

ain.c

```
1 #include <stdio.h>
2 #include <stdlib.h>
3 #define pi 3.14
4 void cylinder(int r,int h)
5 {
6     float a,v;
7     a=(2*pi*r*h)+(2*pi*r*r);
8     v=pi*r*r*h;
9     printf("The area of the cylinder=%0.2f\n",a);
10    printf("The volume of the cylinder=%0.2f\n",v);
11 }
12 void sphere(int r)
13 {
14     float a,v;
15     a=4*pi*r*r;
16     v=(4/3.0)*pi*r*r*r;
17     printf("The area of the sphere=%0.2f\n",a);
18     printf("The volume of the sphere=%0.2f\n",v);
19 }
20 int main()
21 {
22     int n,rc,rh,rs;
23     scanf("%d",&n);
24     for (;;)
25     {
26         printf("Input the number to choose the shape:\n");
27         printf("1.Cylinder\n2.Sphere\n3.Exit\n");
28         switch (n)
29         {
30             case 1:printf("Enter the value of the radius for the cylinder:\n");
31             rc=scanf("%d",&r);
32             if (rc==1)
33             {
34                 cylinder(r,h);
35             }
36             else
37             {
38                 printf("Please enter a valid integer value.\n");
39             }
40         }
41     }
42 }
```

```
1    scanf("%d",&n);
2    for(;;)
3    {
4        printf("Input the number to choose the shape:\n");
5        printf("1.Cylinder\n2.Sphere\n3.Exit\n");
6        switch(n)
7        {
8            case 1:printf("Enter the value of the radius for the cylinder:\n");
9                scanf("%d",&rc);
10               printf("Enter the value of the height for the cylinder:\n");
11               scanf("%d",&rh);
12               cylinder(rc,rh);
13               break;
14            case 2:printf("Enter the value of the radius for the sphere:\n");
15                scanf("%d",&rs);
16                sphere(rs);
17                break;
18            case 3:exit(0);
19                break;
20            default:printf("Please input a valid number!\n");
21                break;
22        }
23    }
24    return 0;
25 }
```

C:\WINDOWS\SYSTEM32\cmd.exe

1.Cylinder

2.Sphere

3.Exit

1

Enter the value of the radius for the cylinder:
12

Enter the value of the height for the cylinder:
23

The area of the cylinder=2637.60

The volume of the cylinder=10399.68

Input the number to choose the shape:

1.Cylinder

2.Sphere

3.Exit

2

Enter the value of the radius for the sphere:
12

The area of the sphere=1808.64

The volume of the sphere=7234.56

Input the number to choose the shape:

1.Cylinder

2.Sphere

3.Exit

3

(program exited with code: 0)

Press any key to continue . . .