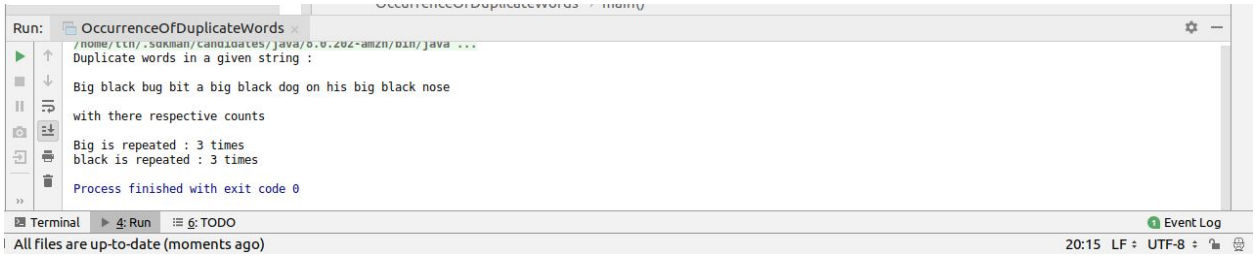
1. Write a program to replace a substring inside a string with other string ?

```
public class SubstrReplace {

  public static void main(String[] args) {
    String a="ohh my god";
    System.out.println("the string we took for the exercise : "+a+"\n");

     System.out.println("splitting using replace() of string class");
     a=a.replace("my","ALMIGHTY");
     System.out.println(a+"\n");

     a="ohh my god";
     System.out.println("splitting using substring() and concat() of string class");
     a=a.substring(0,4).concat("ALMIGHTY")+a.substring(6);
     System.out.println(a);
  }
}
```

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

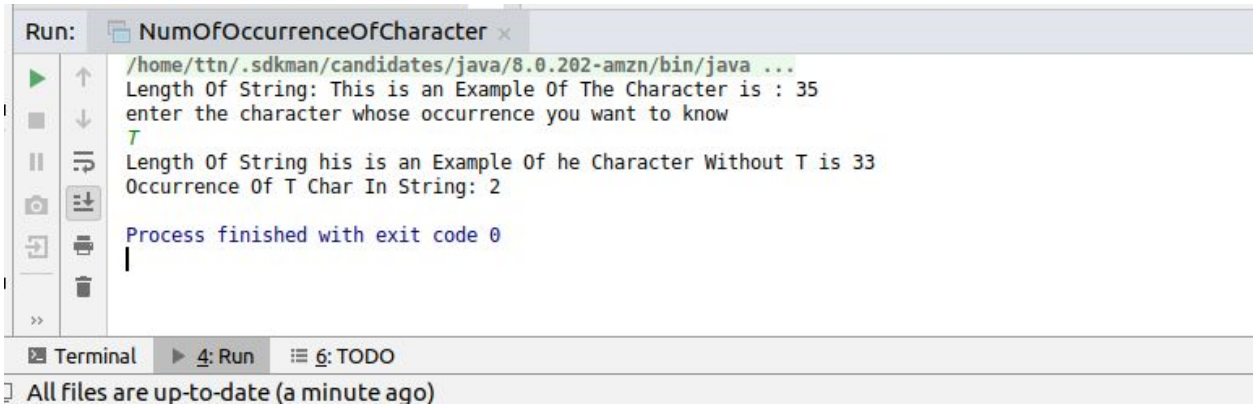
```
public class OccurrenceOfDuplicateWords
{     public static void main(String[] args)
    {
        String string = "Big black bug bit a big black dog on his big black nose";
        int count;

        String words[] = string.split(" ");

        System.out.println("Duplicate words in a given string :\n\n" + string+" \n\nwith there respective
counts\n");
        for(int i = 0; i < words.length; i++)
        {
           count = 1;
           for(int j = i+1; j < words.length; j++)
           {
              if(words[i].equalsIgnoreCase(words[j]))
```

```
            {
                count++;
                //Set words[j] to empty to avoid printing visited word
                words[j] = "";
            }
        }

        //Displays the duplicate word if count is greater than 1
        if(count > 1 && words[i] != "")
            System.out.println(words[i] + " is repeated : " + count + " times");
    }
  }
}
```



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

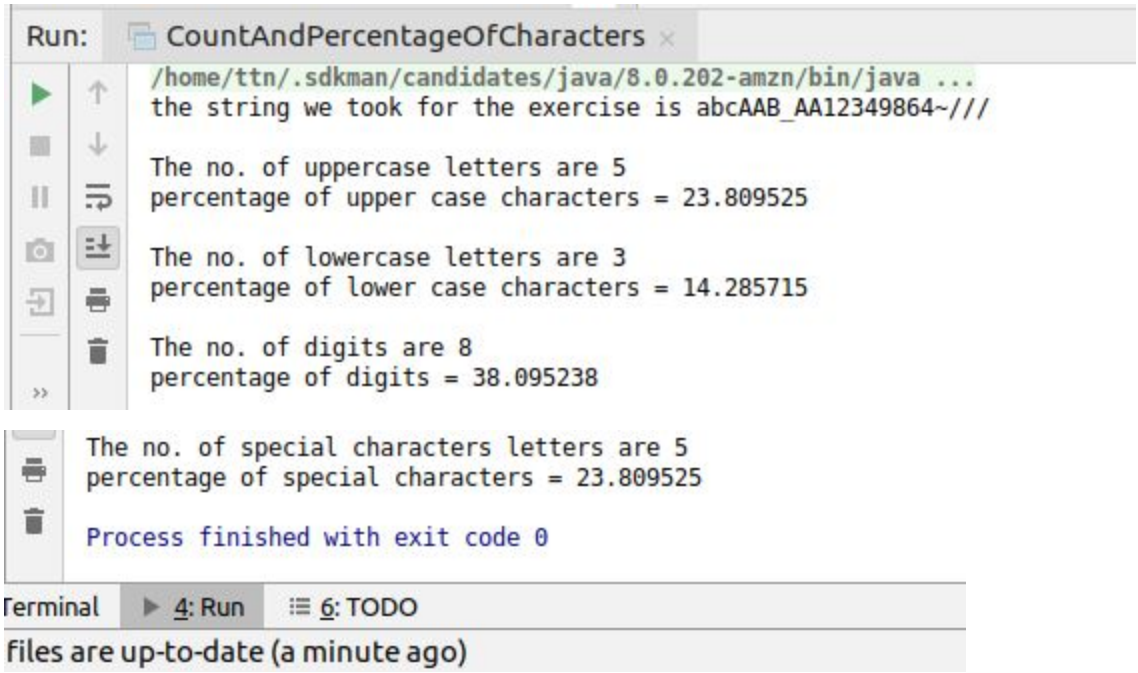
```
import java.util.Scanner;


public class NumOfOccurrenceOfCharacter
{
  public static void main(String[] args)
  {
     String str = "This is an Example Of The Character";
     System.out.println("Length Of String: " + str+" is : "+str.length());

     System.out.println("enter the character whose occurrence you want to know ");
     Scanner in =new Scanner(System.in);
     String  a=in.next();
     a=a.substring(0,1);

    // System.out.println("a is"+a);
     String s1=str.replace(a,"");
     System.out.println("Length Of String "+s1+" Without "+a+" is " + s1.length());
     int charcount = str.length() - s1.length();
     System.out.println("Occurrence Of "+ a+ " Char In String: " + charcount);

  }
}
```



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

```
public class CountAndPercentageOfCharacters {


  public static void main(String[] args) {

    String input = "abcAAB_AA12349864~///";


    int upperCase = 0, lowerCase = 0, digits = 0, specialCharacters = 0;
    for (int k = 0; k < input.length(); k++) {

      // Check for uppercase letters.
      if (Character.isUpperCase(input.charAt(k))) upperCase++;

      // Check for lowercase letters.
      if (Character.isLowerCase(input.charAt(k))) lowerCase++;

      // Check for digits.
      if (Character.isDigit(input.charAt(k))) digits++;

      // Check for special characters.
      if (!(Character.isDigit(input.charAt(k))) && !(Character.isAlphabetic(input.charAt(k))))
        specialCharacters++;

    }


    System.out.println("the string we took for the exercise is "+input);

    System.out.println("\nThe no. of uppercase letters are " + upperCase);
    System.out.println("percentage of upper case characters = " + (((float)upperCase / input.length()) * 100));
```

```
        System.out.println("\nThe no. of lowercase letters are " + lowerCase);
        System.out.println("percentage of lower case characters = " + (((float)lowerCase / input.length()) * 100));

        System.out.println("\nThe no. of digits are " + digits);
        System.out.println("percentage of digits = " + (((float)digits / input.length()) * 100));

        System.out.println("\nThe no. of special characters letters are " + specialCharacters);
        System.out.println("percentage of special characters = " + (((float)specialCharacters / input.length()) * 100));


    }

}
```



Q5. Find common elements between two arrays.

```
public class SimilarElementsInArrays
{
   public static void main(String[] args)
   {
      int arr1[] = {10, 7, 31, 97};
      int arr2[] = {23, 15, 31, 97,1008, 8, 10};
      int len1 = arr1.length;
      int len2 = arr2.length;
      for(int i =0;i<len1;i++)
      {
         for(int j= 0;j<len2;j++)
         {
            if(arr1[i]==arr2[j])
```

```
            {
                // printing common elements
                System.out.println(arr1[i]);
            }
        }
    }
}
```

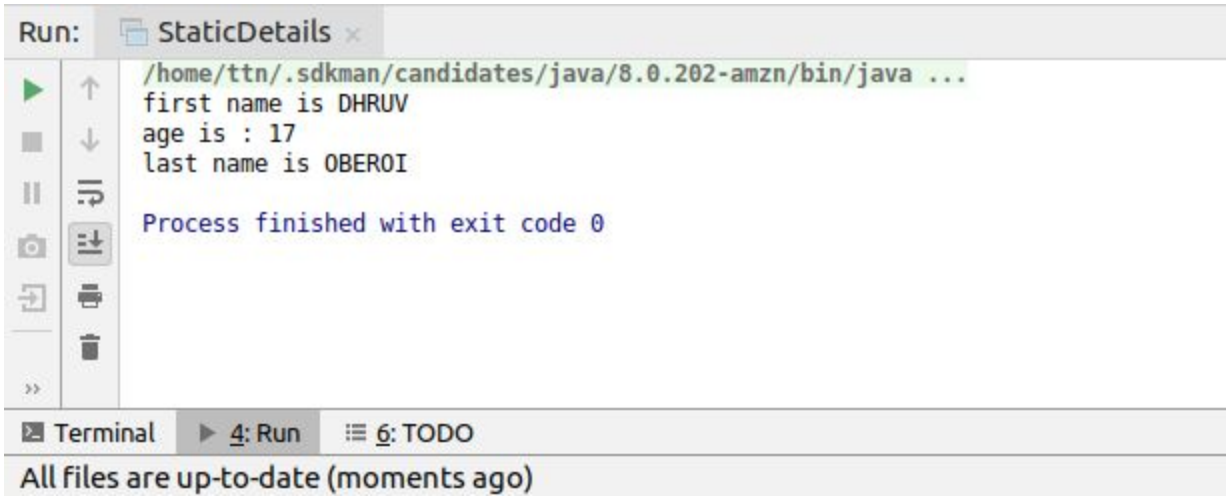
Q6. There is an array with every element repeated twice except one. Find that element

```
public class ElementNotRepeatedTwice {

  static int findSingle(int ar[], int ar_size)
  {
     // Do XOR of all elements and return
     int res = ar[0];
     for (int i = 1; i < ar_size; i++)
        res = res ^ ar[i];

     return res;
  }




  public static void main (String[] args)
  {
     int ar[] = {2, 3, 5, 4, 5, 3, 4, 8, 10, 45, 2, 45, 10};
```

```
    int n = ar.length;
    System.out.println("Element occurring once is " + findSingle(ar, n) + " ");
  }
}
```

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

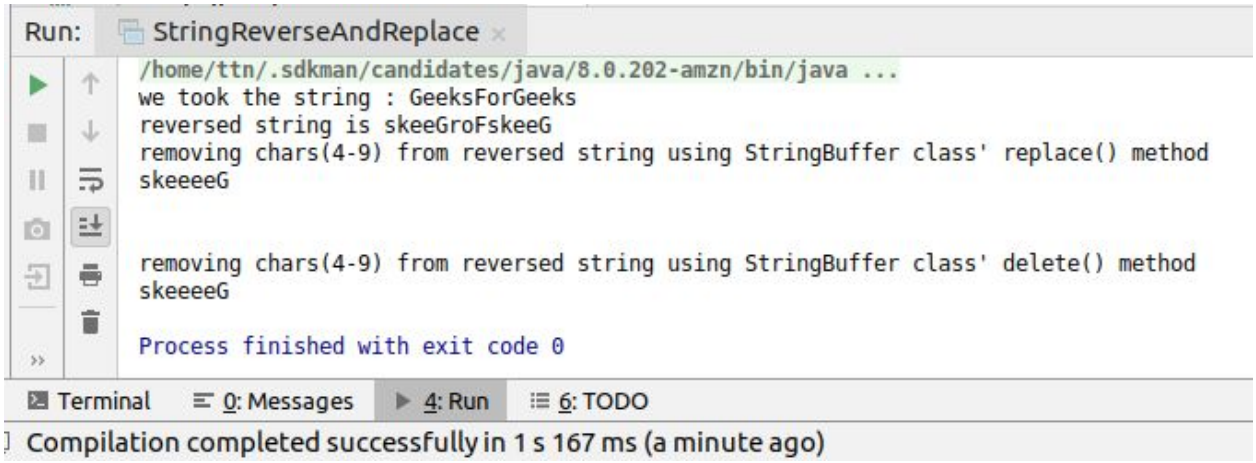
```
public class StaticDetails {

  private static String first_Name;
  private static String last_Name;

  static void lastName()
  {
    last_Name="OBEROI";
    System.out.println("last name is "+last_Name);
  }
  static{
    first_Name="DHRUV";
    System.out.println("first name is "+first_Name);
  }


  private static int age=17;

  public static void main(String[] args) {


    System.out.println("age is : "+StaticDetails.age);
    StaticDetails.lastName();
  }
}
```



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

```
public class StringReverseAndReplace
{
  public static void main(String[] args) {
     String input = "GeeksForGeeks";

     // convert String to character array
     // by using toCharArray
     char[] try1 = input.toCharArray();

     System.out.println("we took the string : "+input);

     String intermediate = "";
     for (int i = try1.length - 1; i >= 0; i--)
        // System.out.print(try1[i]);
        intermediate += try1[i];

     input = "";
     input += intermediate;

     System.out.println("reversed string is "+input);

     System.out.println("removing chars(4-9) from reversed string using StringBuffer class' replace() method");
     StringBuffer sb=new StringBuffer(input);
     sb.replace(4,10,"");
     System.out.println(sb);
```

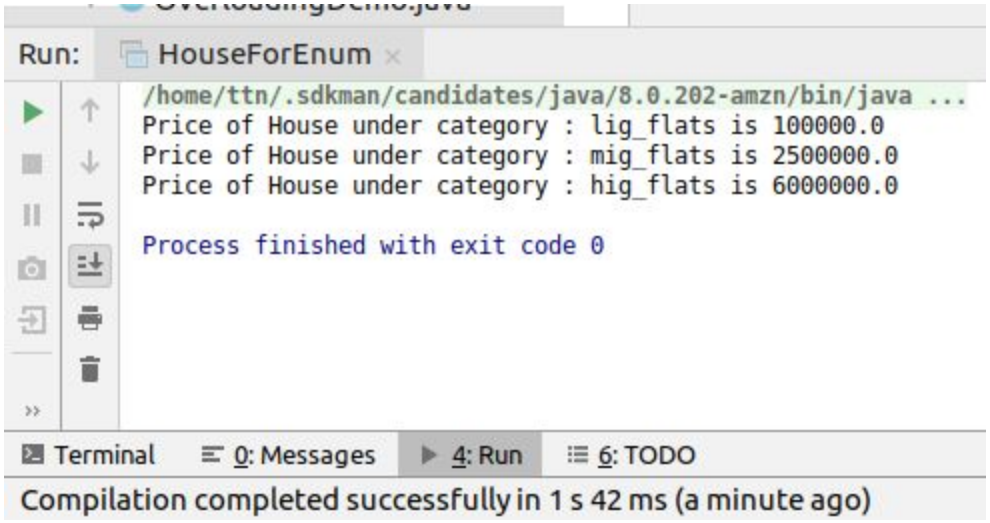
```
    System.out.println("\n\nremoving chars(4-9) from reversed string using StringBuffer class' delete()
method");
    StringBuffer sb1=new StringBuffer(input);
    sb1.delete(4,10);
    System.out.println(sb1);
  }
}
```



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

```
public class HouseForEnum{


  enum House
  {
    LIG("lig_flats", 100000d), MIG("mig_flats", 2500000d), HIG("hig_flats", 6000000d);

    private String houseName;
    private double housePrice;

    House(String houseName, double housePrice)
    {
      this.houseName = houseName;
      this.housePrice = housePrice;
    }
```

```
    public void getPrice()
    {
        System.out.println("Price of House under category : "+houseName+" is "+housePrice);
    }
}

public static void main(String[] args) {
    House h1 = House.LIG;
    h1.getPrice();


    h1=House.MIG;
    h1.getPrice();


    h1=House.HIG;
    h1.getPrice();

}
}
```



Q10.Write a single program for following operation using overloading

A) Adding 2 integer number

B) Adding 2 double

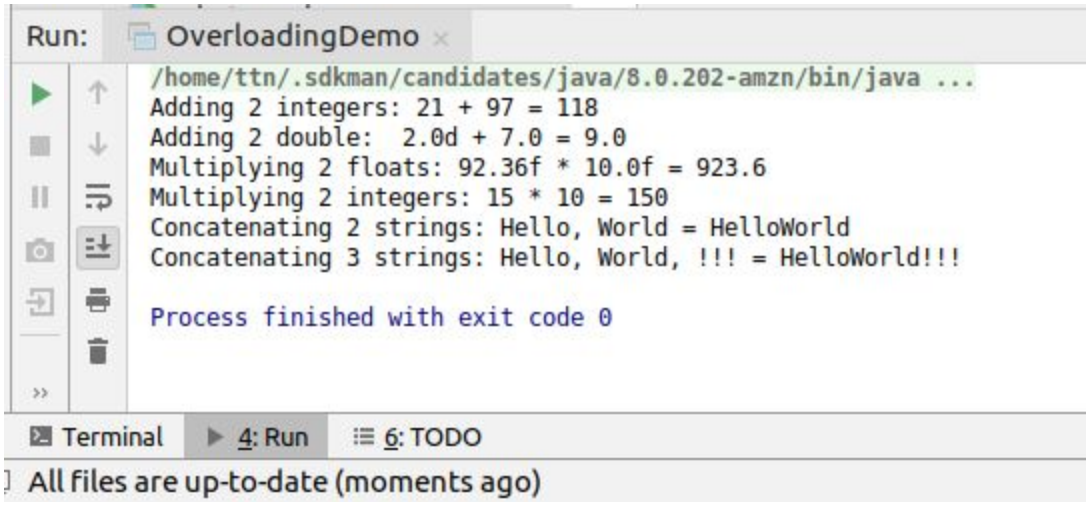
C) multiplying 2 float

D) multiplying 2 int

E) concate 2 string

F) Concate 3 String

```java
class OverloadingMethods
{

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

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

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

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

  String concatenate(String a, String b)
  {
     return a+b;
  }

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

public class OverloadingDemo
{
  public static void main(String[] args)
  {
     OverloadingMethods ob1 = new OverloadingMethods();
     System.out.println("Adding 2 integers: 21 + 97 = " +ob1.add(21, 97));
     System.out.println("Adding 2 double:  2.0d + 7.0 = " +ob1.add(2.0d, 7.0));
     System.out.println("Multiplying 2 floats: 92.36f * 10.0f = " +ob1.multiply(92.36f, 10.0f));
     System.out.println("Multiplying 2 integers: 15 * 10 = " +ob1.multiply(15, 10));
     System.out.println("Concatenating 2 strings: Hello, World = " +ob1.concatenate("Hello", "World"));
     System.out.println("Concatenating 3 strings: Hello, World, !!! = " +ob1.concatenate("Hello", "World", "!!!"));


  }
}
```



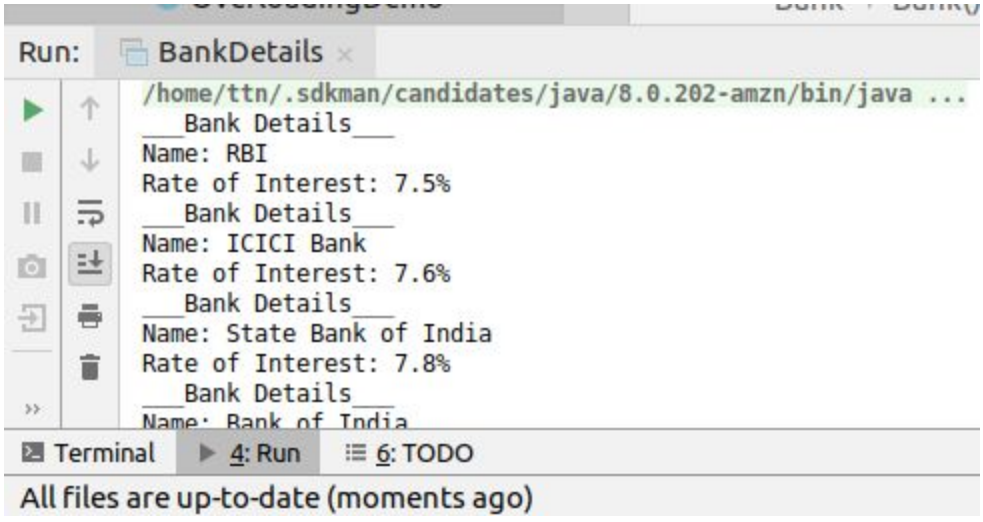
Q11.Create 3 sub class of bank SBI,BOI,ICICI all 4 should have method called getDetails which provide there specific details like rateofinterest etc,print details of every banks

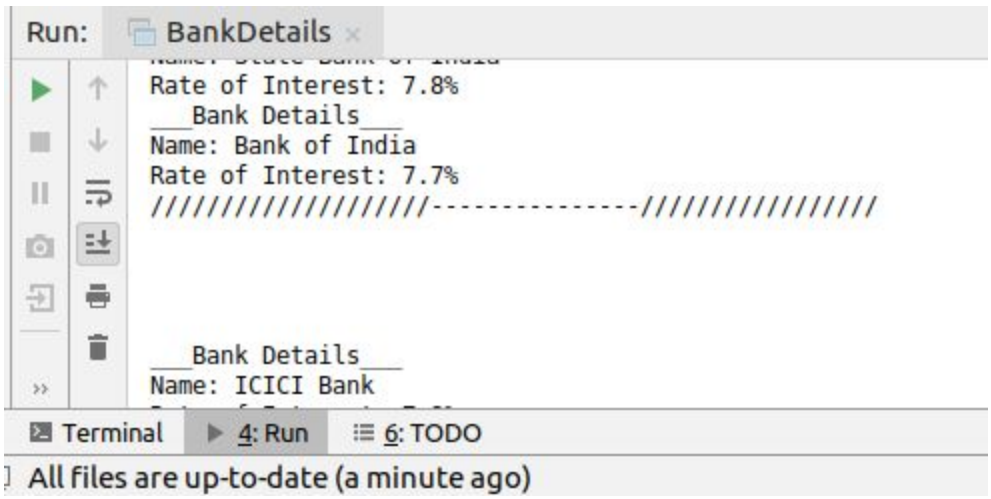
```
class Bank
  {
    private String bankName;
    private double rateOfInterest;

    Bank(String name, double interest)
     {
      bankName = name;
      rateOfInterest = interest;
     }

     void getDetails()
     {
      System.out.println("___Bank Details___");
      System.out.println("Name: " + this.bankName);
      System.out.println("Rate of Interest: " + this.rateOfInterest + "%");
     }

  }



class SBI extends Bank
{


   private String bankName;
   private double rateOfInterest;
```

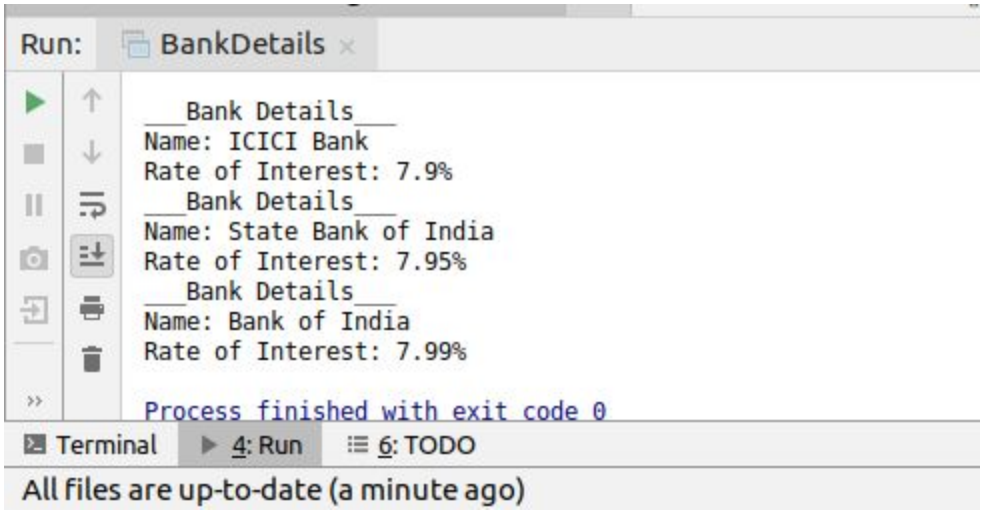
```
  SBI(String nameSuper, double interestSuper, String nameThis, double interestThis)
  {
     super(nameSuper, interestSuper);
     bankName = nameThis;
     rateOfInterest = interestThis;

  }




  void getDetails()
  {
     System.out.println("___Bank Details___");
     System.out.println("Name: " + this.bankName);
     System.out.println("Rate of Interest: " + this.rateOfInterest + "%");
  }

}



class ICICI extends Bank
{
  private String bankName;
  private double rateOfInterest;

  ICICI(String nameSuper, double interestSuper, String nameThis, double interestThis)
  {
     super(nameSuper, interestSuper);
     bankName = nameThis;
     rateOfInterest = interestThis;

  }


  void getDetails()
  {
     System.out.println("___Bank Details___");
     System.out.println("Name: " + this.bankName);
     System.out.println("Rate of Interest: " + this.rateOfInterest + "%");
  }



}
```

```
class BOI extends Bank
{
   private String bankName;
   private double rateOfInterest;

   BOI(String nameSuper, double interestSuper, String nameThis, double interestThis)
   {
      super(nameSuper, interestSuper);
      bankName = nameThis;
      rateOfInterest = interestThis;

   }

   void getDetails()
   {
      System.out.println("___Bank Details___");
      System.out.println("Name: " + this.bankName);
      System.out.println("Rate of Interest: " + this.rateOfInterest + "%");
   }




}



   public class BankDetails
   {


      public static void main(String[] args)
      {
         Bank myBank = new Bank("RBI", 7.5);
         myBank.getDetails();
         ICICI icici = new ICICI("RBI",7.5,"ICICI Bank", 7.6);
         icici.getDetails();
         SBI sbi = new SBI("RBI",7.5,"State Bank of India", 7.8);
         sbi.getDetails();
         BOI boi = new BOI("RBI",7.5,"Bank of India", 7.7);
         boi.getDetails();


         System.out.println("//////////////////----------/////////////////\n\n\n\n");

         Bank myBank2;
         myBank2=new ICICI("RBI",7.5,"ICICI Bank", 7.9);
         myBank2.getDetails();
```

```
        myBank2=new SBI("RBI",7.5,"State Bank of India", 7.95);
        myBank2.getDetails();

        myBank2=new BOI("RBI",7.5,"Bank of India", 7.99);
        myBank2.getDetails();




    }


}
```






Run:
BankDetails
___Bank Details___
Name: ICICI Bank
Rate of Interest: 7.9%
___Bank Details___
Name: State Bank of India
Rate of Interest: 7.95%
___Bank Details___
Name: Bank of India
Rate of Interest: 7.99%
Process finished with exit code 0
Terminal
4: Run
6: TODO
All files are up-to-date (a minute ago)