4. Write a C/Java program which prints the area and volume of any one of the given shapes given below. Accept the choice of the shape, app i/p from user, cal & disp the area & vol of the same.

```
#include<stdio.h>
#include<math.h>
int main()
{
void cylinder();
void cone();
void sphere();
void main()
{
  int n, temp=0
while (temp==0)
{
printf("Enter 1.Cylinder\n 2.Cone\n 3.Sphere\n
                    4.Exit\n");
scanf("%d", &n);
switch(n)
{
case 1: Cylinder();
break;
Case 2: Cone();
  break;
Case 3: Sphere();
  break;
Case 4: temp=1;
  break;
default: printf("Invalid choice\n");
}
```

```
        if (temp == 1)
            break;
    }
}
void cylinder()
{
    float r, h, a, v;
    printf("Enter r & h \n");
    scanf("%f %f", &r, &h);
a = ((2.0 * 3.14 * r * h) + (2.0 * 3.14 * r * r));
v = 3.14 * r * r * h;
printf("Area = %f \n", a);
printf("Volume = %f \n", v);
}
void cone()
{
    float a, v, r, h;
printf("Enter r & h : \n");
scanf("%f %f", &r, &h);
float f = (float) sqrt(h * h + r * r);
a = 3.14 * r * (r + f);
v = (3.14 * r * r * h) / 3.0;
printf("Area = %f \n", a);
printf("Volume = %f \n", v);
}
```

```
void sphere()
{
    float a, r, v;
printf("Enter r:\n");
 scanf("%f", &r);
a = (4.0 * 3.14 * r * r);
v = (4.0 * 3.14 * r * r * r) / 3.0;
printf("Area = %f\n", a);
printf("Volume = %f\n", v);
}
```

5.