

Ans 38:

```
#include <stdio.h>
int main ()
{
    int n, i, j, count = 0;
    printf ("Enter the number of rows: ");
    scanf ("%d", &n);
    for (i = 1; i <= n; i++)
    {
        printf ("\n");
        for (j = 1; j <= i; j++)
        {
            count++;
            printf ("%d\t", count);
        }
    }
    return 0;
}
```

```
Ans 4: #include <stdio.h>

void main()
{
    int internal, external, x, total_marks;
    printf("Enter the CIE and SEE marks respectively = ");
    scanf("%d %d", &internal, &external);
    x = (external / 2);
    total_marks = 2 + internal;
    if (total_marks < 100 && total_marks >= 90)
    {
        printf("Grade is S");
    }
    else if (total_marks < 90 && total_marks >= 80)
    {
        printf("Grade is A");
    }
    else if (total_marks < 80 && total_marks >= 70)
    {
        printf("Grade is B");
    }
    else if (total_marks < 70 && total_marks >= 60)
    {
        printf("Grade is C");
    }
    else if (total_marks < 60 && total_marks >= 50)
    {
        printf("Grade is D");
    }
    else if (total_marks < 50 && total_marks >= 40)
    {
        printf("Grade is E");
    }
}
```



```
else
```

```
{
```

```
printf ("Grade is Fail") ;
```

```
}
```

```
}
```

Ans 5=

```

#include <stdio.h>
int main ()
{
    int low, high, i, flag;
    printf ("Enter two numbers : ");
    scanf ("%d %d", &low, &high);
    printf ("Prime numbers between %d and %d are : ", low, high);
    while (low <= high)
    {
        flag = 0;
        if (low <= 1) {
            ++low;
            continue;
        }
        for (i = 2; i <= low/2; ++i)
        {
            if (low % i == 0)
            {
                flag = 1;
                break;
            }
        }
        if (flag == 0)
            printf ("%d ", low);
        ++low;
    }
    return 0;
}

```



Ans 6:

```
#include <stdio.h>
#include <math.h>
int main()
{
    float r, h, area, volume;
    int opt;
    char ch;
    const float pi = 3.14;
    do {
        printf("For which shape do you want to calculate Area and Volume : \n");
        printf("\n OPTIONS : \n 1-Cylinder \n 2-Cone \n 3-Sphere \n");
        scanf("%d", &opt);
        switch (opt) {
            Case 1:
                printf("Enter the radius of cylinder : ");
                scanf("%f", &r);
                printf("Enter the height of cylinder : ");
                scanf("%f", &h);
                area = (2 * pi * r * h) + (2 * pi * r * r);
                volume = pi * r * r * h;
                printf("Area : %f", area);
                printf("Volume : %f", volume);
                break;
            Case 2:
                printf("Enter the radius of the cone : ");
                scanf("%f", &r);
                printf("Enter the height of the cone : ");
                scanf("%f", &h);
                area = pi * r * (r + sqrt(h * h + r * r));
                volume = pi * r * r * (h / 3);
```



```
printf ("In Area : %f", area);
printf ("In Volume : %f", volume);
break;
```

Case 3 :

```
printf ("In Enter the radius of sphere : ");
scanf ("%f", &r);
area = (4 * pi * r * r);
volume = (4/3) * pi * r * r * r;
printf ("In Area : %f", area);
printf ("In Volume : %f", volume);
break;
```

% default :

```
printf printf ("Enter a valid option !! ");
break;
```

```
}
printf ("In Do you want to repeat the operation Y/N : ");
scanf ("%s", &ch);
}
while (ch == 'y' || ch == 'Y');
return 0;
}
```