

```

1 #include<stdio.h>
2 #include <math.h>
3 int main()
4 {
5     float area,volume,r,h;
6     int i,flag=0;
7     float pi=3.14;
8     do
9     {
10        printf("Enter 1:Cylinder\n2:Cone\n3:sphere\n4:exit\n");
11        scanf("%d",&i);
12        switch(i)
13        {
14            case 1:
15                printf("enter radius\n");
16                scanf("%f",&r);
17                printf("enter hieght\n");
18                scanf("%f",&h);
19                area=(2*pi*r*h)+(2*pi*r*r);
20                volume=(pi*r*r*h);
21                printf("the area and volume of cylinder is %f and %f\n",area,volume);
22                break;
23            case 2:
24                printf("enter radius\n");
25                scanf("%f",&r);
26                printf("enter hieght\n");
27                scanf("%f",&h);
28                area=pi*r*(r+sqrt((h*h)+(r*r)));
29                volume=pi*r*r*(h/3);
30                printf("the area and volume of cone is %f and %f\n",area,volume);
31                break;
32            case 3:
33                printf("enter radius\n");
34                scanf("%f",&r);
35                area=4*pi*r*r;
36                volume=(4/3)*pi*r*r*r;

```

input


```

12 switch(i)
13 {
14     case 1:
15         printf("enter radius\n");
16         scanf("%f",&r);
17         printf("enter hieght\n");
18         scanf("%f",&h);
19         area=(2*pi*r*h)+(2*pi*r*r);
20         volume=(pi*r*r*h);
21         printf("the area and volume of cylinder is %f and %f\n",area,volume);
22         break;
23     case 2:
24         printf("enter radius\n");
25         scanf("%f",&r);
26         printf("enter hieght\n");
27         scanf("%f",&h);
28         area=pi*r*(r+sqrt((h*h)+(r*r)));
29         volume=pi*r*r*(h/3);
30         printf("the area and volume of cone is %f and %f\n",area,volume);
31         break;
32     case 3:
33         printf("enter radius\n");
34         scanf("%f",&r);
35         area=4*pi*r*r;
36         volume=(4/3)*pi*r*r*r;
37         printf("the area and volume of sphere is %f and %f\n",area,volume);
38         break;
39     case 4:
40         flag=1;
41         break;
42 }
43 }
44 while(flag!=1);
45
46 return 0;

```



```
15 printf("enter radius\n");
16 scanf("%f",&r);
```

Enter 1:Cylinder

2:Cone

3:sphere

4:exit

1

enter radius

2

enter hieght

2

the area and volume of cylinder is 50.240002 and 25.120001

Enter 1:Cylinder

2:Cone

3:sphere

4:exit

2

enter radius

2

enter hieght

2

the area and volume of cone is 30.322523 and 8.373334

Enter 1:Cylinder

2:Cone

3:sphere

4:exit

3

enter radius

2

the area and volume of sphere is 50.240002 and 25.120001

input

```
4:exit
2
enter radius
2
enter hieght
2
the area and volume of cone is 30.322523 and 8.373334
Enter 1:Cylinder
2:Cone
3:sphere
4:exit
3
enter radius
2
the area and volume of sphere is 50.240002 and 25.120001
Enter 1:Cylinder
2:Cone
3:sphere
4:exit
3
enter radius
3
the area and volume of sphere is 113.040001 and 84.779999
Enter 1:Cylinder
2:Cone
3:sphere
4:exit
```


d... : 2

50.12

6

```
#include <stdio.h>
#include <math.h>
int main()
{
    float area, volume, r, h;
    int i, t=0;
    float pi = 3.14;
    do
    {
        printf("Enter 1. cylinder 2. cone 3. sphere 4. exit");
        scanf("%d", &i);
        switch(i)
        {
            case 1: printf("Enter choice\n");
                    scanf("%d", &i);
                    switch(i)
                    {
                        case 1: printf("enter radius\n");
                                scanf("%f", &r);
                                printf("enter height\n");
                                scanf("%f", &h);
                                area = (2 * pi * r * h) + (2 * pi * r * r);
                                volume = (pi * r * r * h);
                                printf("Area and volume of cylinder is %f and %f\n", area, volume);
                                break;
                        case 2: printf("enter radius and height\n");
                                scanf("%f %f", &r, &h);
                                area = pi * r * (r + sqrt((h * h) + (r * r)));
                                volume = pi * r * r * (h/3);
                                break;
                        case 3: printf("enter radius and height\n");
                                scanf("%f %f", &r, &h);
                                area = 4 * pi * r * r;
                                volume = (4/3) * pi * r * r * h;
                                break;
                        case 4: exit(0);
                    }
            }
        }
    } while(i != 4);
}
```

2


```
printf ("Area and volume of cone is %.1f and %.1f \n",  
        area, volume);
```

```
break;
```

```
Case 3: printf ("enter radius \n");
```

```
scanf ("%f", &r);
```

```
area = 4 * pi * r * r;
```

```
Volume = (4/3) * pi * r * r * r;
```

```
printf ("Area and volume of sphere are %.1f and %.1f \n",
```

```
        area, volume);
```

```
break;
```

```
case 4: t = 1;
```

```
break;
```

```
}
```

```
}
```

```
while (t != 1);
```

```
return 0;
```

```
}
```

O/p: ~~Enter~~ 1. Cylinder

2. Cone

3. Sphere

4. exit

Enter the choice : 1

~~Area and Volume of cylinder~~

enter the radius : 2

enter the height : 2

Area and volume of cylinder are 50.24000 and 25.120000

1. Cylinder

2. cone

3. sphere

4. exit

enter the choice : 2

enter radius and height : 2 2

Area and volume of ~~cy~~ cone are 30.144000 and

8.373333.

1. Cylinder

2. cone

3. sphere

4. exit

enter the choice : 3

enter radius : 2

~~area~~ Area and volume of sphere are 50.24 and 33.49.

1. Cylinder

2. cone

3. sphere

4. exit

enter the choice : 4

exit.


```
7. #include <stdio.h>
#include <string.h>
void main()
```

```
{
```

```
    char name [100][100];
```

```
    int stud, l, c;
```

```
    int i = 0;
```

```
    int j = 0;
```

```
    int k = 0;
```

```
    do
```

```
    {
```

```
        printf("Enter the number of students :");
```

```
        scanf("%d", &stud);
```

```
        printf("Enter name of student and course
```

```
                \n 1. for internet of things \n
```

```
                2. for advanced java and J2EE
```

```
                \n 3. for advanced data structure \n");
```

```
        for (l = 0; l < stud; l++)
```

```
        {
```

```
            scanf("%s %d", name[i], &c);
```

```
        }
```

```
        for (l = 0; l < stud; l++)
```

```
        {
```



```
if (c == 1)
```

```
    i++;
```

```
if (c == 2)
```

```
    j++;
```

```
if (c == 3)
```

```
    k++;
```

```
    }
```

```
}
```

```
while ((i < 30) || (j < 30) || (k < 30));
```

```
printf ("students in internet of things : %.d", i);
```

```
printf ("students in advanced java and J2EE : %.d", j);
```

```
printf ("students in advanced data structure : %.d", k);
```