

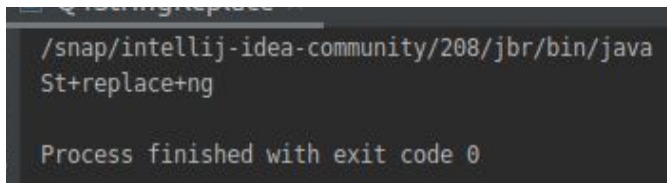
## JAVA 1 EXERCISE

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

Code:

```
public class Q1StringReplace {  
    public static void main(String[] args) {  
        String str = "String";  
        String str1 = "+replace+";  
        System.out.println(str.replace("ri",str1));  
    }  
}
```

Output:



```
/snap/intellij-idea-community/208/jbr/bin/java -Xmx200m -Xms100m -jar Q1StringReplace.jar  
St+replace+ng  
  
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 ?

Code:

```
public class Q2DuplicateWords {  
    public static void main(String[] args) {  
        String str = "What are you doing what are you doing what are you doing what are you doing";  
        int count = 1;  
  
        String[] strArray = str.split(" ");  
  
        for(int i = 0; i < strArray.length; i++){  
            count = 1;  
            for(int j=i+1; j<strArray.length; j++){  
                if(strArray[i].equalsIgnoreCase(strArray[j])){  
                    count++;  
  
                    strArray[j] = "matched";  
                }  
            }  
        }  
  
        if(count > 0 && strArray[i] != "matched"){  
            System.out.println(strArray[i] + " : "+ count);  
        }  
    }  
}
```

```

    }
}
}
}

```

Output:

```

Run: Q2DuplicateWords x
/snap/intellij-idea-community/208/jbr/bin/
What : 4
are : 4
you : 4
doing : 4
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?

Code:

```

import java.util.*;
public class Q3Char {
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter the String");
        String str = scan.nextLine();
        System.out.println("Enter the character to be count");
        String str1 = scan.nextLine();
        int count = str.length() - str.replace(str1,"").length();
        System.out.println("Number of occurence of s in str : "+str + " : "+count);
    }
}

```

Output:

```

Run: Q3Char x
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/snap
Enter the String
sssssssssiieuiyiiis
Enter the character to be count
s
Number of occurence of s in str : ssssssssiieuiyiiis : 10
Process finished with exit code 0

```

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

Code:

```
import java.util.*;

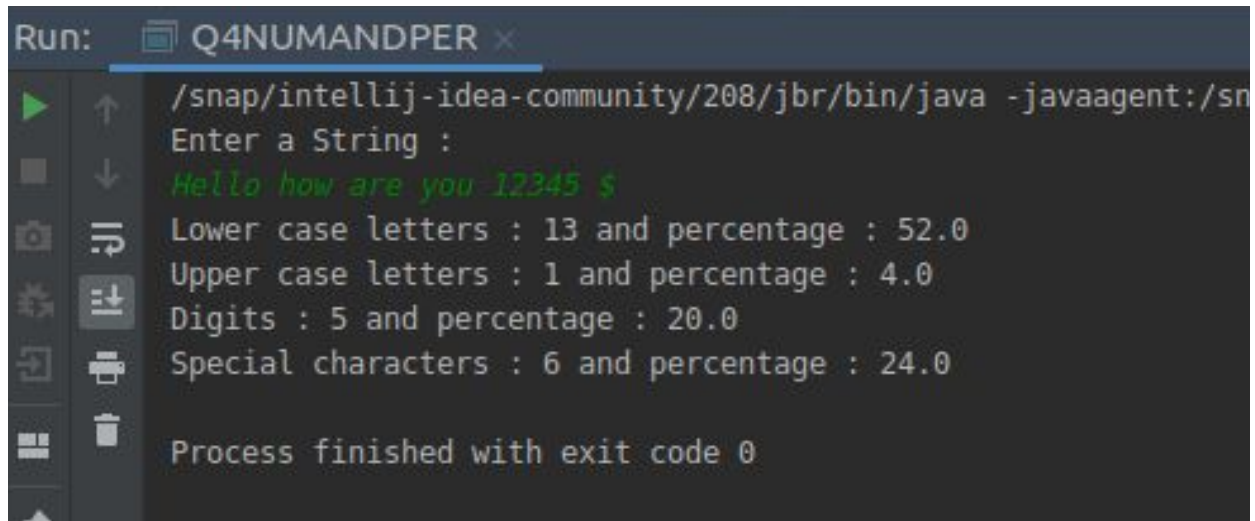
public class Q4NUMANDPER {
// Synchronized keyword provides intrinsic lock on threads
    public static void main(String[] args) {
        Scanner scan = new Scanner(System.in);
        System.out.println("Enter a String : ");

        String str = scan.nextLine();
        float upper = 0, lower = 0, digits = 0, special = 0;

        for(int i = 0; i < str.length(); i++)
        {
            char ch = str.charAt(i);
            if (ch >= 'A' && ch <= 'Z')
                upper++;
            else if (ch >= 'a' && ch <= 'z')
                lower++;
            else if (ch >= '0' && ch <= '9')
                digits++;
            else
                special++;
        }

        System.out.println("Lower case letters : " + (int)(lower) + " and percentage : " + (lower * 100)/str.length());
        System.out.println("Upper case letters : " + (int) (upper) + " and percentage : " + (upper * 100)/str.length());
        System.out.println("Digits : " + (int)(digits) + " and percentage : " + (digits * 100)/str.length());
        System.out.println("Special characters : " + (int) (special) + " and percentage : " + (special * 100)/str.length());
    }
}
```

Output:



```
Run: Q4NUMANDPER x
/snap/intellij-idea-community/208/jbr/bin/java -javaagent:/sn
Enter a String :
Hello how are you 12345 $
Lower case letters : 13 and percentage : 52.0
Upper case letters : 1 and percentage : 4.0
Digits : 5 and percentage : 20.0
Special characters : 6 and percentage : 24.0
Process finished with exit code 0
```

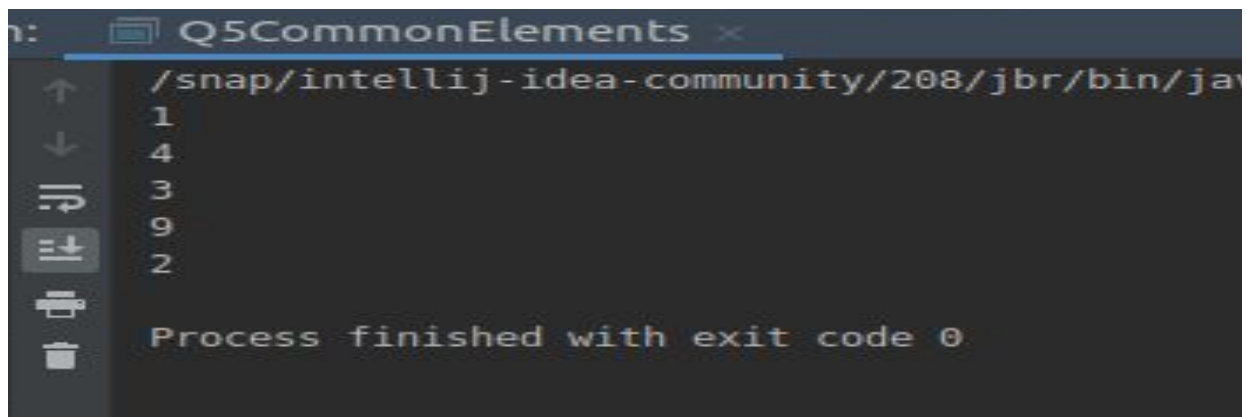
Q5. Find common elements between two arrays.

Code:

```
public class Q5CommonElements {
    public static void main(String[] args) {

        int[] arr1 = {1,4,7,3,9,2};
        int[] arr2 = {3,2,12,9,40,32,1,4};
        for(int i=0;i<arr1.length;i++){
            for(int j=0;j<arr2.length;j++){
                if(arr1[i]==arr2[j]){
                    System.out.println(arr1[i]);
                }
            }
        }
    }
}
```

Output:



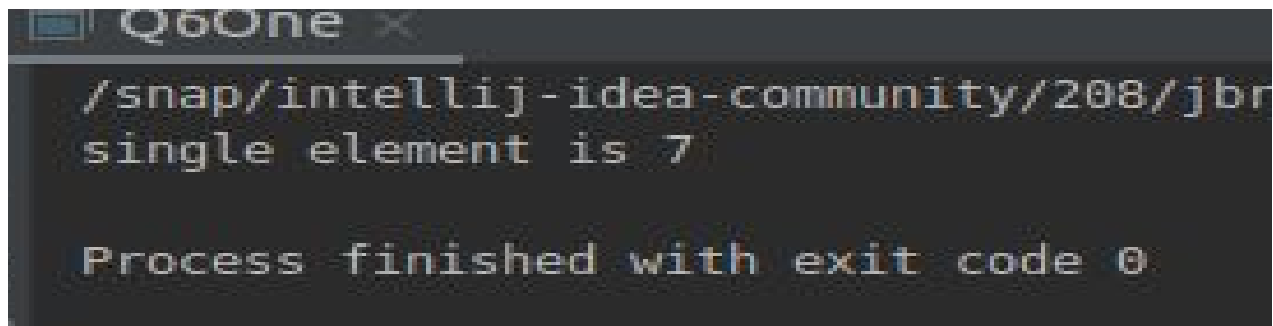
```
Run: Q5CommonElements x
/snap/intellij-idea-community/208/jbr/bin/java
1
4
3
9
2
Process finished with exit code 0
```

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

Code:

```
public class Q6One {
    public static void main(String args[])
    {
        int[] arr1={1,99,8,1,99,8,7};
        int count=0;
        for (int i=0;i<arr1.length;i++)
        {
            count=1;
            for(int j=i+1;j<arr1.length;j++)
            {
                if(arr1[i]==arr1[j])
                {
                    count++;
                    arr1[j]='0';
                }
            }
            if(arr1[i]!='0' && count==1)
            {
                System.out.println("single element is "+arr1[i]);
            }
        }
    }
}
```

Output:

A screenshot of a Java IDE terminal window. The window title is "Q6One x". The terminal shows the path "/snap/intellij-idea-community/208/jbr" followed by the output "single element is 7". At the bottom, it says "Process finished with exit code 0".

```
/snap/intellij-idea-community/208/jbr
single element is 7

Process finished with exit code 0
```

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

Code:

```
public class Q7name {

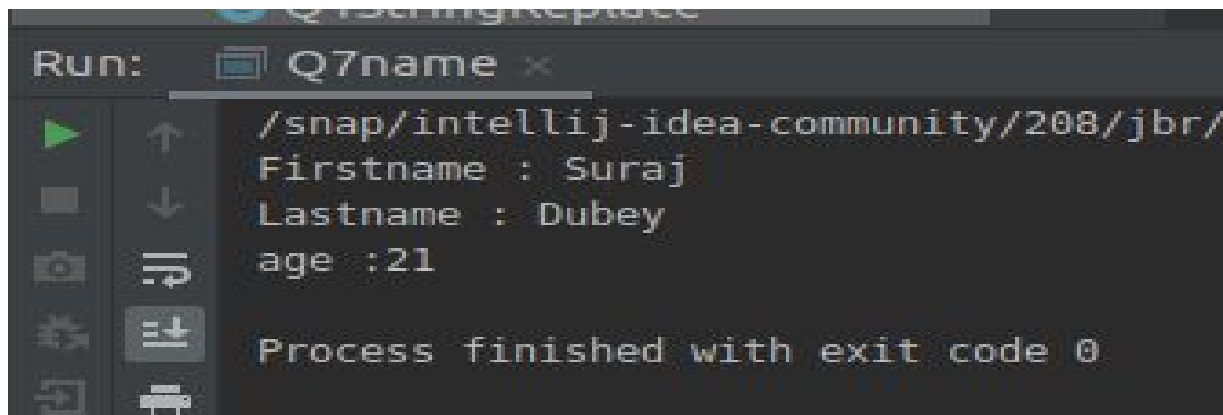
    static int age=21; //static variable
    static
    {
        //static block
        System.out.println("Firstname : Suraj");
    }
}
```

```

static void Lastname() //static method
{
    System.out.println("Lastname : Dubey");
}
public static void main(String args[])
{
    Lastname();
    System.out.println("age : " + age);
}
}

```

Output:



```

Run: Q7name x
/snap/intellij-idea-community/208/jbr/
Firstname : Suraj
Lastname : Dubey
age :21
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

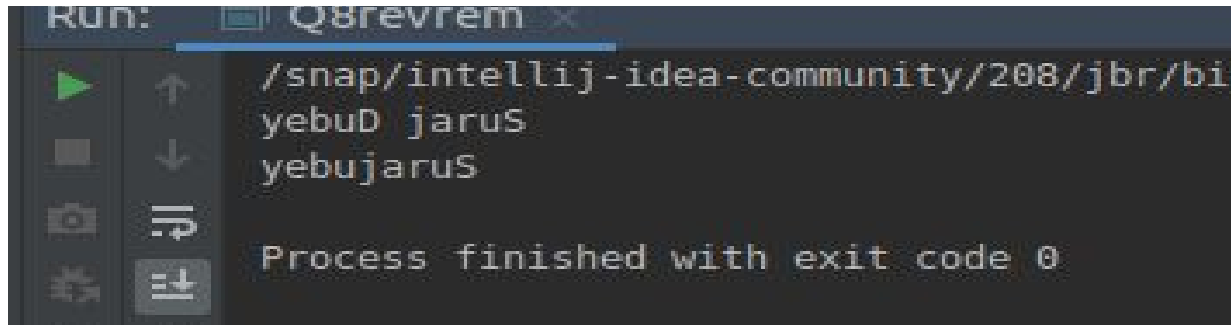
Code:

```

public class Q8revrem {
    public static void main(String args[])
    {
        String str1=("Suraj Dubey");
        StringBuffer str2=new StringBuffer();
        str2.append(str1);
        str2=str2.reverse();
        System.out.println(str2);
        str2.delete(4,6);
        System.out.println(str2);
    }
}

```

Output:



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

Code:

```
public class Q9Enums {
    public enum houseName{
        NORTH(7898), SOUTH(98723), EAST(56789), WEST(43562), CENTRAL(65432);
        private int p;
        houseName(int price)
        {
            p=price;
        }
        int getPrice()
        {
            return p;
        }
    }
    public static void main(String[] args)
    {
        System.out.println("house name:price");
        System.out.println(houseName.NORTH +": "+houseName.NORTH.getPrice()+" rupees");
        System.out.println(houseName.SOUTH +": "+houseName.SOUTH.getPrice()+" rupees");
        System.out.println(houseName.EAST +": "+houseName.EAST.getPrice()+" rupees");
        System.out.println(houseName.WEST +": "+houseName.WEST.getPrice()+" rupees");
        System.out.println(houseName.CENTRAL +": "+houseName.CENTRAL.getPrice()+" rupees");
    }
}
```

Output:

```
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) concatenate 2 string
F) Concatenate 3 String
Code:
public class Q10Operation {
    public int add(int x,int y)
    {
        return(x+y);
    }
    public double add(double x,double y)
    {
        return(x+y);
    }
    public float multiply(float x,float y)
    {
        return(x*y);
    }
    public int multiply(int x,int y)
    {
        return(x*y);
    }
    public String concatenate(String str1,String str2)
    {
        String str3=str1.concat(str2);
        //System.out.println("concatenated string:");
        return("concatenated string: "+str3);
    }
    public String concatenate3(String str1,String str2, String str3)
    {
        String str4=str1+str2+str3;
        //System.out.println("concatenated string:");
    }
}
```

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) concatenate 2 string
- F) Concatenate 3 String

Code:

```
public class Q10Operation {
    public int add(int x,int y)
    {
        return(x+y);
    }
    public double add(double x,double y)
    {
        return(x+y);
    }
    public float multiply(float x,float y)
    {
        return(x*y);
    }
    public int multiply(int x,int y)
    {
        return(x*y);
    }
    public String concatenate(String str1,String str2)
    {
        String str3=str1.concat(str2);
        //System.out.println("concatenated string:");
        return("concatenated string: "+str3);
    }
    public String concatenate3(String str1,String str2, String str3)
    {
        String str4=str1+str2+str3;
        //System.out.println("concatenated string:");
    }
}
```



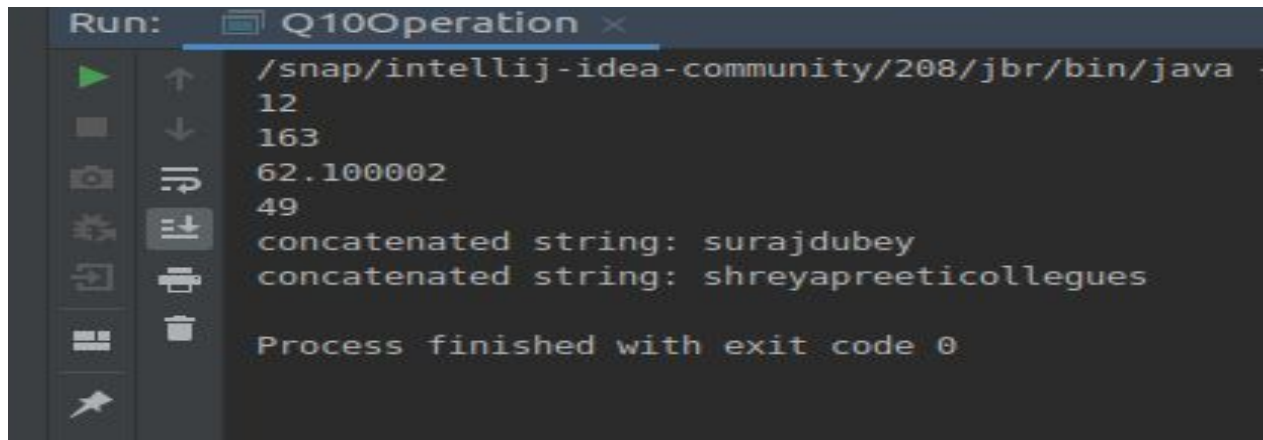
```

    return("concatenated string: "+str4);
}
public static void main(String args[])
{
    Q10Operation o=new Q10Operation();
    System.out.println(o.add(5,7));

    System.out.println(o.add(65,98));
    System.out.println(o.multiply(6.9f,9.0f));
    System.out.println(o.multiply(7,7));
    System.out.println(o.concat("suraj","dubey"));
    System.out.println(o.concat3("shreya","preeti","colleagues"));
}
}

```

Output:



```

Run: Q10Operation x
/snap/intellij-idea-community/208/jbr/bin/java
12
163
62.100002
49
concatenated string: surajdubey
concatenated string: shreyapreeticolleagues
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

Code:

```

class Bank
{
    void getDetails()
    {
        System.out.println("rate of interest = 2%");
        System.out.println("number of employees = 200");
    }
}
class SBI extends Bank
{
    void getDetails()
    {
        System.out.println("branch: SBI- Gandhi Nagar");
    }
}

```

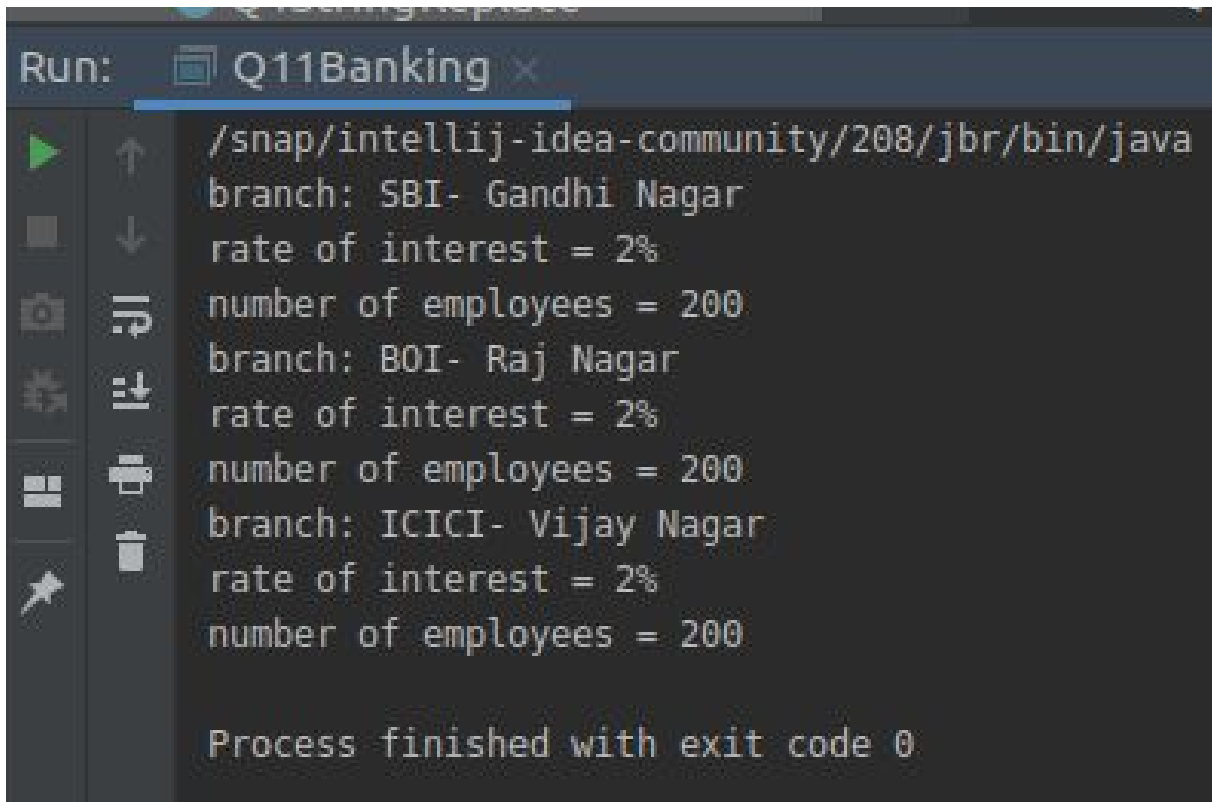
```

    }
    void display()
    {
        getDetails();
        super.getDetails();
    }
}
class BOI extends Bank
{
    void getDetails()
    {
        System.out.println("branch: BOI- Raj Nagar");
    }
    void display()
    {
        getDetails();
        super.getDetails();
    }
}
class ICICI extends Bank
{
    void getDetails()
    {
        System.out.println("branch: ICICI- Vijay Nagar");
    }
    void display()
    {
        getDetails();
        super.getDetails();
    }
}
public class Q11Banking
{
    public static void main(String args[])
    {
        SBI s = new SBI();
        s.display();
        BOI b = new BOI();
        b.display();
        ICICI i = new ICICI();
        i.display();
    }
}

```

}

Output:



```
Run: Q11Banking x
/snap/intellij-idea-community/208/jbr/bin/java
branch: SBI- Gandhi Nagar
rate of interest = 2%
number of employees = 200
branch: BOI- Raj Nagar
rate of interest = 2%
number of employees = 200
branch: ICICI- Vijay Nagar
rate of interest = 2%
number of employees = 200

Process finished with exit code 0
```