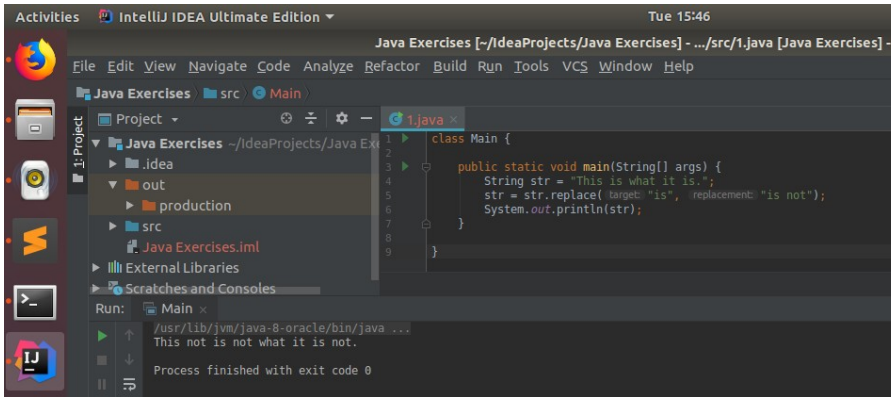
Q1. Write a program to replace a substring inside a string with other string ?
A1.
1.java

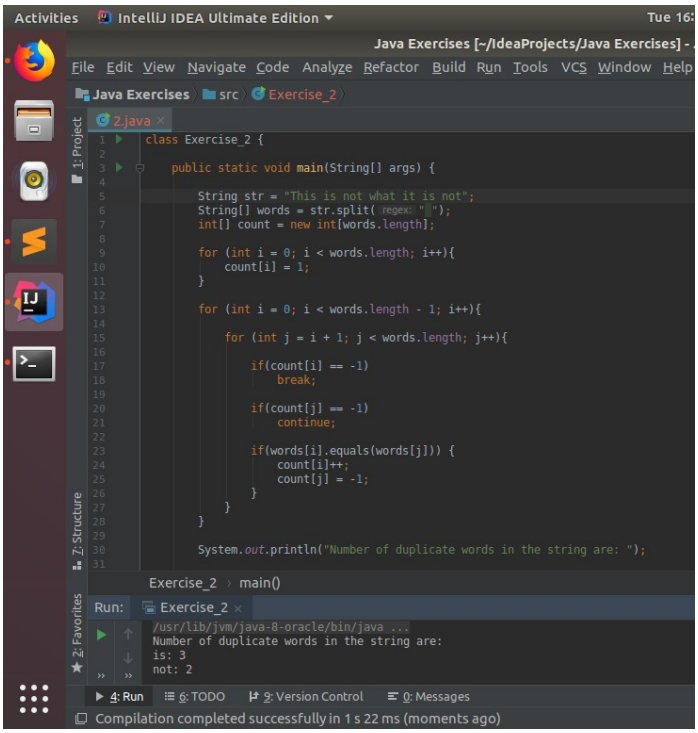
```
class Exercise_1 {

    public static void main(String[] args) {
        String str = "This is what it is.";
        str = str.replace("is", "is not");
        System.out.println(str);
    }
}
```



Q2. Write a program to find the number of occurrences of the duplicate words in a string and print them ?
A2.
2.java

```
import java.util.Scanner;

class Exercise_2 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);
        String str = sc.nextLine();

        String[] words = str.split(" ");
        int[] count = new int[words.length];

        System.out.println("Number of duplicate words in the string are: ");

        for (int i = 0; i < words.length - 1; i++) {

            count[i] = 1;

            for (int j = i + 1; j < words.length; j++) {

                if (count[i] == -1)
                    break;

                if (count[j] == -1)
```

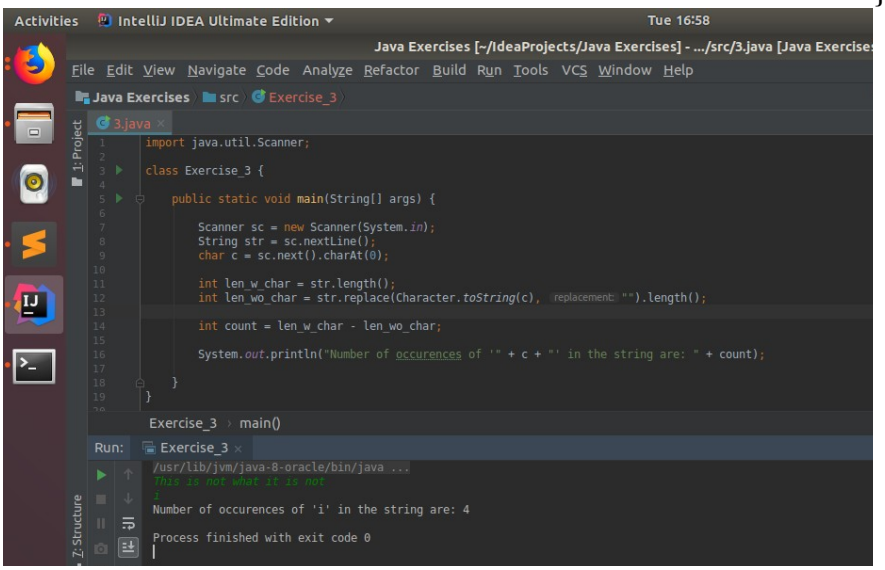
```
                continue;

            if (words[i].equals(words[j])) {
                count[i]++;
                count[j] = -1;
            }
        }

        if (count[i] > 1)
            System.out.println(words[i] + ": " + count[i]);
    }
  }
}
```



Q3. Write a program to find the number of occurrences of a character in a string without using loop?
A3.
3.java

```
import java.util.Scanner;

class Exercise_3 {

   public static void main(String[] args) {

       Scanner sc = new Scanner(System.in);
       String str = sc.nextLine();
       char c = sc.next().charAt(0);

       int len_w_char = str.length();
       int len_wo_char = str.replace(Character.toString(c), "").length();

       int count = len_w_char - len_wo_char;
```

```
    System.out.println("Number of occurences of '" + c + "' in the string are: " + count);
}
                                                                                    }
```



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

A4.

4.java

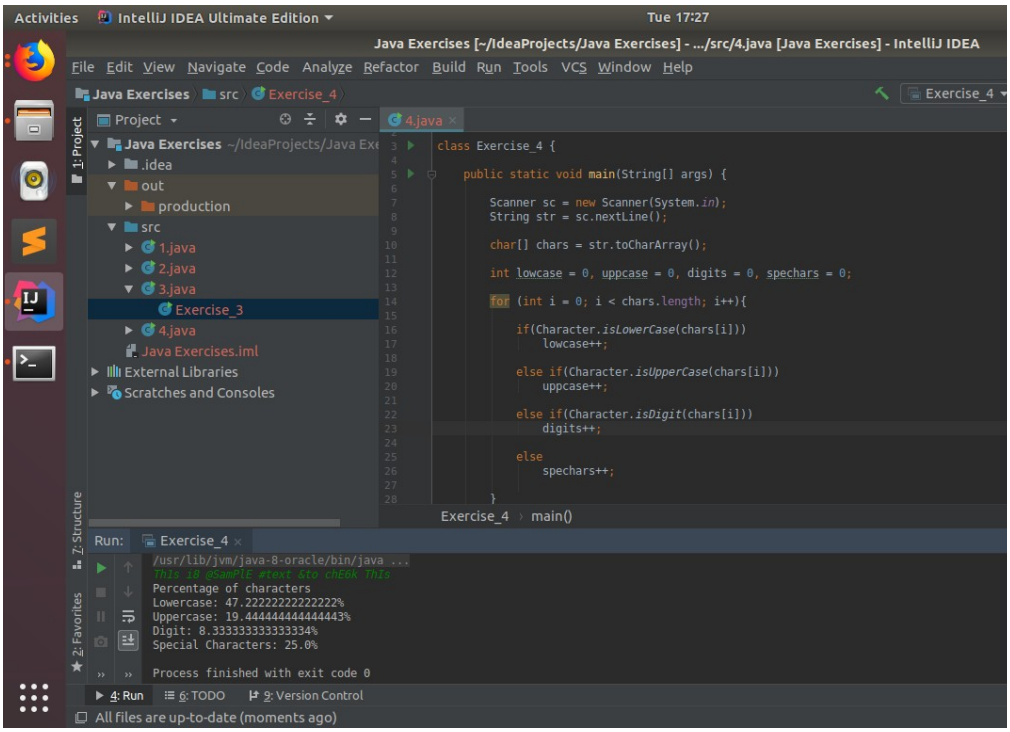
```
import java.util.Scanner;

class Exercise_4 {

   public static void main(String[] args) {

      Scanner sc = new Scanner(System.in);
      String str = sc.nextLine();

      char[] chars = str.toCharArray();

      int lowcase = 0, uppcase = 0, digits = 0, spechars = 0;

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

         if(Character.isLowerCase(chars[i]))
            lowcase++;

         else if(Character.isUpperCase(chars[i]))
            uppcase++;

         else if(Character.isDigit(chars[i]))
            digits++;

         else
            spechars++;
```

```
        }

        System.out.println("Percentage of characters");
        System.out.println("Lowercase: " + (lowcase * 100.0 / chars.length) +
                           "%\nUppercase: " + (uppcase * 100.0 / chars.length) +
                           "%\nDigit: " + (digits * 100.0 / chars.length) +
                           "%\nSpecial Characters: " + (spechars * 100.0 / chars.length) + "%");
    }
}
```

Q5. Find common elements between two arrays.

A5.

5.java

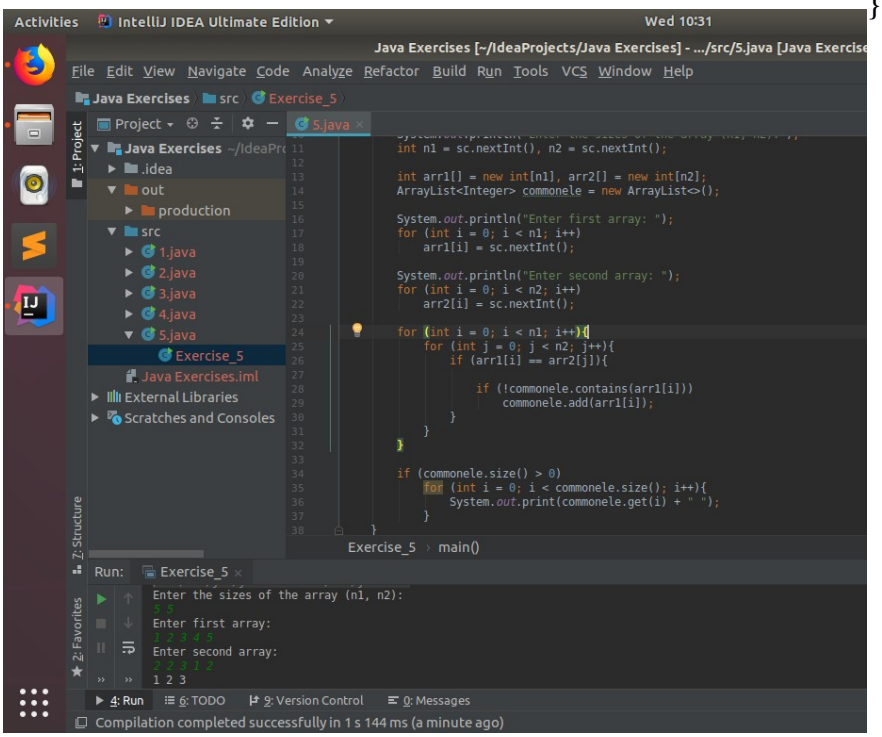


import

```
java.util.ArrayList;
import java.util.Scanner;

class Exercise_5 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the sizes of the array (n1, n2):");
        int n1 = sc.nextInt(), n2 = sc.nextInt();

        int arr1[] = new int[n1], arr2[] = new int[n2];
        ArrayList<Integer> commonele = new ArrayList<>();

        System.out.println("Enter first array: ");
        for (int i = 0; i < n1; i++)
            arr1[i] = sc.nextInt();

        System.out.println("Enter second array: ");
        for (int i = 0; i < n2; i++)
            arr2[i] = sc.nextInt();
```

```
    for (int i = 0; i < n1; i++){
        for (int j = 0; j < n2; j++){
            if (arr1[i] == arr2[j]){

                if (!commonele.contains(arr1[i]))
                    commonele.add(arr1[i]);
            }
        }
    }

    if (commonele.size() > 0)
        for (int i = 0; i < commonele.size(); i++){
            System.out.print(commonele.get(i) + " ");
        }
}
```

}



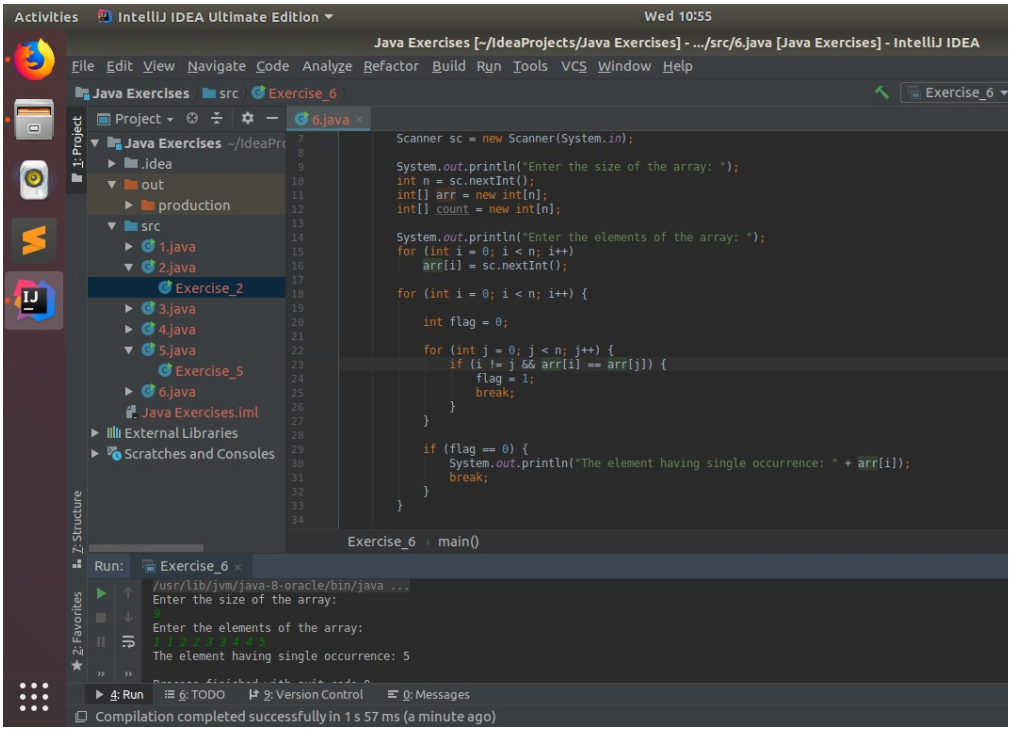
Q6. There is an array with every element repeated twice except one. Find that element
A6.

6.java

```
import java.util.Scanner;

class Exercise_6 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the size of the array: ");
        int n = sc.nextInt();
        int[] arr = new int[n];
        int[] count = new int[n];
```

```
        System.out.println("Enter the elements of the array: ");
        for (int i = 0; i < n; i++)
            arr[i] = sc.nextInt();

        for (int i = 0; i < n; i++) {

            int flag = 0;

            for (int j = 0; j < n; j++) {
                if (i != j && arr[i] == arr[j]) {
                    flag = 1;
                    break;
                }
            }

            if (flag == 0) {
                System.out.println("The element having single occurrence: " + arr[i]);
                break;
            }
        }
    }
}
```

Q7. Write a program to print your



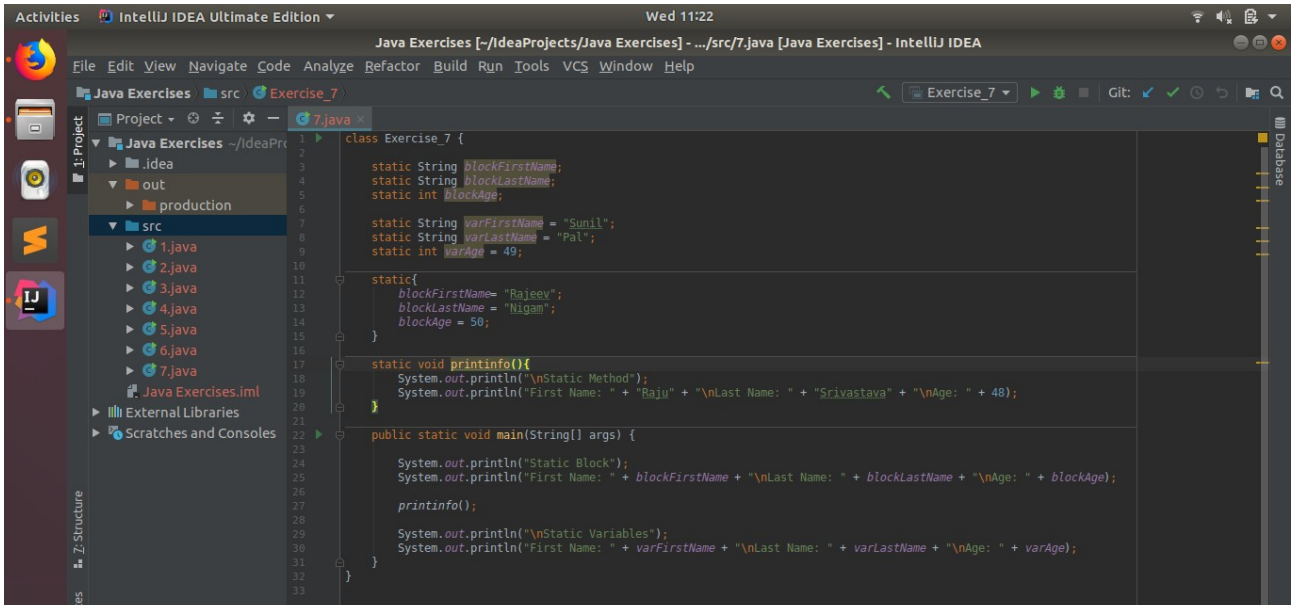
Firstname,LastName & age using static block,static method & static variable respectively

A7.

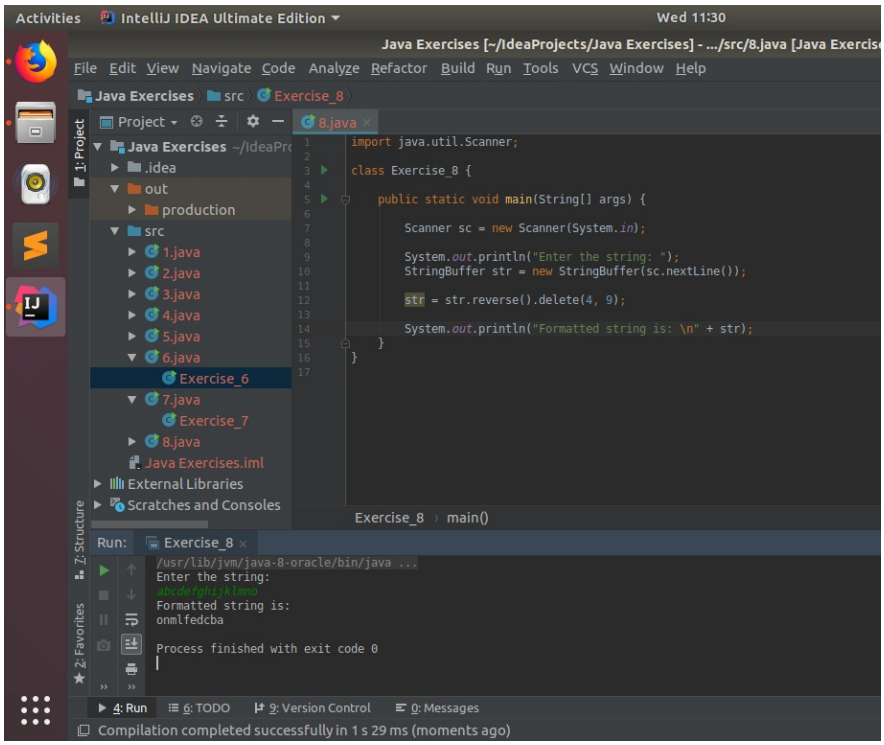
7.java

```
class Exercise_7 {

    static String blockFirstName;
    static String blockLastName;
    static int blockAge;
```

```
    static String varFirstName = "Sunil";
    static String varLastName = "Pal";
    static int varAge = 49;

    static{
        blockFirstName= "Rajeev";
        blockLastName = "Nigam";
        blockAge = 50;
    }

    static void printinfo(){
        System.out.println("\nStatic Method");
        System.out.println("First Name: " + "Raju" + "\nLast Name: " + "Srivastava" + "\nAge: " + 48);
    }

    public static void main(String[] args) {

        System.out.println("Static Block");
        System.out.println("First Name: " + blockFirstName + "\nLast Name: " + blockLastName + "\
nAge: " + blockAge);

        printinfo();

        System.out.println("\nStatic Variables");
        System.out.println("First Name: " + varFirstName + "\nLast Name: " + varLastName + "\nAge:
" + varAge);
    }
}
```

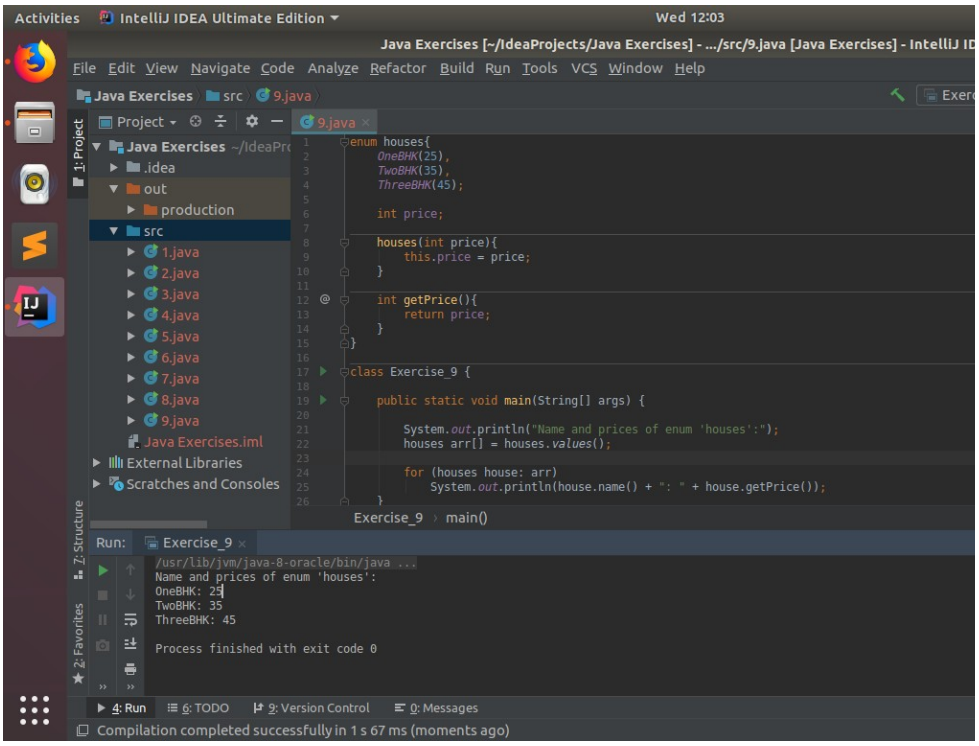


Q8. Write a program to reverse a string and remove character from index 4 to index 9 from the reversed string using String Buffer
A8.
8.java
```
import java.util.Scanner;

class Exercise_8 {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.println("Enter the string: ");
        StringBuffer str = new StringBuffer(sc.nextLine());

        str = str.reverse().delete(4, 9);

        System.out.println("Formatted string is: \n" + str);
    }
}
```



Q9.Write a program to display values of enums using a constructor & getPrice() method (Example display house & their prices)
A9.
9.java
```
enum houses{
    OneBHK(25),
    TwoBHK(35),
```

```
    ThreeBHK(45);

    int price;

    houses(int price){
        this.price = price;
    }

    int getPrice(){
        return price;
    }
}

class Exercise_9 {

    public static void main(String[] args) {

        System.out.println("Name and prices of enum 'houses':");
        houses arr[] = houses.values();

        for (houses house: arr)
            System.out.println(house.name() + ": " + house.getPrice());
    }
}
```



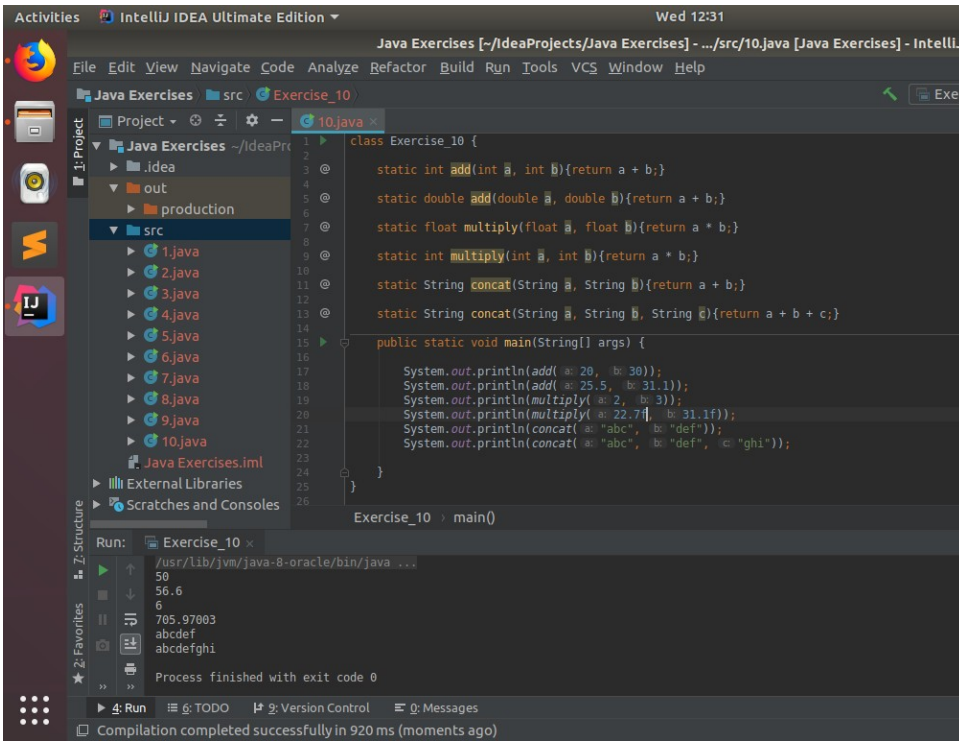
Q10.Write a single program for following operation using overloading

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

A10.
10.java

```
class Exercise_10 {

    static int add(int a, int b){return a + b;}

    static double add(double a, double b){return a + b;}

    static float multiply(float a, float b){return a * b;}

    static int multiply(int a, int b){return a * b;}

    static String concat(String a, String b){return a + b;}

    static String concat(String a, String b, String c){return a + b + c;}

    public static void main(String[] args) {

        System.out.println(add(20, 30));
        System.out.println(add(25.5, 31.1));
        System.out.println(multiply(2, 3));
        System.out.println(multiply(22.7f, 31.1f));
        System.out.println(concat("abc", "def"));
        System.out.println(concat("abc", "def", "ghi"));

    }
}
```



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
A11.
11.java

```
class Bank {

    String name;
    double roi;

    Bank(String name, double roi){
        this.name = name;
        this.roi = roi;
    }

    void getDetails(){
        System.out.println("Name of the bank: " + name);
        System.out.println("ROI of the bank: " + roi);
    }
}

class SBI extends Bank{

    SBI(){
        super("SBI", 6.0);
    }
}

class BOI extends Bank{

    BOI(){
        super("BOI", 5.5);
    }
}

class ICICI extends Bank{

    ICICI(){
        super("ICICI", 7.0);
    }
}

class Exercise_11{

    public static void main(String[] args) {
        SBI sbi = new SBI();
        BOI boi = new BOI();
        ICICI icici = new ICICI();

        System.out.println("Calling getDetails() of SBI class object...");
        sbi.getDetails();
```

```
        System.out.println("Calling getDetails() of BOI class object...");
        boi.getDetails();

        System.out.println("Calling getDetails() of ICICI class object...");
        icici.getDetails();
    }
}
```