

- ③ Write a C/Java Prog 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.*;
class Series
{

```

```

    public static void main (String [] args)
    {

```

```

        Scanner sc = new Scanner (System.in);

```

```

        int i, j, c=0, n;

```

```

        System.out.println ("Enter the no. of rows");

```

```

        n = sc.nextInt();

```

```

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

```

```

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

```

```

                c++;

```

```

                System.out.print (c+" ");

```

```

            }

```

```

            System.out.println();
        }
    }
}

```

Name - Vedika Dalmia, IBM19CS181

- (4) Write a C/Java Prog. to accept CIE marks (out of 50) and SEE marks (out of 100) of a student and print his/her grade.

```
import java.util.*;
class Grade
{
    public static void main (String[] args)
    {
        Scanner sc = new Scanner (System.in);
        int CIE, SEE ;
        System.out.println("Enter the CIE marks  
for the student out of 50");
        CIE = sc.nextInt();
        System.out.println("Enter the SEE marks  
for the student out of 100");
        SEE = sc.nextInt();
        float Total = CIE + ((float)SEE)/2;
        if (Total >= 90 && Total <= 100)
        {
            System.out.println("S grade");
        }
        elseif (Total >= 80 && Total < 90)
        {
            System.out.println("A grade");
        }
        else if (Total >= 70 && Total < 80)
        {
            System.out.println("B grade");
        }
        else if (Total >= 60 && Total < 70)
        {
            System.out.println("C grade");
        }
    }
}
```

```
else if (Total >= 40 && Total < 60)
```

```
{
```

```
    System.out.println("D grade");
```

```
}
```

```
else
```

```
{
```

```
    System.out.println("F grade");
```

```
}
```

```
}
```

```
}
```

- ⑤ Write a Java Prog to print the prime numbs b/w given two integers (inclusive). Accept these 2 int from the user.

```
import java.util.*
```

```
class Prime
```

```
{
```

```
    public static void main (String[] args)
```

```
{
```

```
        Scanner sc = new Scanner (System.in);
```

```
        int st, en, i, j, c = 0;
```

```
        System.out.println("Enter the starting and  
ending numbers");
```

```
        st = sc.nextInt();
```

```
        en = sc.nextInt();
```

```
        for (i = st; i <= en; i++)
```

```
{
```

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

```
{
```

```
                if (i % j == 0)
```

```
                    c++;
```

```
            }
```

```
            if (c == 2)
```

```
                System.out.println(i);
```

```
            c = 0;
```

```
}
```

```
}
```

```
}
```

```
}
```



VEDIKA DALMIA, IBM19CS181

- 6) Write a java prog which prints area, volume of any one of the given shapes. Accept the choice of shape, appropriate inputs from the user, calculate and display the area and volume of the same. Repeat this until user wishes to stop.

```
import java.util.*;  
import java.math.*;  
class Shape
```

{

```
    public static void main (String[] args)
```

{

```
        Scanner sc = new Scanner (System.in);
```

```
        int ch;
```

```
        float p=3.14, r, h, Area, Volume;
```

```
        System.out.println("Enter your choice");
```

```
        System.out.println("1 for Cylinder \n  
                             2 for Cone \n  
                             3 for Sphere");
```

```
        ch = sc.nextInt();
```

```
        while (ch != 0)
```

{

```
            switch (ch) {
```

{

```
                case 1 : System.out.println("Enter the  
                             radius and height of cylinder");
```

```
                Area = 2 * p * r * h;
```

```
                r = sc.nextFloat();
```

```
                h = sc.nextFloat();
```

```
                Area = (2 * p * r * h) + (2 * p * r * r);
```

```
                Vol = p * r * r * h;
```

```
                break;
```

```
                case 2 : System.out.println("Enter radius  
                             and height of cone");
```

```
                r = sc.nextFloat();
```

```
h = sc.nextFloat(),  
Area = (p * r) * (r + sqrt((h * h) + (r * r))),  
Volume = (p * r * r * h) / 3;  
break;
```

```
case 3 : System.out.println("Enter radius  
of sphere");
```

```
r = sc.nextFloat();  
Area = 4 * p * r * r;  
Vol = (4/3) * (p * r * r * r);  
break;
```

```
}
```

```
System.out.println("Area of the fig = " + Area);  
System.out.println("Volume of the fig = " + Vol);  
System.out.println("To continue choose  
an option between 1 to 3");
```

```
ch = sc.nextInt();  
System.out.println("To Exit enter 0");  
ch = sc.nextInt();
```

```
}
```

```
} //main function
```

```
} // class
```



Vedika Dalmia ; IBM19CS181

```
7.) #include <stdio.h>
#include <string.h>
struct getname {
    char name[10];
};

int main ()
{
    struct getname arr[100];
    int n, i;
    int cnt1=0, cnt2=0, cnt3=0;
    int a[100];
    printf("Students are required to fill in their
           details and choice of electives \n");
    printf("Choices for electives : \n");
    printf("1. Internet Of Things \n
           2. Advanced Java and J2EE \n
           3. Advanced DS \n");

    int num;
    printf("Enter the total no. of students: ");
    scanf("%d", &num);
    for (i=0; i<num; i++)
    {
        printf("Enter the name of student: ");
        scanf("%s", &arr[i].name);
        printf("Enter your choice: ");
        scanf("%d", &n);
        a[i]=n;
        if (a[i]==1)
            cnt1++;
        else if (a[i]==2)
            cnt2++;
        else if (a[i]==3)
            cnt3++;
    }
}
```

Vedika Dalmia ; IBM19CS181

Date 25 Sep, 20  
Page

```
printf("Operation 1\n");  
int x;  
printf("Enter the choice of list elective you  
want to get the list for :");  
scanf("%d", &x);  
for (i=0; i<num; i++)  
{
```

```
    if (a[i] == x)  
        printf("%s\n", arr[i].name);  
}
```

```
}  
printf("Operation 2\n");  
if (cnt1 < 30)  
{
```

```
    cnt1 = 0;
```

```
    printf("All elective one students should  
choose different electives\n");
```

```
    for (i=0; i<num; i++)  
    {
```

```
        if (a[i] == 1)  
        {
```

```
            printf(".s. select from 2 or 3 :",  
                arr[i].name);
```

```
            scanf("%d", &n);
```

```
            a[i] = n;
```

```
            if (n == 3)
```

```
                cnt3++;
```

```
            else if (n == 2)
```

```
                cnt2++;
```

```
        }
```

```
    }
```

```
}  
if (cnt2 < 30)  
{
```

```
    cnt2 = 0;
```

```
    printf("Elective 2 students should  
choose diff elective\n");
```

Vedika Dalmia ; IBM19CS181

```
for ( i=0; i<num; i++)
{
```

```
    if (a[i] == 2)
```

```
        printf( ".s Select from 1 or 3:",
                arr[i].name);
```

```
        scanf( ".d", &n);
```

```
        a[i] = n;
```

```
        if (n == 1)
```

```
            cnt1++;
```

```
        else if (n == 3)
```

```
            cnt3++;
```

```
    }
```

```
}
```

```
if (cnt3 < 30)
```

```
{
```

```
    printf( "Elective 3 students must
            choose diff elective\n");
```

```
    for ( i=0; i<num; i++)
```

```
    {
```

```
        if (a[i] == 3)
```

```
            printf( ".s Select from 1 or 2:",
                    arr[i].name);
```

```
            scanf( ".d", &n);
```

```
            a[i] = n;
```

```
            if (n == 1)
```

```
                cnt1++;
```

```
            else if (n == 2)
```

```
                cnt2++;
```

```
        }
```

```
    }
```

```
}
```



```
printf("Operation 3\n");
printf("No. of students in elec 1 : %.d\n", cnt1);
printf("No. of students in elec 2 : %.d\n", cnt2);
printf("No. of students in elec 3 : %.d\n", cnt3);
```

```
printf("Operation 4\n");
printf("List of students in elec 1 : \n");
for (int i = 0; i < num; i++)
```

```
    if (a[i] == 1)
        printf("%.s\n", arr[i].name);
```

```
    printf("List of students in elec 2 : \n");
    for (int i = 0; i < num; i++)
```

```
        if (a[i] == 2)
            printf("%.s\n", arr[i].name);
```

```
    printf("List of students in elec 3 : \n");
    for (i = 0; i < num; i++)
```

```
        if (a[i] == 3)
            printf("%.s\n", arr[i].name);
```

```
    return 0;
```