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Date :

(3) Write a C/Java prog to accept a number n from the user and print n rows of output is given below if n=4.

```
1
1 2
1 2 3
```

```
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.println(c+" ");
            }
            System.out.println();
        }
    }
}
```

M T W T F S S

COMPASS

Date:

(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");
        }
        else if (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 numbers 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.next.Int();
    for(i = st; i <= en; i++)
    {
        for (j = 1; j <= i; j++)
        {
            if ( i % j == 0)
                c++;
        }
    if (c == 2)
    System.out;
```

```
System.out.println(i);
}
    c = 0;
}
}
```

6) Write a java prog which prints area, volume of any one of the given shapes. Accept the choice of shape, appropriate input's 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 Area
{
  public static void main (String [] args)
  {
    Scanner sc = new Scanner (System.in);
    int c;
    float p = 3.14, or, h, area, vol;
System.out.println ("Enter your choice");
System.out.println (" 1 for cylinder \n
                      2 for cone \n
                      3 for sphere");
    c = sc.nextInt();
while (ch != 0)
{
    switch (ch)
    {
      case 1: System.out.println ("Enter the
      radius and height of cylinder");
```

```
        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 the
        radius and height of the cone");
        r = sc.nextFloat();
        h = sc.nextFloat();
        Area = (p*r) (r* sqrt((h*h) + (r*r));
        vol = (p* r * r *h) /3;
        break;

case 3: System.out.println("Enter the radius
        of Sphere");
        r = sc.nextFloat();
        Area = 4*p*r*r;
        Vol = (4/3) * (p*r*r);
        break;

default: System.out.println("Wrong input.
        Enter the correct input");
}
System.out.println("Area of the solid="+Area);
System.out.println("Volume of the solid="+vol);
System.out.println("For different solid enter
option 1 to 3 \n to exit enter 0");
    c = sc.nextInt();
  }
}
}
```

7)

```
# include <stdio.h>
# include <stdlib.h>

struct Student {
    char name[40];
    int elective;
};

int main ()
{
  int i, j, choice, n, least, temp;
  int count[3] = {0, 0, 0};
  char electives[3][40] = {"IoT", "Advanced Java", "J2EE"};
  printf ("Enter number of students : ");
  scanf ("%d", &n);

  struct Student student[n];
  for (i=0; i<3; i++)
  {
   printf ("\n %d - %s", i+1, electives[i]);
  }
for (i=0; i<n; i++)
{
   printf ("\nEnter the name of student : ");
scanf ("%s", student[i].name);
printf ("\n Enter the choice : ");
scanf ("%d", &student[i].elective==2)
{
   count[1]++;
}
else {
```

```
count[2]++;
}
}
printf("\n Operation 1:\n");
printf("Enter the choice of elective you want to get the list for:\n");
scanf("%d", &x);
for(i=0; i<n; i++)
{
if(student[i].elective==x)
{
printf("> %s\n", student[i].name);
}
}
printf("Operation 2\n");
printf("Number of students in %s elective: %d\n", electives[0], count[0]);
printf("Number of students in %s elective: %d\n", electives[1], count[1]);
printf("Number of students in %s elective: %d\n", electives[2], count[2]);

printf("Operation 3\n");
if(count[0]<3)
{
printf("%s students must chose another elective due to less number\n", electives[0]);
printf("choose between Advanced Java(2) and J2EE (3)\n");
scanf("%d", &choice);
for(i=0; i<n; i++)
{
if(student[i].elective==2)
```

```
{
student [i]. elective = choice;
3
count [0]--;
count [choice-1] ++;
}
}
if (count [2] <3)
{
printf (" %. s students must chose another
elective due to less numbers \n", electives[2]);
printf (" choose between Advanced Java (1)
and J2EE (2) \n");
scanf ("%.d", &choice);
for (i=0; i<n; i++)
{
if (student [i]. elective == 3) {
student [i] . elective = choice;
3
count [0]--;
count [choice-1]++;
}
3
printf (" Number of students in %. s
elective : %. d \n", electives [0], count [0]);
printf (" Number of students in %. s
elective : %. d \n", electives [1], count [1]);
printf (" Number of students in %. s elective:
%. d \n", electives [2], count [2]);
printf (" Operation 4 \n");
for(i = 0; i<3; i++)
{
```

```
printf ("\n Students in %.s: \n", electives[i]);
for (j=0; j<n; j++)
{
    if (student[j].elective = (i+1)
    {
        printf ("> %s \n", student[j].name);
    }
}
}
return 0;
}
```