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Lab - 1

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1. Biggest of 3 Numbers

```
import java.util.*;

public class Big3 {
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        int a = sc.nextInt();
        int b = sc.nextInt();
        int c = sc.nextInt();
        int max = a > b ? (a > c ? a : c) : (b > c ? b : c);
        System.out.println("Maximum is " + max);
        sc.close();
    }
}
```

```
[sid@Siddharths-Air College % javac Big3.java
[sid@Siddharths-Air College % java Big3
13
23
1
Maximum is 23
sid@Siddharths-Air College % ]
```

2. Fibonacci Series

```
public class fibonacci{  
    public static void main(String args[]){  
        int first = 0;  
        int second = 1;  
        int sum = 0;  
        System.out.println(first);  
        System.out.println(second);  
        for(int i=0; i<=8;i++){  
            sum = first + second;  
            first = second;  
            second = sum;  
            System.out.println(sum);  
        }  
    }  
}
```

```
[sid@Siddharths-Air College % javac fibonacci.java  
[sid@Siddharths-Air College % java fibonacci  
0  
1  
1  
2  
3  
5  
8  
13  
21  
34  
55  
sid@Siddharths-Air College %
```

3. Factorial of a number

```
import java.util.*;
public class factorial{
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        int a = sc.nextInt();
        int prod = 1;
        while(a!=1) {
            prod*=a--;
        }
        System.out.println("Factorial is "+prod);
        sc.close();
    }
}
```

```
[sid@Siddharths-Air College % javac factorial.java
[sid@Siddharths-Air College % java factorial
5
Factorial is 120
sid@Siddharths-Air College % ]
```

4. Pattern

```
public class pattern {  
    public static void main(String args[]) {  
        for (int i = 1; i <= 5; i++) {  
            for (int j = 0; j < i; j++)  
                System.out.print("*");  
            System.out.println();  
        }  
    }  
}
```

```
|sid@Siddharths-Air College % javac pattern.java  
|sid@Siddharths-Air College % java pattern  
*  
**  
***  
****  
*****  
sid@Siddharths-Air College % █
```

5. Swap

```
import java.util.*;  
  
public class swap {  
    public static void main(String args[]) {  
        Scanner sc = new Scanner(System.in);  
        int a = sc.nextInt();  
        int b = sc.nextInt();  
        int c = a;  
        a = b;  
        b = c;  
        System.out.println("Swapped Numbers are " + a + " and " +  
b);  
        sc.close();  
    }  
}
```

```
[sid@Siddharths-Air College % javac swap.java  
[sid@Siddharths-Air College % java swap  
34  
12  
Swapped Numbers are 12 and 34  
sid@Siddharths-Air College %
```

6. Prime

```
import java.util.*;  
  
public class prime {  
    public static void main(String args[]) {  
        Scanner sc = new Scanner(System.in);  
        int a = sc.nextInt();  
        for (int i = 2; i < a; i++) {  
            boolean flag = false;  
            int num = i;  
            for (int j = 2; j < num / 2; j++) {  
                if (num % j == 0) {  
                    flag = true;  
                    break;  
                }  
            }  
            if (!flag) {  
                System.out.println(i);  
            }  
        }  
        sc.close();  
    }  
}
```

```
[sid@Siddharths-Air College % javac prime.java  
[sid@Siddharths-Air College % java prime  
40  
2  
3  
4  
5  
7  
11  
13  
17  
19  
23  
29  
31  
37  
sid@Siddharths-Air College %
```

7. Hello World

```
public class hello_world{  
    public static void main(String args[]) {  
        System.out.println("Hello World");  
    }  
}
```

```
[sid@Siddharths-Air Lab 1 % javac hello_world.java  
[sid@Siddharths-Air Lab 1 % java hello_world  
Hello World  
sid@Siddharths-Air Lab 1 % ]
```

8. User input

```
import java.util.*;
public class user_inp{
    public static void main(String args[]) {
        Scanner sc = new Scanner(System.in);
        String first = sc.next();
        String last = sc.next();
        System.out.println("Hello "+first+" "+last);
    }
}
```

```
[sid@Siddharths-Air Lab 1 % javac user_inp.java
[sid@Siddharths-Air Lab 1 % java user_inp
Siddharth
Roy
Hello Siddharth Roy
sid@Siddharths-Air Lab 1 % ]
```

9. Sum of binary number

```
import java.util.*;
public class binarySum{
    public static void main(String args[]) {
        Scanner sc=new Scanner(System.in);
        String b1,b2,b3;
        System.out.print("Enter the first binary number:");
        b1=sc.next();
        System.out.print("Enter the second binary number:");
        b2=sc.next();
        b3=Integer.toBinaryString((Integer.parseInt(b1,2))+
(Integer.parseInt(b2,2)));
        System.out.println("The sum of two binary numbers is "+b3);
    }
}
```

```
[sid@Siddharths-Air Lab 1 % javac binarySum.java
[sid@Siddharths-Air Lab 1 % java binarySum
Enter the first binary number:101
Enter the second binary number:100
The sum of two binary numbers is 1001
sid@Siddharths-Air Lab 1 % ]
```

10. Area, Perimeter, Diameter

```
import java.lang.*;
import java.util.*;
public class area
{
    public static void main(String a[])
    {
        Scanner sc=new Scanner(System.in);
        float area,radius;
        System.out.print("Enter the Area of circle:");
        area=sc.nextFloat();
        radius=(float)(Math.sqrt((float)area/Math.PI));
        System.out.println("The Diameter of circle is "+2*radius);
        System.out.println("The Perimeter of circle is
"+2*Math.PI*radius);
    }
}
```

```
[sid@Siddharths-Air Lab 1 % javac area.java
[sid@Siddharths-Air Lab 1 % java area
Enter the Area of circle:41
The Diameter of circle is 7.225152
The Perimeter of circle is 22.698484493548733
sid@Siddharths-Air Lab 1 % ]
```

11. Weird Number

```
import java.util.*;
class weird
{
    public static void main(String a[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.print("Enter an integer value:");
        int number;
        number=sc.nextInt();
        if(number%2!=0)
        {
            System.out.println("Weird.");
        }
        else
        {
            if((number>=2 && number<=5) || number>20)
            {
                System.out.println("Not Weird.");
            }
            else
            {
                System.out.println("Weird.");
            }
        }
    }
}
```

```
[sid@Siddharths-Air Lab 1 % javac weird.java
[sid@Siddharths-Air Lab 1 % java weird
Enter an integer value:5
Weird.
sid@Siddharths-Air Lab 1 % ]
```

12. Read Integer, String Double

```
import java.util.*;
class read
{
    public static void main(String a[])
    {
        Scanner sc=new Scanner(System.in);
        int number;
        double number1;
        String s;
        System.out.print("Enter an integer value:");
        number=sc.nextInt();
        System.out.print("Enter a double value:");
        number1=sc.nextDouble();
        sc.nextLine();
        System.out.print("Enter a string value:");
        s=sc.nextLine();
        System.out.println("Print String:"+s+"\nPrint
Double:"+number1+"\nPrint Int:"+number);
    }
}
```

```
|sid@Siddharths-Air Lab 1 % javac read.java
|sid@Siddharths-Air Lab 1 % java read
Enter an integer value:5
Enter a double value:2.345
Enter a string value:Siddharth
Print String:Siddharth.
Print Double:2.345.
Print Int:5
sid@Siddharths-Air Lab 1 %
```

13. Multiple String and Integer

```
import java.util.*;
class StringMultiple
{
    public static void main(String ar[])
    {
        Scanner sc=new Scanner(System.in);
        System.out.println("Enter the number of strings:");
        int n=sc.nextInt();
        String s;
        int j;
        String a[]=new String[10];
        int b[]=new int[10];
        for(int i=0;i<n;i++)
        {
            System.out.println("Enter a string followed by a number:");
            s=sc.next();
            int l=s.length();
            for(j=0;j<s.length();j++)
            {
                if(s.charAt(j)>48 && s.charAt(j)<58)
                {
                    break;
                }
            }
            a[i]=s.substring(0,(j));
            b[i]=Integer.parseInt(s.substring(j,(s.length())));
        }
        for(int i=0;i<n;i++)
        {
            System.out.printf("%-10s%03d\n",a[i],b[i]);
        }
    }
}
```

```
sid@Siddharths-Air Lab 1 % javac StringMultiple.java
sid@Siddharths-Air Lab 1 % java StringMultiple
Enter the number of strings:
3
Enter a string followed by a number:
sid34
Enter a string followed by a number:
roy23
Enter a string followed by a number:
hi65
sid      034
roy      023
hi       065
sid@Siddharths-Air Lab 1 %
```

14. Multiples

```
import java.util.*;  
  
class multiples {  
    public static void main(String a[]) {  
        Scanner sc = new Scanner(System.in);  
        int number;  
        System.out.print("Enter a number:");  
        number = sc.nextInt();  
        System.out.println("The first ten multiples of the number " +  
number + " are:");  
        for (int i = 1; i <= 10; i++) {  
            System.out.printf("%d*%02d=%d\n", number, i, (number *  
i));  
        }  
        sc.close();  
    }  
}
```

```
[sid@Siddharths-Air Lab 1 % javac multiples.java  
[sid@Siddharths-Air Lab 1 % java multiples  
Enter a number:5  
The first ten multiples of the number 5 are:  
5*01=5  
5*02=10  
5*03=15  
5*04=20  
5*05=25  
5*06=30  
5*07=35  
5*08=40  
5*09=45  
5*10=50  
sid@Siddharths-Air Lab 1 %
```

15. Command Line Arguments

```
class command_line {  
    public static void main(String a[]) {  
        System.out.println("The Input given are:");  
        for (String i : a) {  
            System.out.println(i);  
        }  
    }  
}
```

```
[sid@Siddharths-Air Lab 1 % javac command_line.java  
[sid@Siddharths-Air Lab 1 % java command_line hi bye sid  
The Input given are:  
hi  
bye  
sid  
sid@Siddharths-Air Lab 1 %
```