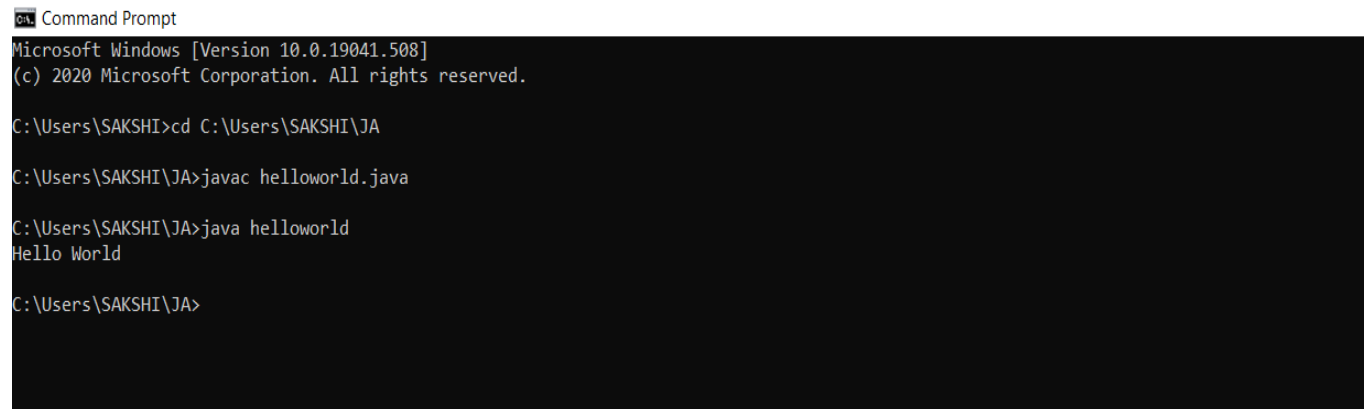


1. Write a Java program to print "Hello World".

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



Command Prompt

Microsoft Windows [Version 10.0.19041.508]
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C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA

C:\Users\SAKSHI\JA>javac helloworld.java

C:\Users\SAKSHI\JA>java helloworld

Hello World

C:\Users\SAKSHI\JA>

2. Write a Java program to find largest of three numbers using if construct.

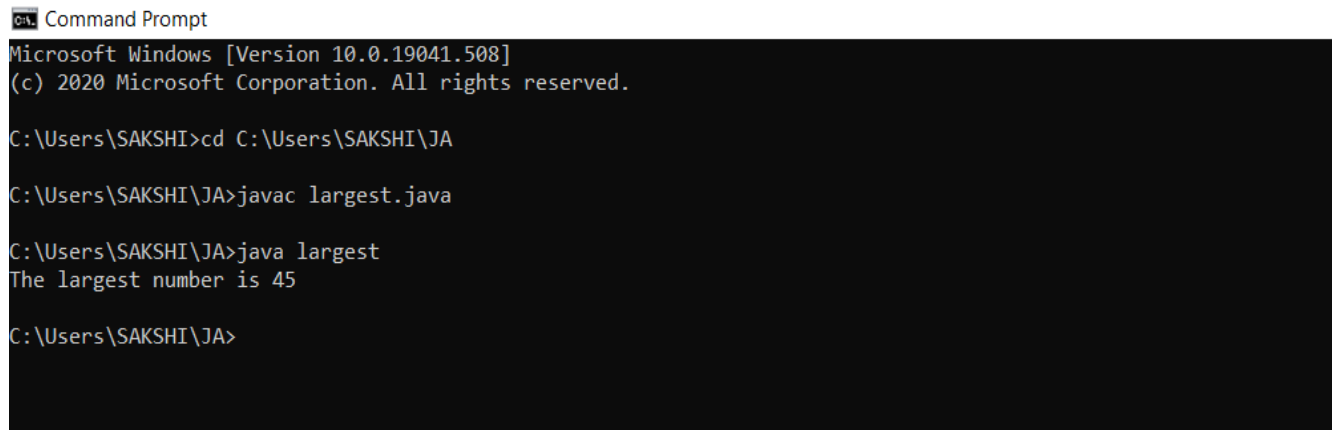
```
class largest  
{  
    public static void main(String args[])  
    {  
        int a=30, b=45, c=20;  
        if(a>b && a>c)  
            System.out.println("The largest number is " + a);  
        else if(b>a && b>c)  
            System.out.println("The largest number is " + b);  
    }  
}
```

```
else

    System.out.println("The largest number is " + c);

}

}
```



Command Prompt

Microsoft Windows [Version 10.0.19041.508]
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C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA

C:\Users\SAKSHI\JA>javac largest.java

C:\Users\SAKSHI\JA>java largest

The largest number is 45

C:\Users\SAKSHI\JA>

3. Write a Java program to print the values from 1 to n by taking input from the user.

```
import java.util.Scanner;

class Numbers

{

    public static void main(String args[])

    {

        int n, i;

        Scanner in = new Scanner(System.in);

        System.out.println("Enter the value of n : ");

        n = in.nextInt();

        System.out.println("The numbers from 1 to " + n + " are : ");
```

```

for(i=1;i<=n;i++)

{

    System.out.println(i);

}

}

}

```

```

C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA
C:\Users\SAKSHI\JA>javac Numbers.java
C:\Users\SAKSHI\JA>java Numbers
Enter the value of n :
4
The numbers from 1 to 4 are :
1
2
3
4
C:\Users\SAKSHI\JA>java Numbers
Enter the value of n :
8
The numbers from 1 to 8 are :
1
2
3
4
5
6
7
8
C:\Users\SAKSHI\JA>

```

4. Write a Java program to accept a number n from the user and print n rows of output as given below if n=4.

```

1
2   3
4   5   6
7   8   9   10

```

```

import java.util.Scanner;
class rowsofnumbers
{
    public static void main(String args[])
    {
        int n, i, j, k=0;
        Scanner in = new Scanner(System.in);
        System.out.println("Enter the value of n : ");
        n = in.nextInt();
        System.out.println();
        for(i=1;i<=n;i++)
        {
            for(j=1;j<=i;j++)
            {
                System.out.print(++k + "\t");
            }
            System.out.println();
        }
    }
}

```

Command Prompt

```

Microsoft Windows [Version 10.0.19041.508]
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C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA

C:\Users\SAKSHI\JA>javac rowsofnumbers.java

C:\Users\SAKSHI\JA>java rowsofnumbers
Enter the value of n :
4

1
2      3
4      5      6
7      8      9      10

C:\Users\SAKSHI\JA>java rowsofnumbers
Enter the value of n :
7

1
2      3
4      5      6
7      8      9      10
11     12     13     14     15
16     17     18     19     20     21
22     23     24     25     26     27     28

C:\Users\SAKSHI\JA>

```

5. Write a Java program to accept the CIE marks (Out of 50) and SEE marks (Out of 100) of a student and print his/her grade. Use if... elseif ladder.

```
import java.util.Scanner;
class grades
{
    public static void main(String args[])
    {
        int cie_marks[] = new int[6];
        int see_marks[] = new int[6];
        int i;
        float total=0, avg;
        Scanner in = new Scanner(System.in);
        for(i=0;i<6;i++)
        {
            System.out.print("Enter CIE marks of subject " + (i+1) + " out of 50 : ");
            cie_marks[i] = in.nextInt();
            System.out.print("Enter SEE marks of subject " + (i+1) + " out of 100 : ");
            see_marks[i] = in.nextInt();
            System.out.println();
            total = total + (float)cie_marks[i] + (((float)see_marks[i])/(float)2);
        }
        avg = total/6;
        System.out.print("The student grade is : ");
        if(avg>=90)
            System.out.print("S");
        else if(avg>=80 && avg<90)
            System.out.print("A");
        else if(avg>=70 && avg<80)
            System.out.print("B");
        else if(avg>=60 && avg<70)
            System.out.print("C");
        else if(avg>=50 && avg<60)
            System.out.print("D");
        else if(avg>=40 && avg<50)
            System.out.print("E");
        else
            System.out.print("F");
    }
}
```

(output of this program in next page)

```
Command Prompt
Microsoft Windows [Version 10.0.19041.508]
(c) 2020 Microsoft Corporation. All rights reserved.

C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA

C:\Users\SAKSHI\JA>javac grades.java

C:\Users\SAKSHI\JA>java grades
Enter CIE marks of subject 1 out of 50 : 34
Enter SEE marks of subject 1 out of 100 : 68

Enter CIE marks of subject 2 out of 50 : 46
Enter SEE marks of subject 2 out of 100 : 92

Enter CIE marks of subject 3 out of 50 : 32
Enter SEE marks of subject 3 out of 100 : 73

Enter CIE marks of subject 4 out of 50 : 41
Enter SEE marks of subject 4 out of 100 : 82

Enter CIE marks of subject 5 out of 50 : 47
Enter SEE marks of subject 5 out of 100 : 90

Enter CIE marks of subject 6 out of 50 : 39
Enter SEE marks of subject 6 out of 100 : 79

The student grade is : A
C:\Users\SAKSHI\JA>
```

6. Write a Java program to print the prime numbers between given two integers (inclusive). Accept these two integers from the user.

```
import java.util.Scanner;

class prime_numbers
{
    public static void main(String args[])
    {
        int count, start, end;

        Scanner pr=new Scanner(System.in);

        System.out.print("Enter Starting Number : ");

        start = pr.nextInt();
```

```
System.out.print("Enter Ending Number : ");

end = pr.nextInt();

System.out.println("Prime numbers in the range from "+start+" to "+end+" are : ");

for(int i = start ; i <= end ; i++)

{

    count = 0;

    for(int j = 1 ; j <= i ; j++)

    {

        if(i % j == 0)

            count = count+1;

    }

    if(count == 2)

        System.out.println(i);

}

}
```

(output of this program in next page)

```

Command Prompt
Microsoft Windows [Version 10.0.19041.508]
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C:\Users\SAKSHI>cd C:\Users\SAKSHI\JA

C:\Users\SAKSHI\JA>javac prime_numbers.java

C:\Users\SAKSHI\JA>java prime_numbers
Enter Starting Number : 4
Enter Ending Number : 10
Prime numbers in the range from 4 to 10 are :
5
7

C:\Users\SAKSHI\JA>java prime_numbers
Enter Starting Number : 1
Enter Ending Number : 13
Prime numbers in the range from 1 to 13 are :
2
3
5
7
11
13

C:\Users\SAKSHI\JA>

```

7. Write a C program to count the number of students registered for three elective courses. Accept the names of n students, their choice of the elective (Say, the electives courses offered are Internet of Things, Advanced Java and J2EE and Advanced Data Structures).

Include the following operations:

- 1. Accept say x from the user. Display the names of the students who have opted for elective x**
- 2. Count and display the total number of students present in each elective.**
- 3. If count is less than 3, inform that the course will not be floated and ask the students who have opted the course to reselect their electives from the other two. Count and display the counts again.**
- 4. Display the name of the students in each elective.**

```

#include<stdio.h>
#include<string.h>

```

```

struct getname
{
    char name[10];
};

```



```

int main()
{
    struct getname arr[100];
    int n;
    int c1 = 0, c2 = 0, c3 = 0;
    int a[100];
    printf("Students are required to fill in their details and choice of electives\n");
    printf("Choices for the electives are: \n");
    printf("1.Internet of things\n2.Advanced Java and J2EE\n3.Advance Data Structures\n");
    int num;
    printf("Enter the total number of students: ");
    scanf("%d",&num);
    for(int i=0;i<num;i++)
    {
        printf("Enter the name of student %d: ",i+1);
        scanf("%s",&arr[i].name);
        printf("Enter your choice : ");
        scanf("%d",&n);
        a[i] = n;
        if(a[i] == 1)
        {
            c1++;
        }

        else if(a[i] == 2)
        {
            c2++;
        }
        else if(a[i] == 3)
        {
            c3++;
        }

    }

    printf("Operation 1:\n");
    int x;
    printf("Enter the choice number to display the names of students in that elective : ");
    scanf("%d",&x);
    for (int i = 0; i < num; i++)
    {
        if(a[i] == x) {
            printf(">%s\n",arr[i].name);
        }
    }

    printf("Operation 2:\n");
    if(c1<3) {

```

```

c1 = 0;
printf("All elective 1 students are requested to choose a different elective.\n");
for(int i=0;i<num;i++) {
    if(a[i] == 1) {
        printf("%s select from elective 2 or 3: ",arr[i].name);
        scanf("%d",&n);
        a[i] = n;
        if(n == 3)
            c3++;
        else if(n == 2)
            c2++;
    }
}
if(c2<3) {
    c2 = 0;
    printf("All elective 2 students are requested to choose a different elective.\n");
    for(int i=0;i<num;i++) {
        if(a[i] == 2) {
            printf("%s Select from elective 1 or 3: ",arr[i].name);
            scanf("%d",&n);
            a[i] = n;
            if(n == 1)
                c1++;
            else if(n == 3)
                c3++;
        }
    }
    if(c3<3) {
        c3 = 0;
        printf("All elective 3 students are requested to choose a different elective.\n");
        for(int i=0;i<num;i++) {
            if(a[i] == 3) {
                printf("%s Select from elective 2 or 1: ",arr[i].name);
                scanf("%d",&n);
                a[i] = n;
                if(n == 1)
                    c1++;
                else if(n == 2)
                    c2++;
            }
        }
    }

    printf("Operation 3:\n");

```

```
printf("Number of students in elective 1 : %d \n",c1);
printf("Number of students in elective 2 : %d \n",c2);
printf("Number of students in elective 3 : %d \n",c3);
```

```
printf("Operation 4:\n");
printf("List of students in elective 1: \n");
for (int i = 0; i < num; i++)
{
    if(a[i] == 1) {
        printf(">%s\n",arr[i].name);
    }
}
printf("List of students in elective 2: \n");
for (int i = 0; i < num; i++)
{
    if(a[i] == 2) {
        printf(">%s\n",arr[i].name);
    }
}
printf("List of students in elective 3: \n");
for (int i = 0; i < num; i++)
{
    if(a[i] == 3) {
        printf(">%s\n",arr[i].name);
    }
}
}
```

(output of this program in next page)

C:\Users\Prajwal\Downloads\ss\bin\Debug\ss.exe

Students are required to fill in their details and choice of electives

Choices for the electives are:

1.Internet of things

2.Advanced Java and J2EE

3.Advance Data Structures

Enter the total number of students: 8

Enter the name of student 1: qq

Enter your choice : 1

Enter the name of student 2: ww

Enter your choice : 2

Enter the name of student 3: ee

Enter your choice : 3

Enter the name of student 4: rr

Enter your choice : 1

Enter the name of student 5: tt

Enter your choice : 2

Enter the name of student 6: yy

Enter your choice : 3

Enter the name of student 7: uu

Enter your choice : 1

Enter the name of student 8: ss

Enter your choice : 3

Operation 1:

Enter the choice number to display the names of students in that elective : 3

>ee

>yy

>ss

Operation 2:

All elective 2 students are requested to choose a different elective.

ww Select from elective 1 or 3: 1

tt Select from elective 1 or 3: 3

Operation 3:

Number of students in elective 1 : 4

Number of students in elective 2 : 0

Number of students in elective 3 : 4

Operation 4:

List of students in elective 1:

>qq

>ww

>rr

>uu

List of students in elective 2:

List of students in elective 3:

>ee

>tt

>yy

>ss

Process returned 0 (0x0) execution time : 52.654 s

Press any key to continue.