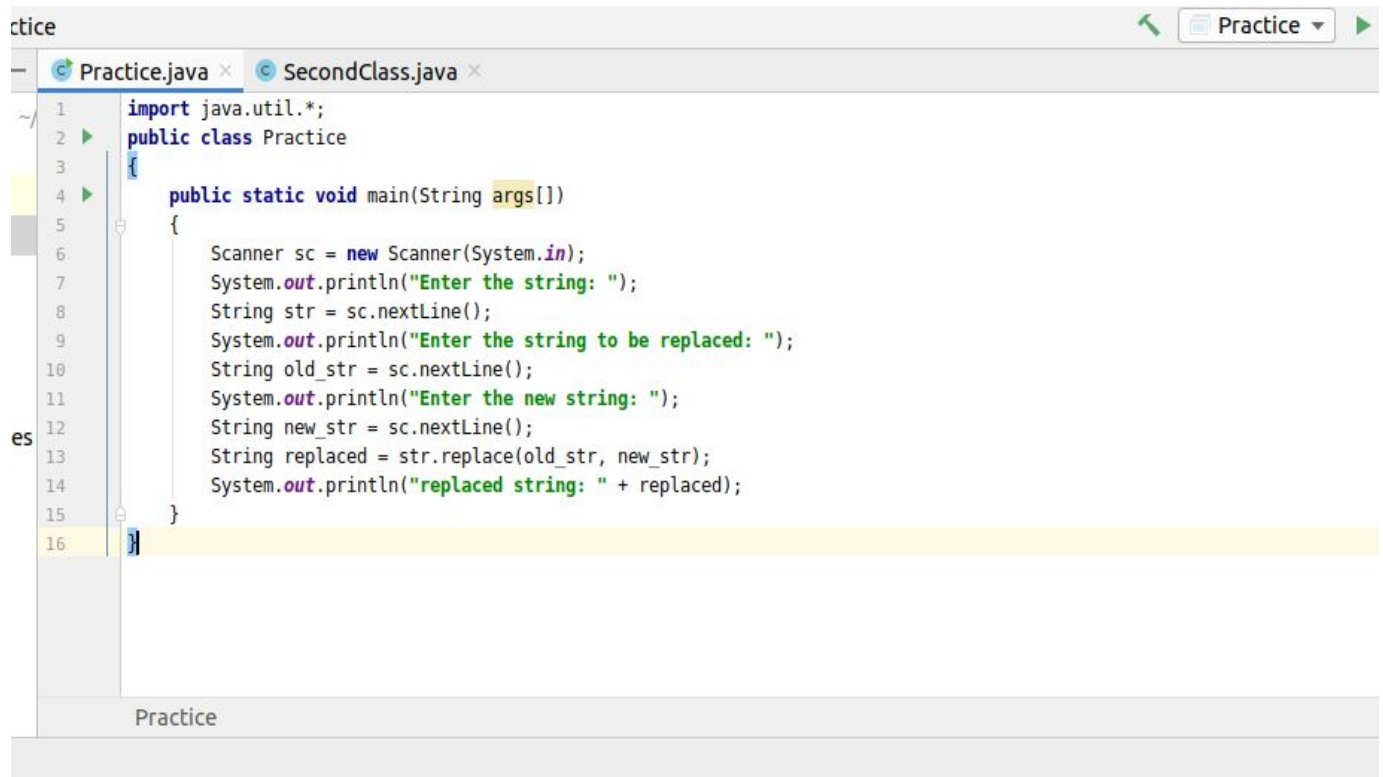


Q1. Write a program to replace a substring inside a string with other string ?

Answer:

In this code ,we **import java.util.*;** just only to take the input by Scanner class.

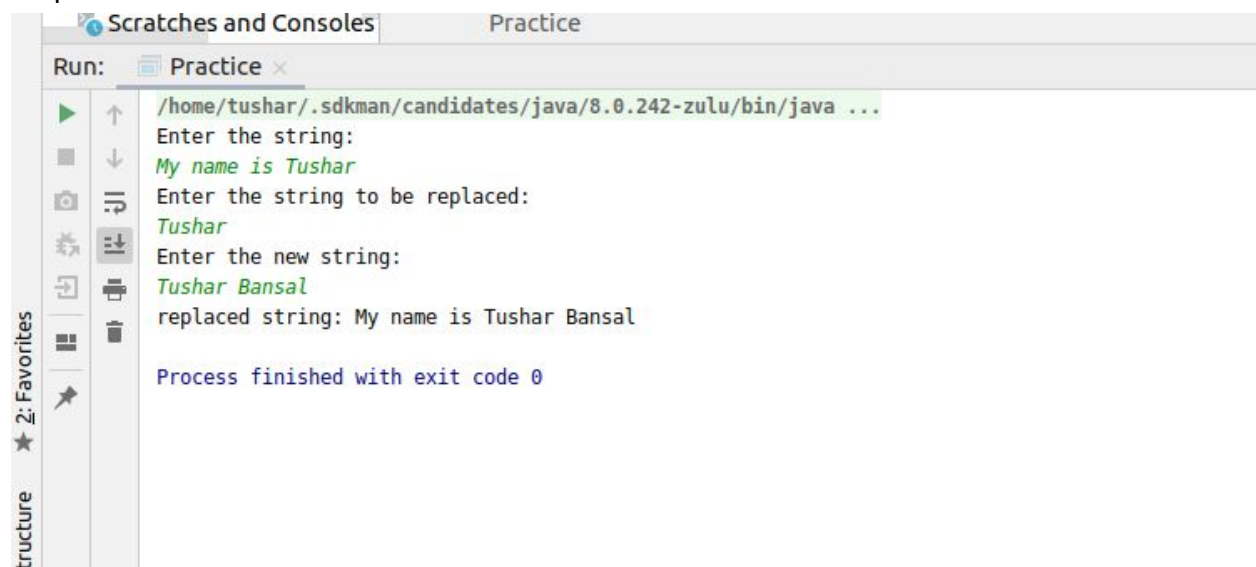
str.replace(x,y): to replace the x string by y.



The screenshot shows an IDE with two tabs: 'Practice.java' and 'SecondClass.java'. The 'Practice.java' tab is active, displaying the following code:

```
1 import java.util.*;
2 public 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 string to be replaced: ");
10        String old_str = sc.nextLine();
11        System.out.println("Enter the new string: ");
12        String new_str = sc.nextLine();
13        String replaced = str.replace(old_str, new_str);
14        System.out.println("replaced string: " + replaced);
15    }
16 }
```

Output:



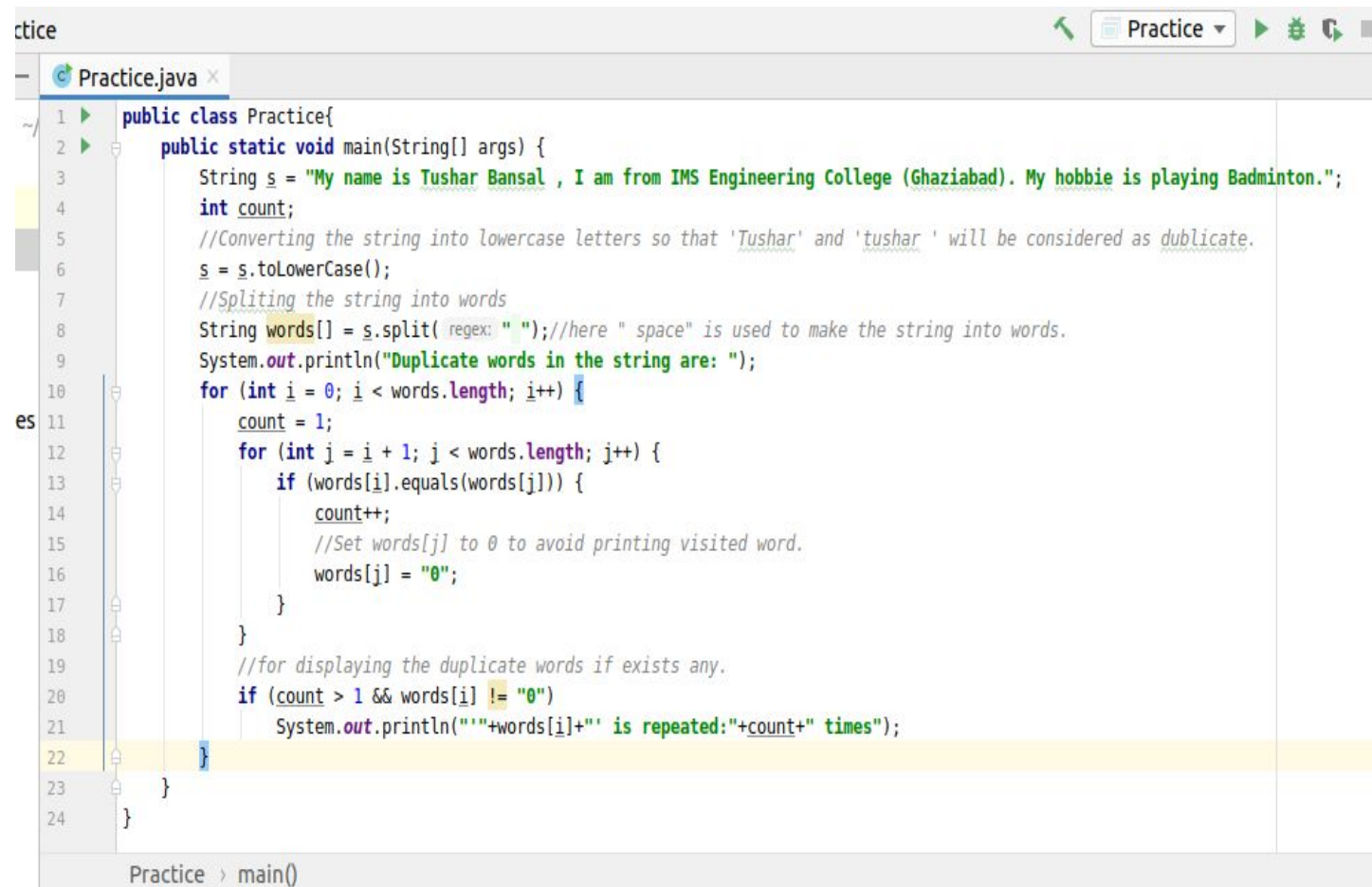
The screenshot shows the 'Scratches and Consoles' tab with the 'Practice' console. The output of the program is as follows:

```
Run: Practice x
/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
```

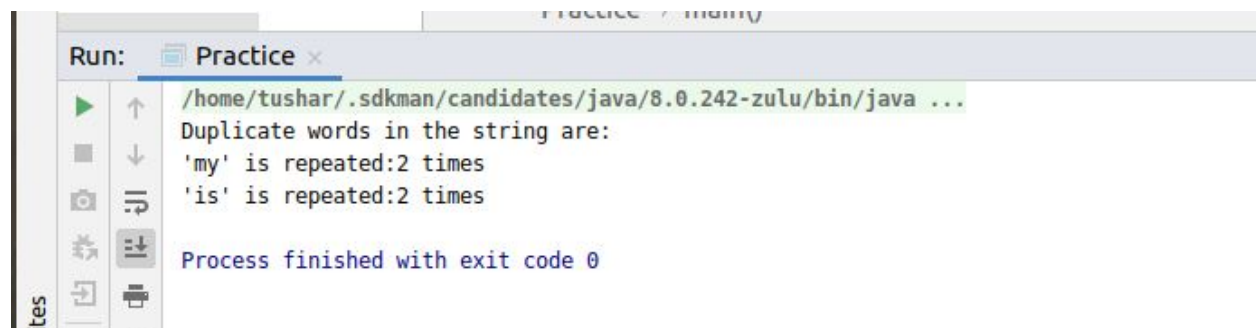
Q2. Write a program to find the number of occurrences of the duplicate words in a string and print them ?

Answer:



```
1 public class Practice{
2     public static void main(String[] args) {
3         String s = "My name is Tushar Bansal , I am from IMS Engineering College (Ghaziabad). My hobbie is playing Badminton.";
4         int count;
5         //Converting the string into lowercase letters so that 'Tushar' and 'tushar ' will be considered as duplicate.
6         s = s.toLowerCase();
7         //Splitting the string into words
8         String words[] = s.split( regex: " "); //here " space" is used to make the string into words.
9         System.out.println("Duplicate words in the string are: ");
10        for (int i = 0; i < words.length; i++) {
11            count = 1;
12            for (int j = i + 1; j < words.length; j++) {
13                if (words[i].equals(words[j])) {
14                    count++;
15                    //Set words[j] to 0 to avoid printing visited word.
16                    words[j] = "0";
17                }
18            }
19            //for displaying the duplicate words if exists any.
20            if (count > 1 && words[i] != "0")
21                System.out.println("'" + words[i] + "' is repeated: " + count + " times");
22        }
23    }
24 }
```

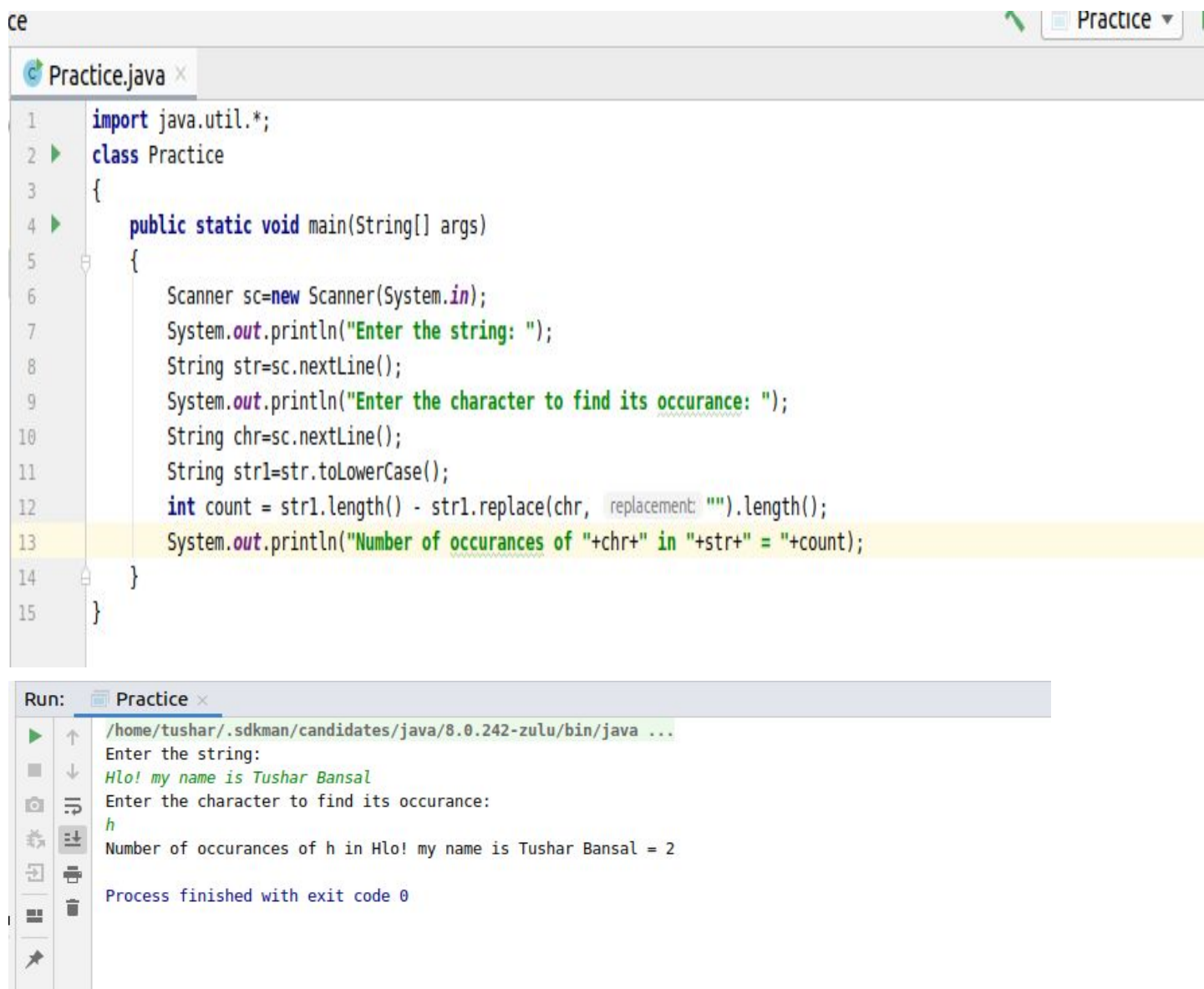
in the string are:
2 times



```
Run: Practice x
/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:



The screenshot displays an IDE with a Java file named 'Practice.java'. The code uses the `String.replace()` method to count occurrences of a character by replacing it with an empty string and calculating the difference in lengths. Below the code editor, the 'Run' console shows the program's execution with sample input and output.

```
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 occurrence: ");
10        String chr=sc.nextLine();
11        String str1=str.toLowerCase();
12        int count = str1.length() - str1.replace(chr, "").length();
13        System.out.println("Number of occurrences 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 occurrence:
h
Number of occurrences 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 x

```
1 import java.util.*;
2 public class Practice {
3     public static void main(String[] args) {
4         Scanner sc = new Scanner(System.in);
5         System.out.println("Enter the string!");
6         String s = sc.next();
7         int uppercase = 0;
8         int lowercase = 0;
9         int digits=0;
10        int special_char=0;
11        int len=s.length();
12
13        for (int i = 0; i < s.length(); i++) {
14            if (Character.isLowerCase(s.charAt(i))) {
15                lowercase++;
16            } else if (Character.isUpperCase(s.charAt(i))) {
17                uppercase++;
18            } else if (Character.isDigit(s.charAt(i))) {
19                digits++;
20            } else
21                special_char++;
22        }
23        int p_low=(lowercase*100)/len;
24        int p_upper=(uppercase*100)/len;
25        int p_digit=(digits*100)/len;
26        int p_sp_chr=(special_char*100)/len;
27        System.out.println("No. of lowercase letter : " + lowercase+"and %age : "+p_low+"%");
28        System.out.println("No. of uppercase letter : " + uppercase+"and %age : "+p_upper+"%");
29        System.out.println("No of digits :"+digits+"and %age : "+p_digit+"%");
30        System.out.println("No of digits :"+special_char+"and %age : "+p_sp_chr+"%");
31    }
```

Practice > main()

Terminal

4: Run

6: TODO

All files are up-to-date (a minute ago)

Output.....

```
Run: Practice x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter the string!
hlo2@
No. of lowercase letter : 3and %age : 60%
No. of uppercase letter : 0and %age : 0%
No of digits :1and %age : 20%
No of digits :1and %age : 20%

Process finished with exit code 0
```

Q5. Find common elements between two arrays.

Answers:

```
Practice.java x
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};
6         int[] arr2={5,10,15,20};
7         System.out.println("The common elements in the array are:");
8         for(int i=0;i<5;i++){
9             {
10                 for (int j=0;j<4;j++){
11                     {
12                         if(arr1[i]==(arr2[j]))
13                             System.out.print(arr1[i]+" ");
14                     }
15                 }
16             }
17         }
18     }
19 }
```

```
Run: Practice x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
The common elements in the array are:
10 20
Process finished with exit code 0
```


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

Answer:

```
Practice.java x
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 x
/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 x
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      }
10     public static void main(String[] a){
11     }
12 }
13 }
```

```
Run: Practice x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Firstname Tushar
Lastname Bansal
age 20
Process finished with exit code 0
```

Using ststic method----->

```
Practice.java x
1 public class Practice {
2     static void getDetails() {
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         getDetails();
11     }
12 }
13
14 }
```

```
Run: Practice x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Firstname Tushar
Lastname Bansal
age 20
Process finished with exit code 0
```

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

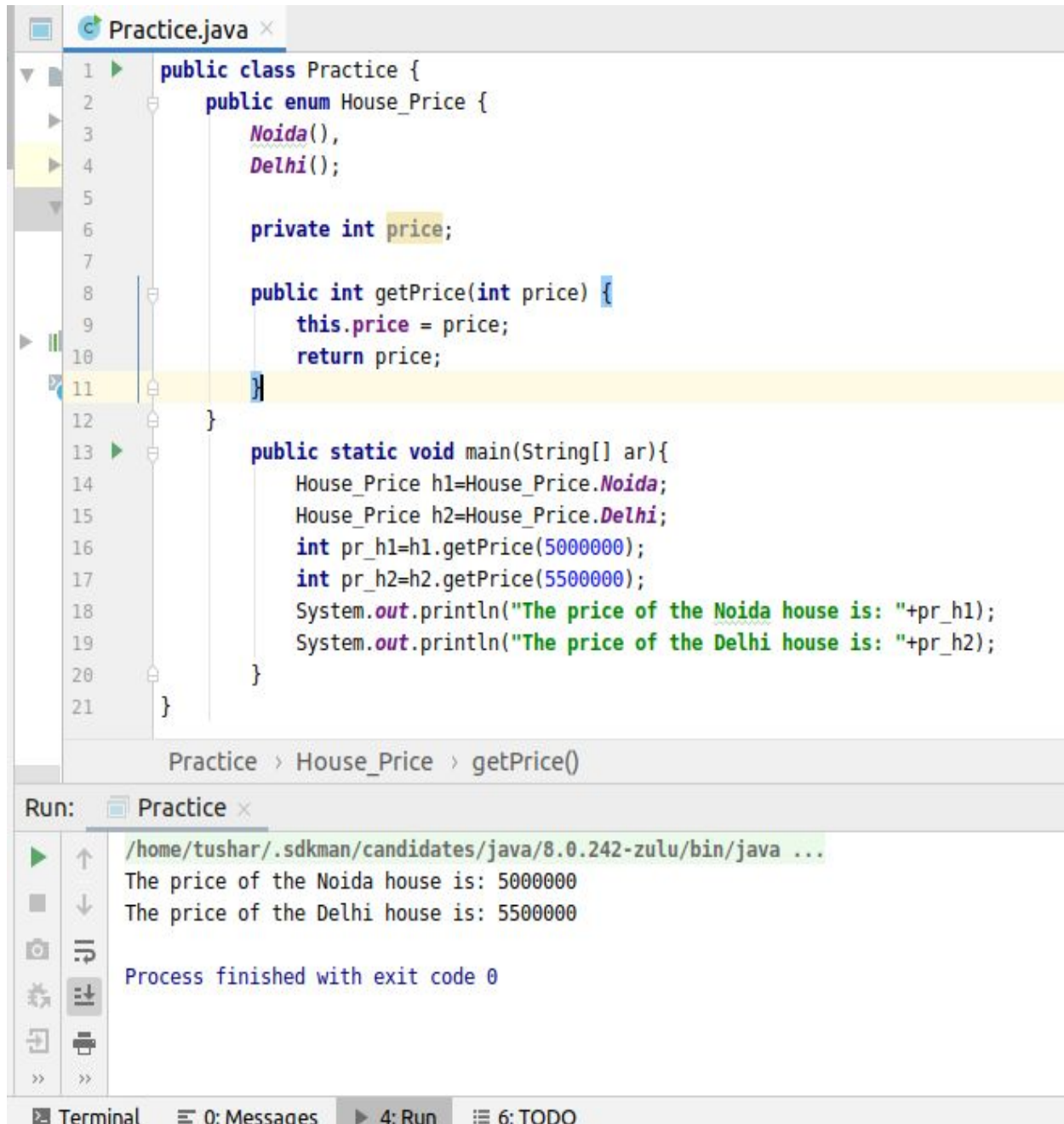
Answer:

```
Practice.java x
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 x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Enter a string
hhhhhhhhheeeeeee
reversed string is: eeeeeehhhhhhhh
replaced string: eeeehhhhhh
|
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:



The screenshot shows an IDE with a file named 'Practice.java'. The code defines a class 'Practice' with an enum 'House_Price' containing 'Noida()' and 'Delhi()'. It has a private integer 'price' and a 'getPrice' method that sets and returns the price. The 'main' method creates instances for 'Noida' and 'Delhi', calls 'getPrice' with values 5000000 and 5500000 respectively, and prints the results. The 'Run' window shows the output: 'The price of the Noida house is: 5000000' and 'The price of the Delhi house is: 5500000', followed by 'Process finished with exit code 0'.

```
1 public class Practice {  
2     public enum House_Price {  
3         Noida(),  
4         Delhi();  
5  
6         private int price;  
7  
8         public int getPrice(int price) {  
9             this.price = price;  
10            return price;  
11        }  
12    }  
13    public static void main(String[] ar){  
14        House_Price h1=House_Price.Noida;  
15        House_Price h2=House_Price.Delhi;  
16        int pr_h1=h1.getPrice(5000000);  
17        int pr_h2=h2.getPrice(5500000);  
18        System.out.println("The price of the Noida house is: "+pr_h1);  
19        System.out.println("The price of the Delhi house is: "+pr_h2);  
20    }  
21 }
```

Practice > House_Price > getPrice()

Run: Practice x

/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
The price of the Noida house is: 5000000
The price of the Delhi house is: 5500000
Process finished with exit code 0

Terminal 0: Messages 4: Run 6: TODO

Q10.Write a single program for following operation using overloading

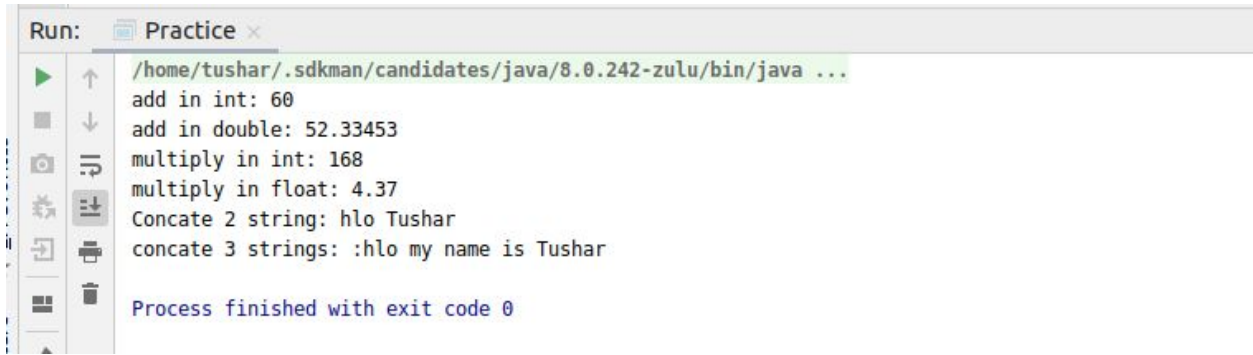
- A) Adding 2 integer number
- B) Adding 2 double
- C) multiplying 2 float
- D) multiplying 2 int
- E) concate 2 string
- F) Concate 3 String

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("Concat 2 string: " + a.concat("hlo ", "Tushar"));
        System.out.println("concat 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:



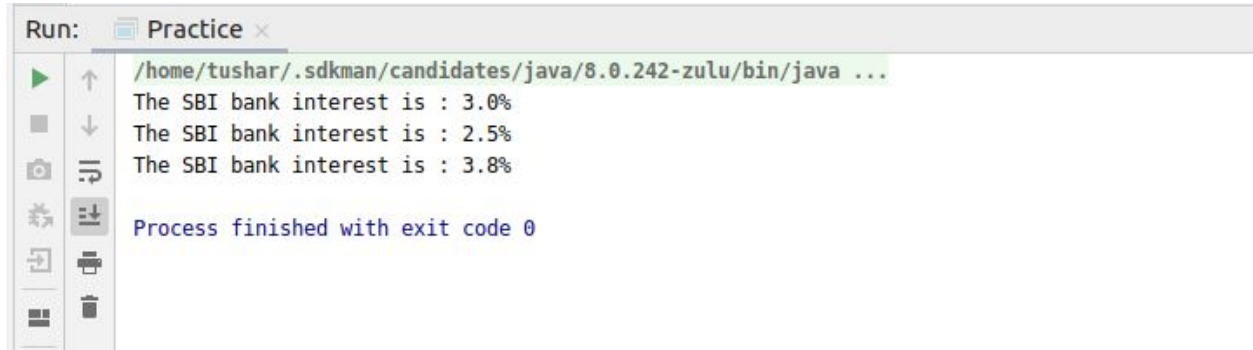
```
Run: Practice x
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
add in int: 60
add in double: 52.33453
multiply in int: 168
multiply in float: 4.37
Concat 2 string: hlo Tushar
concat 3 strings: :hlo my name is Tushar
Process finished with exit code 0
```

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;  
}  
}
```



```
Run: Practice x  
/home/tushar/.sdkman/candidates/java/8.0.242-zulu/bin/java ...  
The SBI bank interest is : 3.0%  
The SBI bank interest is : 2.5%  
The SBI bank interest is : 3.8%  
  
Process finished with exit code 0
```