```
1
       #include <stdio.h>
2
       #include <stdlib.h>
3
       #include <math.h>
4
       #define pi 3.14
5
       int main()
6
     \square {
7
           float r,h;
8
           float A, V, ansl;
9
             int ch;
10
       while (ch!='0')
     ∃ {
11
          printf("\nCalculate Area and Volume of different shapes\n");
12
13
          printf("Menu: \n 1.Cylinder \n 2.Cone \n 3.Sphere \n Press 0 for EXIT \n");
14
15
         scanf ("%d", &ch);
16
         switch (ch)
17
                                               1
18
              case 0:exit(0);
19
               break;
20
              case 1:
21
22
                  printf("Enter the radius:");
23
                  scanf ("%f", &r);
24
                  printf("Enter the height:");
25
                  scanf ("%f", &h);
26
                   A= (2*pi*r*h) + (2*pi*r*r);
27
                  V= (pi *r *r *h);
28
                  printf("The Area of the Cylinder is %f",A);
29
                   printf("\nThe Volume of the Cylinder is $f", V);
30
                  break;
 31
              case 1:
```

```
27
                   V=(pi*r*r*h);
                   printf ("The Area of the Cylinder is %f", A);
28
                    printf("\nThe Volume of the Cylinder is %f",V);
29
30
                   break;
31
              case 2:
32
33
                   printf ("Enter the radius:");
34
                   scanf ("%f", &r);
35
                   printf("Enter the height:");
                                                                                 T
36
                   scanf ("%f", &h);
37
                    ansl=h*h+r*r;
38
                    A=pi*r*(r+sqrt(ansl));
39
                    V=(pi*r*r*h)/3.0;
40
                    printf("The Area of the Cone is %f", A);
 41
                    printf("\nThe Volume of the Cone is %f",V);
                   break;
 42
 43
                 case 3:
                   printf("Enter the radius:");
 44
 45
                    scanf("%f",&r);
                    A=4*pi*r*r;
 46
                    V=(4*pi*r*r*r)/3.0;
 47
                    printf("The Area of the Sphere is %f", A);
 48
                     printf("\nThe Volume of the Sphere is %f", V);
 49
 50
                      break;
               default:
 51
                 printf("\n Invalid choice");
 52
  53
  54
  55
              return 0;
  56
                                                                        Line 52 Col 33 Pos 1419
```

amin\Documents\Shapes_OOJ_lab\bin\Debug\Shapes_OOJ_lab.exe Calculate Area and Volume of different shapes 1.Cylinder 2.Cone 3.Sphere Press 0 for EXIT Enter the radius:2 Enter the height:5 The Area of the Cylinder is 87.919998 The Volume of the Cylinder is 62.799999 Calculate Area and Volume of different shapes Menu: 1.Cylinder 2.Cone 3.Sphere Press 0 for EXIT