

Week 2

3)

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

4]

```
#include <stdio.h>
int main()
{
    int CIE, SEE;
    float tot;
    printf("Enter the CIE(50) and SEE(100) marks of the student respectively \n");
    scanf ("%d %d", &CIE, &SEE);
    tot = (SEE/2.0) + CIE;
    if (CIE >= 20 && SEE >= 40)
    {
        if (tot > 89 && tot <= 100)
            printf ("Grade: S");
        else if (tot > 79 && tot <= 89)
            printf ("Grade: A");
        else if (tot > 69 && tot <= 79)
            printf ("Grade: B");
        else if (tot > 59 && tot <= 69)
            printf ("Grade: C");
        else if (tot > 49 && tot <= 59)
            printf ("Grade: D");
        else
            printf ("Grade: E");
    }
    else if (CIE >= 20 && SEE < 40)
        printf ("Grade: F");
    else
        printf ("Not eligible");
}
```

```
5) #include <stdio.h>
int checkPrime(int n);
int main() {
    int n1, n2, i, f;
    printf("Enter two positive integers: ");
    scanf("%d %d", &n1, &n2);
    printf("Prime numbers between %d and %d (inclusive)
           are: ", n1, n2);
    for (i=n1; i<=n2; i++) {
        f = checkPrime(i);
        if (f == 1)
            printf("%d", i);
    }
    return 0;
}

int checkPrime(int n) {
    int j, f = 1;
    for (j = 2; j <= n/2; ++j) {
        if (n % j == 0) {
            f = 0;
            break;
        }
    }
    return f;
}
```

```

6) #include <stdio.h>
# include <math.h>
# include <stdlib.h>
int main() {
    int c=4;
    float a,v,r,h;
    while (c)
    {
        printf ("Enter the choice of shape : \n");
        printf ("1.Cylinder \n 2.Cone \n 3.Sphere \n 0.Exit \n");
        scanf ("%d", &c);
        switch (c)
        {
            case 1: printf ("Enter radius : \n");
            scanf ("%f", &r);
            printf ("Enter height : \n");
            scanf ("%f", &h);
            a = (2 * 3.14 * r * h) + (2 * 3.14 * r * r);
            v = (3.14 * r * r * h);
            printf ("Area : %f \n Volume : %f \n", a, v);
            break;
            case 2: printf ("Enter radius : \n");
            scanf ("%f", &r);
            printf ("Enter height : \n");
            scanf ("%f", &h);
            a = (3.14 * r) * (r + sqrt((h * h) + (r * r)));
            v = (3.14 * r * r * h) / 3.0;
            printf ("Area : %f \n Volume : %f \n", a, v);
            break;
            case 3: printf ("Enter radius : \n");
            scanf ("%f", &r);
            a = 4 * 3.14 * r * r;
            v = (4 * 3.14 * r * r * r) / 3.0;
            printf ("Area : %f \n Volume : %f \n", a, v);
            break;
        }
    }
}

```

```
case 0: printf("Exit\n");
    exit(0);
default: printf("Invalid choice\n");
}
}
return 0;
}
```