```
1<sup>⊕</sup>/*
2 * EX_1.c
    4 * Created on: Sep 20, 2021
5 * Author: Sarah
    8 #include <stdio.h>
   10⊖ struct student{
   11
                char name[20];
   12
                  int roll;
                  float marks;
   13
   14 };
   15
   16
  17⊖ int main(){
               setvbuf(stdout, NULL, _IONBF, 0);
setvbuf(stderr, NULL, _IONBF, 0);
struct student S1;
   18
   19
   20
                 printf("Enter information of students: \n");
printf("Enter name: ");
scanf("%s", S1.name);
printf("Enter roll number: ");
scanf("%d", &S1.roll);
printf("Enter marks: ");
printf("Enter marks: ");
   21
   22
23
24
25
26
27
28
                  print( Enter marks: );
scanf("%f", &S1.marks);
printf("\nDisplaying information\n");
printf("Name: %s\n", S1.name);
printf("Roll: %d\n", S1.roll);
printf("Marks: %.2f\n", S1.marks);
   29
30
   31
   32
                  return 0;
  33 }
34
```

```
<terminated> (exit value: 0) EX_1.exe [C/C++ Application]
Enter information of students:
Enter name: Adele
Enter roll number: 21
Enter marks: 334.5

Displaying information
Name: Adele
Roll: 21
Marks: 334.50
```

```
1⊖/*
2 * EX_2.c
                                                                                                     <terminated> (exit value: 0) EX_2.exe [C/C++ Application
                                                                                                     Enter information of 1st distance
 3 *
                                                                                                     Enter feet: 12
 4 * Created on: <u>Sep</u> 20, 2021
                                                                                                     Enter inch: 3.45
 5 *
               Author: Sarah
                                                                                                     Enter information of 2nd distance
                                                                                                     Enter feet: 12
 8 #include <stdio.h>
                                                                                                     Enter inch: 9.2
 10⊖ struct distance{
                                                                                                     Sum of distances = 25'-0.6"
         int feet;
 11
          float inch;
 12
13 };
14
15
16⊖ int main(){
          setvbuf(stdout, NULL, _IONBF, 0);
17
18
          setvbuf(stderr, NULL, _IONBF, 0);
         struct distance d1, d2, sum;
printf("Enter information of 1st distance \n");
printf("Enter feet: ");
 19
 20
 21
         scanf("%d", &d1.feet);
printf("Enter inch: ");
 22
 23
24
25
         print("tell line");
scanf("%f", &d1.inch);
printf("\nEnter information of 2nd distance \n");
printf("Enter feet: ");
 26
27
28
         scanf("%d", &d2.feet);
printf("Enter inch: ");
scanf("%f", &d2.inch);
 29
 30
          sum.feet = d1.feet + d2.feet;
 31
          sum.inch = d1.inch + d2.inch;
32
33
          while(sum.inch >= 12.0){
               sum.inch -= 12.0;
 34
               sum.feet++;
 35
 36
          printf("\nSum of distances = %d\'-%.1f\"", sum.feet, sum.inch);
37
 38
          return 0;
39 }
40
```

```
1<sup>⊕</sup>/*
2 * EX_3.c
3 *
 4 * Created on: Sep 20, 2021
 5 *
              Author: Sarah
 8 #include <stdio.h>
10⊖ struct complex{
        float real;
11
         float img;
12
13 };
14
15
16⊖ int main(){
         setvbuf(stdout, NULL, _IONBF, 0);
setvbuf(stderr, NULL, _IONBF, 0);
17
18
19
20
         struct complex num1, num2, sum;
21
         printf("For 1st complex number\n");
printf("Enter real and imaginary respectively: ");
22
23
         scanf("%f%f", &num1.real, &num1.img);
24
25
26
         printf("\nFor 2nd complex number\n");
         printf("Enter real and imaginary respectively: ");
scanf("%f%f", &num2.real, &num2.img);
27
28
29
30
         sum.real = num1.real + num2.real;
         sum.img = num1.img + num2.img;
printf("Sum = %.1f + %.1fi", sum.real, sum.img);
31
32
33
         return 0;
34 }
35
```

```
<terminated> (exit value: 0) EX_3.exe [C/C++ Application] E:\Onlin
For 1st complex number
Enter real and imaginary respectively: 2.3 4.5

For 2nd complex number
Enter real and imaginary respectively: 3.4 5
Sum = 5.7 + 9.5i
```

```
1⊕ /*
    * EX_4.c
 2
 3
 4 * Created on: Sep 20, 2021
 5 *
            Author: Sarah
 6 */
 7
 8 #include <stdio.h>
 9
10⊖ struct student{
11
        char name[20];
12
        int roll;
13
        float marks;
14 };
15
16
179 int main(){
18
        setvbuf(stdout, NULL, _IONBF, 0);
19
        setvbuf(stderr, NULL, _IONBF, 0);
20
21
        struct student S[10];
22
23
        printf("Enter information of students: \n");
24
        for(int i = 0; i < 10; i++){</pre>
25
            printf("\nFor roll number %d\n", i + 1);
26
            printf("Enter name: ");
27
            scanf("%s", S[i].name);
28
            printf("Enter marks: ");
29
            scanf("%f", &S[i].marks);
30
        }
31
32
        printf("\nDisplaying information of students:\n");
33
        for(int i = 0; i < 10; i++){</pre>
34
            printf("Information for roll number %d\n", i + 1);
35
            printf("Name: %s\n", S[i].name);
36
            printf("Marks: %f\n", S[i].marks);
37
38
        }
39
40
        return 0;
```

Output:

```
Enter information of students:

For roll number 1
Enter name: Tom
Enter marks: 98

For roll number 2
Enter name: Jerry
Enter marks: 89

For roll number 3
```

```
Enter name: Adele
Enter marks: 58
For roll number 4
Enter name: Sarah
Enter marks: 78
For roll number 5
Enter name: Farah
Enter marks: 89
For roll number 6
Enter name: Aya
Enter marks: 78
For roll number 7
Enter name: Ahmed
Enter marks: 89
For roll number 8
Enter name: Bassant
Enter marks: 98
For roll number 9
Enter name: Alaa
Enter marks: 56
For roll number 10
Enter name: Ashraf
Enter marks: 87
Displaying information of students:
Information for roll number 1
Name: Tom
Marks: 98.000000
Information for roll number 2
Name: Jerry
Marks: 89.000000
Information for roll number 3
Name: Adele
Marks: 58.000000
Information for roll number 4
Name: Sarah
Marks: 78.000000
Information for roll number 5
Name: Farah
Marks: 89.000000
Information for roll number 6
Name: Aya
Marks: 78.000000
Information for roll number 7
Name: Ahmed
Marks: 89.000000
Information for roll number 8
Name: Bassant
```

```
Marks: 98.000000
Information for roll number 9
Name: Alaa
Marks: 56.000000
Information for roll number 10
Name: Ashraf
Marks: 87.000000
```

```
1⊕ /*
  2 * EX_5.c
 3 *
 4 * Created on: Sep 20, 2021
  5 *
          Author: Sarah
 6 */
 7
 8 #include <stdio.h>
 10 #define PI 3.14159
 11 #define AREA(radius)(PI * radius * radius)
 12
 13
14⊖ int main(){
 15
        setvbuf(stdout, NULL, _IONBF, 0);
 16
        setvbuf(stderr, NULL, _IONBF, 0);
 17
        int radius;
 18
        printf("Enter the radius: ");
        scanf("%d", &radius);
 19
 20
        printf("Area = %.2f", AREA(radius));
 21
        return 0;
 22 }
23
```

<terminated> (exit value: 0) EX_5.exe
Enter the radius: 3
Area = 28.27

```
1⊖/*
2 * EX_6.c
  3 *
4 * Created on: Sep 20, 2021
5 * Author: Sarah
              Author: Sarah
  8 #include <stdio.h>
 10⊖ union job{
         char name[32];
 11
          float salary;
 12
         int worker_no;
 13
 14 }u;
 15⊖ struct job1{
          char name[32];
 16
          float salary;
 17
          int worker_no;
 19 }s;
 20
 21
 220 int main(){
 23
24
25
          printf("size of union=%d", sizeof(u));
printf("\nsize of structure=%d", sizeof(s));
return 0;
26 }
27
```

<terminated> EX_6.exe [C/C++ Application]

size of union=32 size of structure=40