





# DATA STRUCTURES AND ALGORITHMS ASSIGNMENT NO. 1

```
main.c    Share  Run

1  #include <stdio.h>
2  struct friends
3  {
4      char name[20];
5      char petname[20];
6      long int phoneno;
7      struct type //type of friends
8      {
9          char typeoffriends[20];
10         char commonfriendsname[50];
11         int commonplacesvisitedtogether;
12     }f1;
13 }f[3];
14 int main()
15 {
16     int a;SS
17     printf("enter the number of the friends:");
18     scanf("%d",&a);
19     for(int i=1;i<=3;i++)
20     {
21         printf("name:");
22         scanf("%s",&f[i].name);
23         printf("petname:");
24         scanf("%s",&f[i].petname);
25         printf("phoneno:");
26         scanf("%ld",&f[i].phoneno);
```

main.c



Share

Run

```
27     printf("type of friend:");
28     scanf("%s",&f[i].f1.typeoffriends);
29     printf("common friends name:");
30     scanf("%s",&f[i].f1.commonfriendsname);
31     printf("common places visited together:");
32     scanf("%d",&f[i].f1.commonplacesvisitedtogether);
33 }
34 printf("\nfriends list:\n");
35 printf("s.no\t\tname\t\tpetname\t\tphone no.\t\ttype of friends\t\tcommon
    friends name\t\t common places visited together\n");
36 for(int b=1;b<=3;b++){
37     printf("%d\t\t%s\t\t%s\t\t%ld\t\t%s\t\t%s\t\t%d\n",b+1,f[b].name,f[b]
        .petname,f[b].phoneno,f[b].f1.typeoffriends,f[b].f1
        .commonfriendsname,f[b].f1.commonplacesvisitedtogether);
38 }
39     return 0;
40 }
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```

The image displays two screenshots of the Programiz Online C Compiler interface, showing the execution of a C program. The browser tabs at the top include "c online compil...", "Online C Compil...", "(no subject) - la...", "c language tuto...", "C while and do...", "chat gpt - Yahoo...", "ChatGPT | Open...", and "ChatGPT".

**Top Screenshot:**

The code in `main.c` defines a `Product` struct with `name`, `id`, and `price` fields. It prompts the user to enter the number of products (2) and then details for each product (name, id, price). The output shows the entered details for two products: "pencil" (ID: 7894, Price: 10) and "pen" (ID: 78945, Price: 15).

**Bottom Screenshot:**

The code in `main.c` is updated to calculate the total cost of all products, find the most expensive product, and find the least expensive product. The output shows the total cost of all products is 15.00, the most expensive product is "ts" (ID: s, Price: 0.00), and the least expensive product is "ks" (ID: s, Price: 15.00).

Github link: <https://github.com/iamssakthi/DSA-ASSIGNMENT-1.git>