CSB Lab-9

Q1) Do the following using pointers

a. add two numbers

```c
#include <stdio.h>
int main()
{
   int m, n, *p, *q, sum;
   printf("Enter two integers to add\n");
   scanf("%d%d", &m, &n);
   p = &m;
   q = &n;
   sum = *p + *q;
   printf("Sum of the numbers = %d\n", sum);
   return 0;
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Nitin\Code Blocks\Calm> gcc AddP.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter two integers to add
4
21
Sum of the numbers = 25
PS G:\Nitin\Code Blocks\Calm>
```

b. swap two numbers using a user defined function

```c
#include<stdio.h>
void swap(int *x, int *y){
    int temp;
    temp = *x;
    *x   = *y;
    *y   = temp;
}
int main(){
    int a, b;
    printf("Enter values for a and b:\n");
```

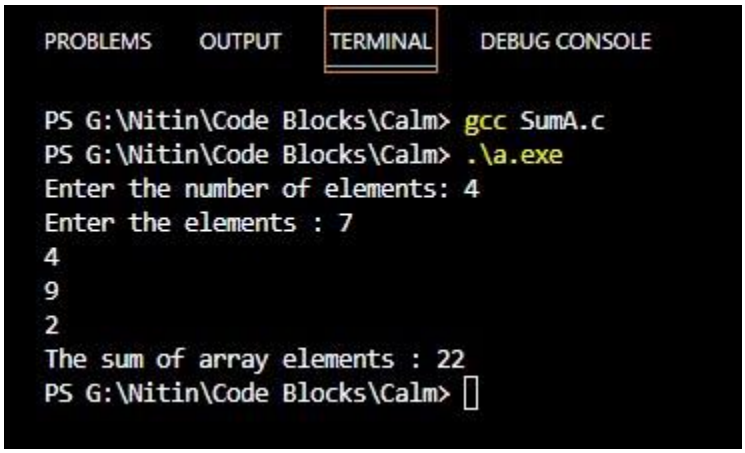
```
    scanf("%d%d", &a, &b);
    printf("Before swapping: a = %d and b = %d", a, b);
    swap(&a, &b);
    printf("\nAfter swapping: a = %d and b = %d\n", a, b);
    return 0;
}
```

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

PS G:\Nitin\Code Blocks\Calm> gcc SwapP.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter values for a and b:
16
27
Before swapping: a = 16 and b = 27
After swapping: a = 27 and b = 16
PS G:\Nitin\Code Blocks\Calm>
```

Q2) Compute sum of the elements stored in an array using pointers and user defined function.

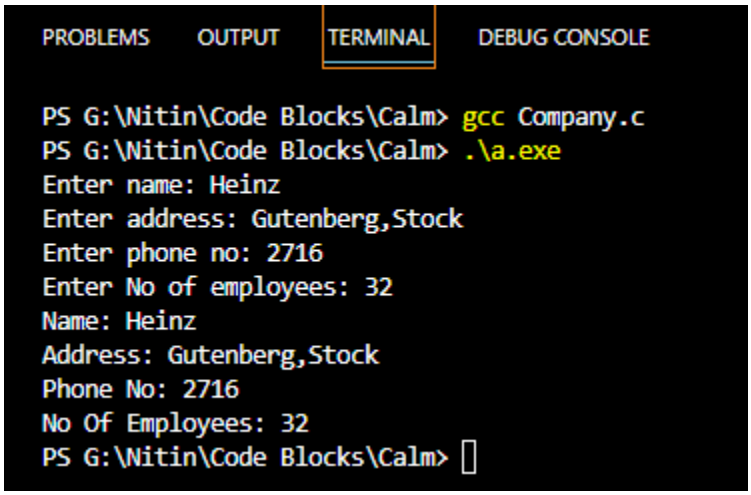
```
#include<stdio.h>
void main() {
    int n, i, *ptr, sum = 0;
    printf("Enter the number of elements: ");
    scanf("%d", &n);
    int numArray[n];
    printf("Enter the elements : ");
    for (i = 0; i < n; i++)
        scanf("%d", &numArray[i]);
    ptr = numArray;
    for (i = 0; i < n; i++) {
        sum = sum + *ptr;
        ptr++;
    }
   printf("The sum of array elements : %d", sum);
}
```



Q3) Write a program to create a structure named company which has name, address, phone and noOfEmployee as member variables. Read name of company, its address, phone and noOfEmployee. Finally display these members's value.

```c
#include <stdio.h>

#include <stdlib.h>
struct company{
    char name[20],address[50];
    int phone,noOfEmployee;
};
int main(){
    struct company C1;
    printf("Enter name: ");
    scanf("%s",&C1.name);
    printf("Enter address: ");
    scanf("%s",&C1.address);
    printf("Enter phone no: ");
    scanf("%d",&C1.phone);
    printf("Enter No of employees: ");
    scanf("%d",&C1.noOfEmployee);
    printf("Name: %s\nAddress: %s\nPhone No: %d\nNo Of Employees:
%d",C1.name,C1.address,C1.phone,C1.noOfEmployee);
}
```


PROBLEMS
OUTPUT
TERMINAL
DEBUG CONSOLE
PS G:\Nitin\Code Blocks\Calm> gcc Company.c
PS G:\Nitin\Code Blocks\Calm> .\a.exe
Enter name: Heinz
Enter address: Gutenberg,Stock
Enter phone no: 2716
Enter No of employees: 32
Name: Heinz
Address: Gutenberg,Stock
Phone No: 2716
No Of Employees: 32
PS G:\Nitin\Code Blocks\Calm>