Data Structure and Algorithm
Lab Manual
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Lab : Revision Of C

1. Write a program in C to display the first 10 natural numbers.

Expected Output :
1 2 3 4 5 6 7 8 9 10

Solution:

```c
#include <stdio.h>
void main()
{
int i;
printf("The first 10 natural numbers are:\n");
for (i=1;i<=10;i++)
{
 printf("%d ",i);
 }
 printf("\n"); }
```

2. **Write a program in C to find the sum of all elements of an array.**

```c
#include <stdio.h>

void main()
{
    int a[100];
    int i, n, sum=0;


       printf("\n\nFind sum of all elements of array:\n");
       printf("------------------------------------\n");

       printf("Input the number of elements to be stored in the array :");
       scanf("%d",&n);

       printf("Input %d elements in the array :\n",n);
       for(i=0;i<n;i++)
        {
        printf("element - %d : ",i);
        scanf("%d",&a[i]);
      }

    for(i=0; i<n; i++)
    {
```

```
            sum += a[i];
        }

        printf("Sum of all elements stored in the array is : %d\n\n",       sum);
    }
```

3.Find square of a number using function

```
#include <stdio.h>

double square(double num)
{
    return (num * num);
}
int main()
{
    int num;
     double n;
       printf("\n\n Function : find square of any number :\n");
       printf("-------------------------------------------------\n");

     printf("Input any number for square : ");
     scanf("%d", &num);
     n = square(num);
     printf("The square of %d is : %.2f\n", num, n);
     return 0;
}
```

4. Add two numbers using pointers.

```
#include <stdio.h>
int main()
{
   int fno, sno, *ptr, *qtr, sum;

   printf("\n\n Pointer : Add two numbers :\n");
   printf("--------------------------------\n");

   printf(" Input the first number : ");
    scanf("%d", &fno);
    printf(" Input the second  number : ");
    scanf("%d", &sno);

    ptr = &fno;
    qtr = &sno;

    sum = *ptr + *qtr;

    printf(" The sum of the entered numbers is : %d\n\n",sum);
```

```
20
21     return 0;
22 }
```