Name : Antarin Ghosal

La 8.1

```c
/*
Antarin Ghosal
LA8.1 WAP to add two numbers using call by reference.
*/


#include <stdio.h>

int add(int *a,int *b,int *c){
    *c=*a+*b;}
int main ()
    {
    int x,y,s=0;
    printf("ENter the Value of x and y: ");
    scanf("%d %d",&x,&y);
    add(&x,&y,&s);
    printf("SUM:%d",s);
   return 0;
}
```

```
ENter the Value of x and y: 10 20
SUM:30
```

```
ENter the Value of x and y: 30 4
SUM:70
```

La 8.2

```c
/*
Antarin Ghosal
LA8.2 WAP to compute the sum of all elements in an array using pointer.
*/
#include <stdio.h>

int main ()
    {
    int N,i,sum=0;
    printf("Enter number of element in the array:");
    scanf("%d",&N);
    int arr[N];
    for(i=0;i<N;i++)
    {
        printf("ENter arr element [%d]: ",i);
```

```
        scanf("%d",&arr[i]);
    }
    int *p=&arr[0];
    for(i=0;i<N;i++)
    {
        sum+=*p;
        p=p+1;
    }
    printf("sum of the array: %d",sum);
   return 0;
}
```

```
Enter number of element in the array:10
ENter arr element [0]: 1
ENter arr element [1]: 2
ENter arr element [2]: 3
ENter arr element [3]: 4
ENter arr element [4]: 5
ENter arr element [5]: 6
ENter arr element [6]: 7
ENter arr element [7]: 8
ENter arr element [8]: 9
ENter arr element [9]: 10
sum of the array: 55
```

```
Enter number of element in the array:3
ENter arr element [0]: 10
ENter arr element [1]: 20
ENter arr element [2]: 30
sum of the array: 60
```

La 8.3

```
/*
Antarin Ghosal
LA8.3 WAP to display values in reverse order from an integer array using pointer.
*/
#include <stdio.h>

int main ()
    {
    int N,i,sum=0;
    printf("Enter number of element in the array:");
    scanf("%d",&N);
    int arr[N];
```

```
    for(i=0;i<N;i++)
    {
        printf("ENter arr element [%d]: ",i);
        scanf("%d",&arr[i]);
    }
    int *p=&arr[N-1];
    for(i=N-1;i>=0;i--)
    {
        printf("%d\t",*p);
        p=p-1;
    }
   return 0;
}
```

```
Enter number of element in the array:5
ENter arr element [0]: 1
ENter arr element [1]: 2
ENter arr element [2]: 3
ENter arr element [3]: 4
ENter arr element [4]: 5
5 4 3 2 1
```

```
Enter number of element in the array:3
ENter arr element [0]: 10
ENter arr element [1]: 20
ENter arr element [2]: 30
30 20 10
```

La 8.4

```
/*
Antarin Ghosal
LA8.4 WAP to swap three numbers in cyclic order using Call by Reference. In other words, WAP that
takes three variable (a, b, c) in as separate parameters and rotates the values stored so that
value a goes to be, b, to c and c to a.
*/


#include <stdio.h>

cyclic(int *i,int *j,int *k)
{
        int temp=*j;
        *j=*i;
        *i=*k;
```

```
        *k=temp;
}
int main ()
    {
    int a,b,c;
    printf("Enter the value of a b and c: ");
    scanf("%d %d %d",&a,&b,&c);
    printf("VAlue before cyclic swap A:%d\tB:%d\tC:%d\n",a,b,c);
    cyclic(&a,&b,&c);
    printf("VAlue after cyclic swap A:%d\tB:%d\tC:%d",a,b,c);
   return 0;
}
```

```
Enter the value of a b and c: 10 20 30
VAlue before cyclic swap A:10   B:20    C:30
VAlue after cyclic swap A:30    B:10    C:20
```

```
Enter the value of a b and c: 1 2 3
VAlue before cyclic swap A:1    B:2     C:3
VAlue after cyclic swap A:3     B:1     C:2
```

Sa 8.1

```
/*
Antarin Ghosal
SA8.1 WAP to create, initialize, assign and access a pointer variable.
*/


#include <stdio.h>

int main ()
    {
    int a=5;
    int *p1;
    p1=&a;

    printf("%d ",*p1);

   return 0;
}
```

```
5
```

Sa 8.2

```c
/*
Antarin Ghosal
SA8.2 WAP to print size of different types of pointer variables.
*/


#include <stdio.h>

int main ()
    {

        printf("\nsize of int pointer: %d",sizeof(int*));
        printf("\nsize of char pointer: %d",sizeof(char*));
        printf("\nsize of float pointer: %d",sizeof(float*));
        printf("\nsize of double pointer: %d",sizeof(double*));
   return 0;
}
```

```
size of int pointer: 8
size of char pointer: 8
size of float pointer: 8
size of double pointer: 8
```

Sa 8.3

```c
/*
Antarin Ghosal
SA8.3 WAP to add two numbers using pointers.
*/


#include <stdio.h>

int main ()
    {
    int a=5,*p1=&a;
    int b=6,*p2=&b;
    int c= *p1+*p2;
    printf("SUM: %d",c);
```

```
   return 0;
}
```

```
SUM: 11
```

Sa 8.4

```
/*
Antarin Ghosal
SA8.4 WAP to swap two numbers using call by reference.
*/


#include <stdio.h>

int swap(int *a,int *b)
{
    int temp=*b;
    *b=*a;
    *a=temp;
}
int main ()
    {
    int x,y;
    printf("ENter the Value of x and y: ");
    scanf("%d %d",&x,&y);

    printf("Before swaping :\na:%d\tb:%d\n",x,y);

    swap(&x,&y);

    printf("After swaping :\na:%d\tb:%d\n",x,y);
   return 0;
}
```

```
ENter the Value of x and y: 10 20
Before swaping :
a:10    b:20
After swaping :
a:20    b:10
```

```
ENter the Value of x and y: 20 40
Before swaping :
a:20    b:40
After swaping :
a:40    b:20
```