DSA ASSIGNMENT-01

```
#include<stdio.h>
struct Friends{
    char name[50];
    char pet_name[50];
    double phone_number;
    struct Type{
        char name_of_friends[50];
        char type_of_friend[50];
        int places_visited_together;
    }d;
};

int main(){
    int i,n;
    printf("ENTER THE NUMBER OF FRIENDS TO ADD:");
    scanf("%d",&n);
    struct Friends f[n];
    for(i=0;i<n;i++){
        printf("ENTER FRIEND NAME:");
        scanf("%s",&f[i].name);
        printf("ENTER PET NAME:");
        scanf("%s",&f[i].pet_name);
        printf("ENTER PHONE NUMBER:");
        scanf("%lf",&f[i].phone_number);
        printf("ENTER TYPE OF FRIEND:");
        scanf("%s",&f[i].d.type_of_friend);
        printf("ENTER NAME OF COMMON FRIENDS:");
        scanf("%s",&f[i].d.name_of_friends);
        printf("ENTER PLACES VISITED TOGETHER:");
        scanf("%d",&f[i].d.places_visited_together);
    }
        printf("S.NO. \t");
        printf("FRIEND LIST NAME: \t");
        printf("PET NAME: \t");
        printf("PHONE NUMBER: \t");
        printf("TYPE OF FRIENDS: \t");
        printf("NAME OF COMMON FRIENDS: \t");
```

```
        printf("NUMBER OF PLACES VISITED TOGETHER: \t\n");

    for(i=0;i<n;i++){
        printf("%d \t",i+1);
        printf("%s \t",f[i].name);
        printf("%s \t",f[i].pet_name);
        printf("%lf \t",f[i].phone_number);
        printf("%s \t",f[i].d.type_of_friend);
        printf("%s \t",f[i].d.name_of_friends);
        printf("%s \t",f[i].d.places_visited_together);

    }
    return 0;
}
```

OUT PUT:

```
ENTER THE NUMBER OF FRIENDS TO ADD:2
ENTER FRIEND NAME:SARATH
ENTER PET NAME:SHIRO
ENTER PHONE NUMBER:234567890
ENTER TYPE OF FRIEND:SCHOOL
ENTER NAME OF COMMON FRIENDS:KEDHAR
ENTER PLACES VISITED TOGETHER:5
ENTER FRIEND NAME:SARATH
ENTER PET NAME:KIRO
ENTER PHONE NUMBER:9878793468
ENTER TYPE OF FRIEND:SCHOOL
ENTER NAME OF COMMON FRIENDS:TEJA
ENTER PLACES VISITED TOGETHER:4
```

DSA ASSIGNMENT-02

```
#include <stdio.h>

struct Product {
```

```
    char name[100];
    char id[10];
    float price;
};

int main() {
    int n;
    printf("Enter the number of products: ");
    scanf("%d", &n);

    struct Product products[n];

    for (int i = 0; i < n; i++) {
        printf("\nEnter details for product %d:\n", i + 1);
        printf("Product Name: ");
        scanf("%s", products[i].name);
        printf("Product ID: ");
        scanf("%s", products[i].id);
        printf("Price: ");
        scanf("%f", &products[i].price);
    }

    printf("Product Details:\n");
    for (int i = 0; i < n; i++) {
        printf("Product Name: %s, Product ID: %s, Price: %.2f\n",
products[i].name, products[i].id, products[i].price);
    }

    float totalCost = 0;
    float maxPrice = products[0].price;
    float minPrice = products[0].price;
    int maxIndex = 0;
    int minIndex = 0;

    for (int i = 1; i < n; i++) {
        totalCost += products[i].price;
        if (products[i].price > maxPrice) {
```

```
            maxPrice = products[i].price;
            maxIndex = i;
        }
        if (products[i].price < minPrice) {
            minPrice = products[i].price;
            minIndex = i;
        }
    }

    totalCost += products[0].price;

    printf("\nMost Expensive Product: %s, Product ID: %s, Price: %.2f\n",
products[maxIndex].name, products[maxIndex].id,
products[maxIndex].price);
    printf("Least Expensive Product: %s, Product ID: %s, Price: %.2f\n",
products[minIndex].name, products[minIndex].id,
products[minIndex].price);
    printf("\nTotal Cost of All Products: %.2f\n", totalCost);

    return 0;
}
```

OUTPUT:

```
Enter the number of products: 2

Enter details for product 1:
Product Name: FREEPIK
Product ID: 001
Price: 1000

Enter details for product 2:
Product Name: DOMINIC
Product ID: 002
Price: 5000
Product Details:
```

Product Name: FREEPIK, Product ID: 001, Price: 1000.00
Product Name: DOMINIC, Product ID: 002, Price: 5000.00

Most Expensive Product: DOMINIC, Product ID: 002, Price: 5000.00
Least Expensive Product: FREEPIK, Product ID: 001, Price: 1000.00

Total Cost of All Products: 6000.00