SESSION - 8
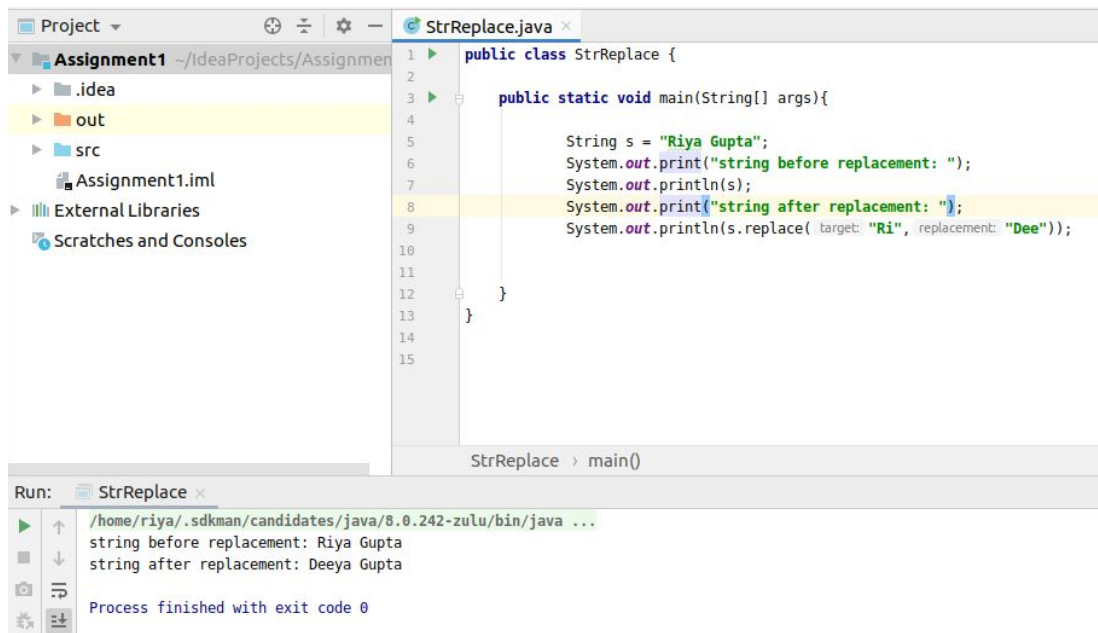# INTRODUCTION TO JAVA 1

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

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

```java
import java.util.Scanner;

public class CountOccurences {
  static int count(String s, String word){

    String a[] = s.split(" ");

    int c = 0;
    for(int i = 0; i<a.length; i++) {

      if (word.equals(a[i]))
        c++;
```

```
    }
    return c;
    }

    public static void main(String[] args) {
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter a string");
    String s = sc.nextLine();
    System.out.println("Enter the word you want occurence of: ");
    Scanner sc1 = new Scanner(System.in);
    String word = sc1.nextLine();
    System.out.println("Number of times word is repeated: "+count(s,word));
  }

}
```

```
Run:     CountOccurences  ×

  ▶  ↑     /home/riya/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
  ■  ↓     Enter a string
  ⊙  ⇥     riya is riya but riya does not laugh.
  ⟲  ⇥     Enter the word you want occurence of:
  ⊡  ⎙     riya
         Number of times word is repeated: 3
  ⊞  🖷
  ★      Process finished with exit code 0


  ▶ 4: Run    ≣ 6: TODO    ⬚ Terminal
  ▭ All files are up-to-date (moments ago)
```

Q3. Write a program to find the number of occurrences of a character in a string without using loop?
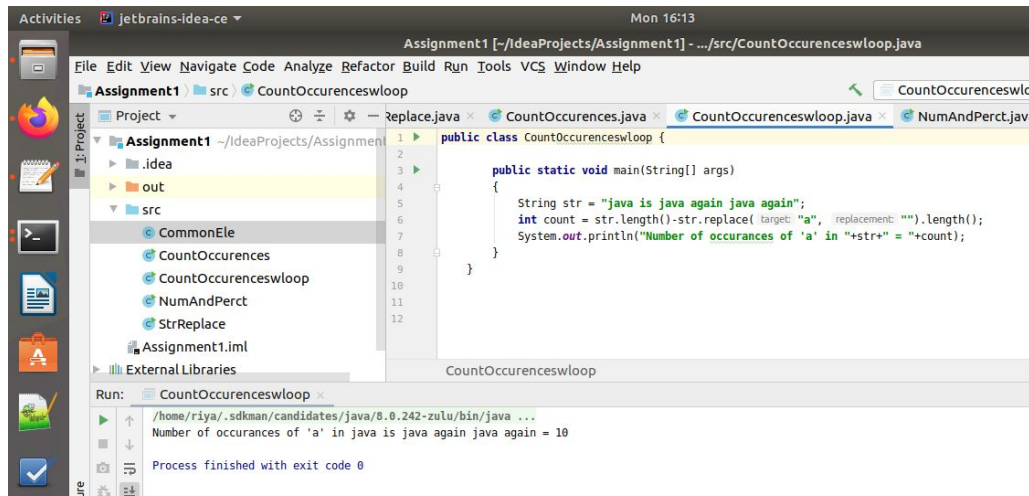
Q4. Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special Characters In A String.

```java
public class NumAndPerct {
  //Calculate the number & Percentage Of Lowercase Letters,Uppercase Letters, Digits And Other Special
Characters In A String.

    public static void main(String[] args) {
        String data = "Hello HOW are you MR 51";
        char [] charArray = data.toCharArray();
        int upper = 0;
        int lower = 0;
        int digit = 0;
        int others = 0;

        int totalChars = data.length();
        for(int i=0; i<data.length(); i++) {
          if (Character.isUpperCase(charArray[i])) {
              upper++;
          } else if(Character.isLowerCase(charArray[i])) {
              lower++;
          } else if(Character.isDigit(charArray[i])){
              digit++;
          } else {
              others++;
          }
        }
        System.out.println("Total length of the string :"+totalChars);
        System.out.println("Upper case :"+upper);
        System.out.println("Percentage of upper case letters: "+(upper*100)/totalChars);
        System.out.println("Lower case :"+lower);
        System.out.println("Percentage of lower case letters:"+(lower*100)/totalChars);
        System.out.println("Digit :"+digit);
        System.out.println("Percentage of digits :"+(digit*100)/totalChars);
```

```java
        System.out.println("Others :"+others);
        System.out.println("Percentage of other characters :"+(others*100)/totalChars);
    }
}
```

Q5. Find common elements between two arrays.

```java
public class CommonEle {

    public static void main(String[] args) {
        String[] numArray1 = {"Riya", "Divya", "Vageesha"};
        String[] numArray2 = {"Riya", "Vageesha", "Rachita", "Jasleen",
                "Java Script", "Python"};
        for(int i = 0; i < numArray1.length; i++){
            for(int j = 0; j < numArray2.length; j++)
            {
                if(numArray1[i].equals(numArray2[j])){
                    System.out.println(numArray1[i]);
                    break;
                }
            }
        }
    }
}
```

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

```java
public class Ar
{
    public static void main(String[] args)
    {
        int[] a = {1,2,3,4,5,6,4,3,2,1};
        int count = 0;

        for(int i = 0; i < a.length; i++)
        {
            count = 0;
            for(int j = 0; j<a.length; j++)
            {
                if(a[i]==a[j])
                {
                    count++;
                }
            }
            if(count<2)
                System.out.println(a[i]);
        }
    }
}
```

Run output:
```
/home/riya/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
5
6
Process finished with exit code 0
```
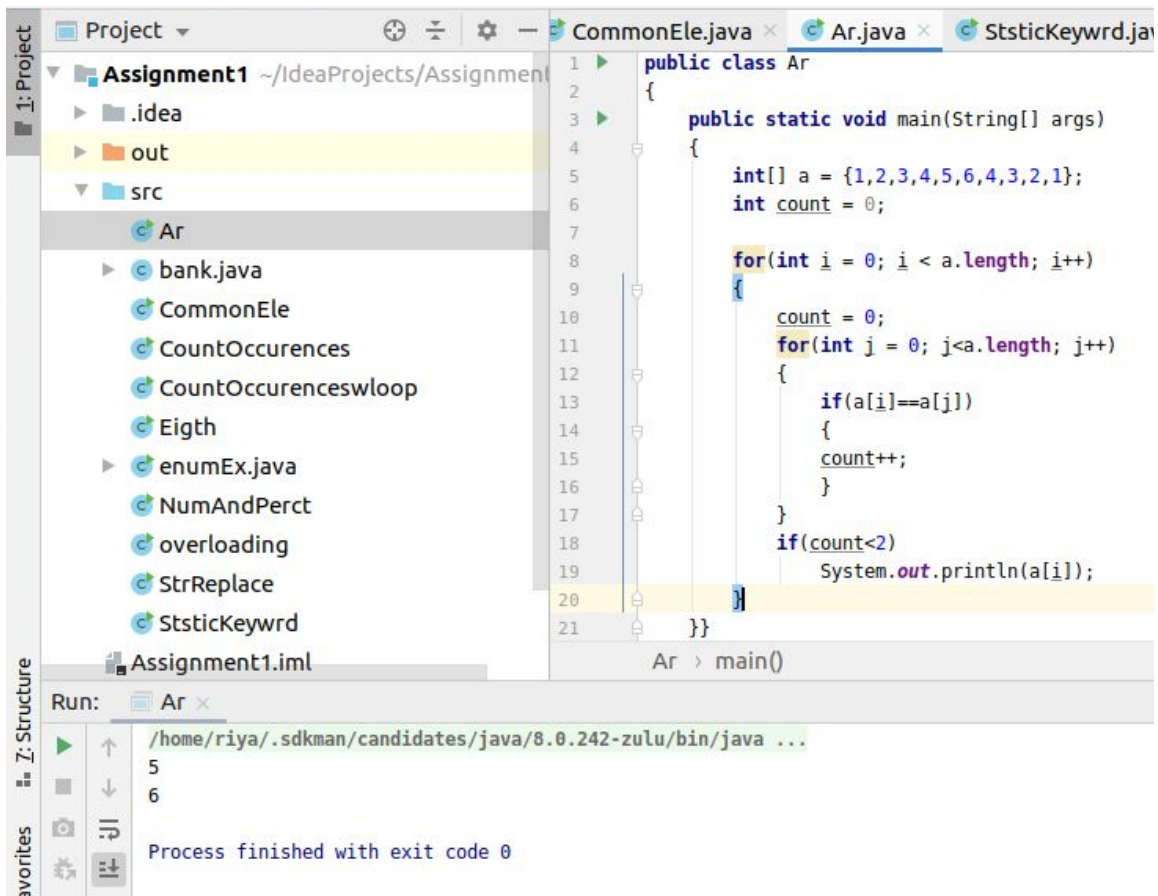
Q7. Write a program to print your Firstname,LastName & age using static block,static method & static variable respectively.
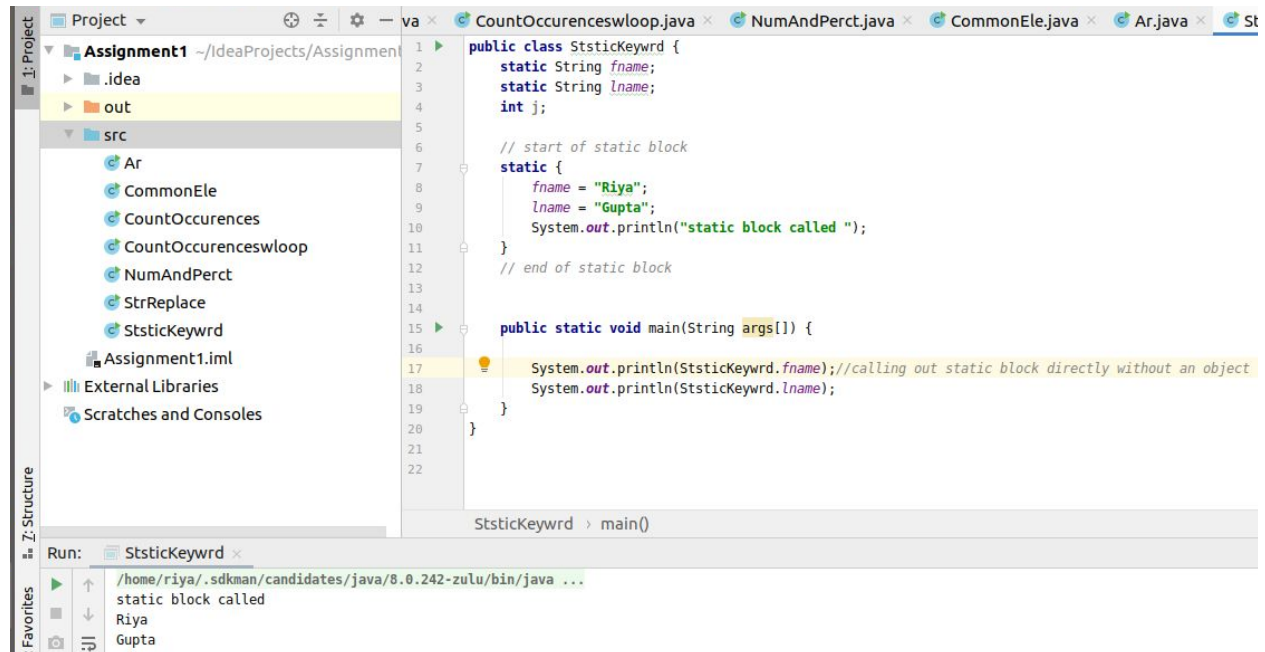
Q8. Write a program to reverse a string and remove character from index 4 to index 9 from the reversed string using String Buffer
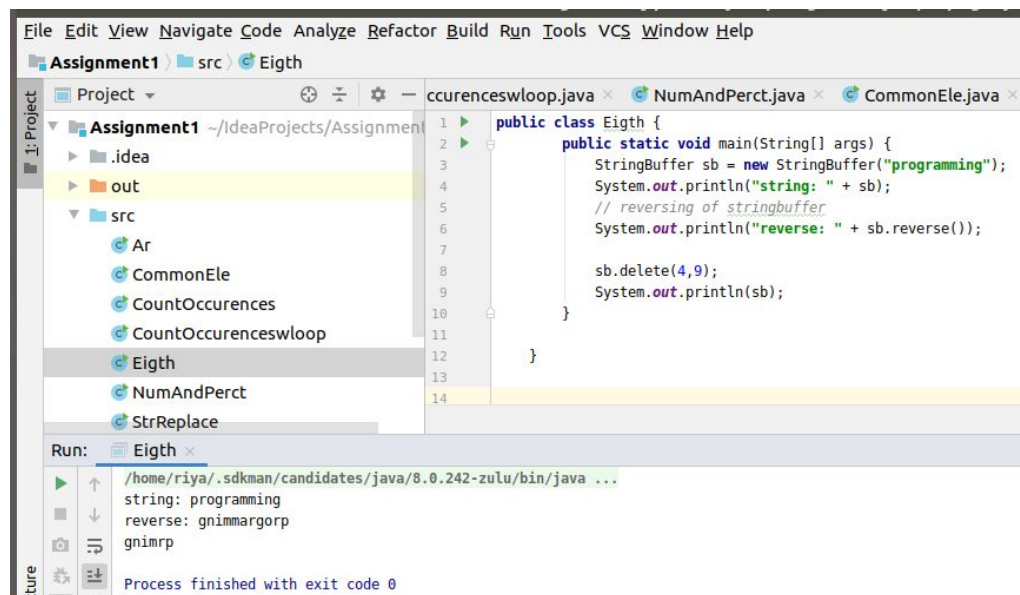
Q9.Write a program to display values of enums using a constructor & getPrice() method (Example display house & their prices)

```
enum House
{
    Noida(100000), Delhi(9200000), Shimla(5000000);
    private double hprice;
```

```java
    House(double pr)
    {
        hprice = pr;
    }

    double getPrice()
    {
        return hprice;
    }
}
public class enumEx
{
    public static void main(String[] args)
    {
        System.out.println("House List: ");
        for(House p : House.values()) System.out.println(p+" 's"+" price is "+p.getPrice()+ " INR");
    }
}
```
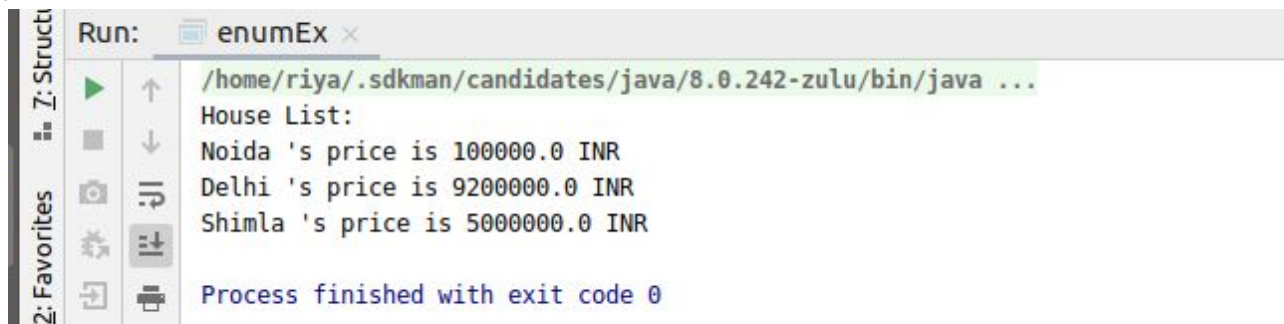
Run: enumEx ×

/home/riya/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
House List:
Noida 's price is 100000.0 INR
Delhi 's price is 9200000.0 INR
Shimla 's price is 5000000.0 INR

Process finished with exit code 0

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

```java
public class overloading
{
    public void sum(int x, int y)
    {
        System.out.println(x+y);
    }
    public void sum(double x, double y)
    {
        System.out.println(x+y);
    }
```
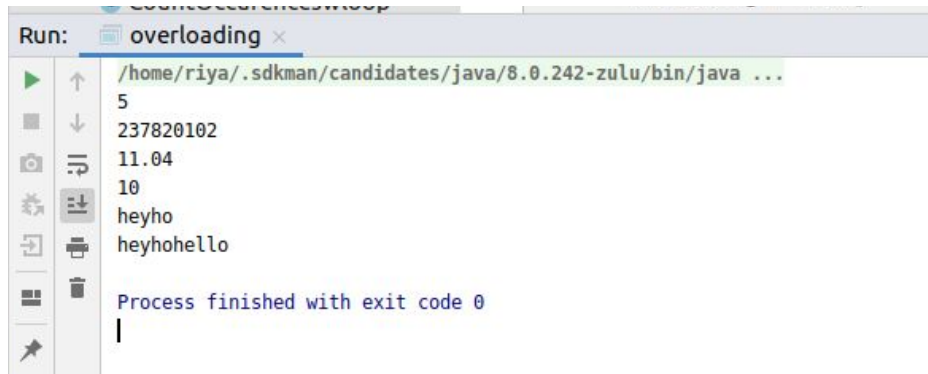
```java
    public void multiply(float x, float y)
    {
        System.out.println(x*y);
    }
    public void multiply(int x, int y)
    {
        System.out.println(x*y);
    }
    public void concat(String a, String b)
    {
        System.out.println(a+b);
    }
    public void concat(String a, String b, String c)
    {
        System.out.println(a+b+c);
    }

    public static void main(String[] args)
    {
        overloading o = new overloading();
        o.sum(2,3);
        o.sum(2354646,235465456);
        o.multiply(2.3f,4.8f);
        o.multiply(2,5);
        o.concat("hey","ho");
        o.concat("hey","ho","hello");
    }
}
```

Run: overloading ×

```
/home/riya/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
5
237820102
11.04
10
heyho
heyhohello

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.

```java
public class bank
{
    //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.
    public void getDetails()
```

```java
        {
            System.out.println("Details of the bank: ");
        }
}
class SBI extends bank
{
    public void getDetails()
    {
        String name = "SBI";
        int id = 1;
        String headquaters = "New Delhi";
        System.out.println("Name: "+ name+" ,ID: "+id+ " ,Headquaters: "+headquaters);
    }
}
class ICICI extends bank
{
    public void getDetails()
    {
        String name = "ICICI";
        int id = 2;
        String headquaters = "Mumbai";
        System.out.println("Name: "+ name+" ,ID: "+id+ " ,Headquaters: "+headquaters);
    }
}
class BOI extends bank
{
    public void getDetails()
    {
        String name = "Bank Of India";
        int id = 3;
        String headquaters = "Kolkata";
        System.out.println("Name: "+ name+" ,ID: "+id+ " ,Headquaters: "+headquaters);

    }
}
class main{
public static void main(String[] args)
{
    bank b = new bank();
    bank b1 = new SBI();
    bank b2 = new ICICI();
    bank b3 = new BOI();

    b.getDetails();
    b1.getDetails();
    b2.getDetails();
    b3.getDetails();
 }
}
```

```
/home/riya/.sdkman/candidates/java/8.0.242-zulu/bin/java ...
Details of the bank:
Name: SBI ,ID: 1 ,Headquaters: New Delhi
Name: ICICI ,ID: 2 ,Headquaters: Mumbai
Name: Bank Of India ,ID: 3 ,Headquaters: Kolkata

Process finished with exit code 0
```

4: Run   6: TODO   Terminal   0: Messages

Build completed successfully in 1 s 911 ms (moments ago)