

Practical No.07

Aim: Programs based on Function (Library functions and User Defined Function, Recursion)

1. C Program to Find out Square of a Number.

Program:

```
#include<stdio.h>
#include<conio.h>

float square(float x); //function prototype

void main()
{
    float m,n;

    clrscr();

    printf("Enter number =");
    scanf("%f",&m);

    n=square(m);          //function calling

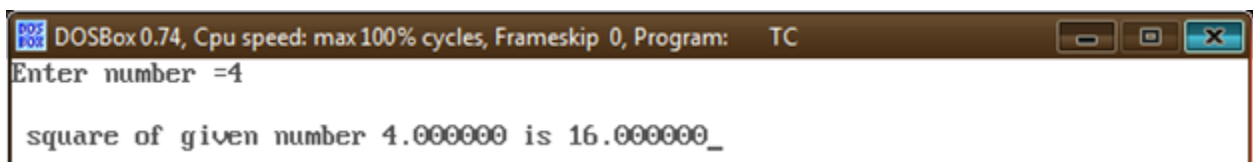
    printf("\n square of given number %f is %f",m,n);

    getch();
}

float square(float x)    //function defination
{
    float p;
    p=x*x;
    return p;
}
```

Output:

```
Enter number=4
square of a given number 4.000000 is 16.000000
```



2. C Program to Swap Values using Call by Value

Program:

```
#include<stdio.h>
#include<conio.h>

void swap(int a,int b);          //function prototype

void main()
{
    int m=22,n=44;

    clrscr();
```

```

printf("Values before swap m=%d & n=%d",m,n);
swap(m,n);                      //function calling

getch();
}

void swap(int a,int b)           //function def
{
    int tmp;
    tmp=a;
    a=b;
    b=tmp;
    printf("\n values after swap m=%d & n=%d",a,b);
}

```

Output:

Values before swap m=22 & n=44
 Values after swap m=44 & n=22



3. C Program to Swap Values using Call by Reference

Program:

```

#include<stdio.h>
#include<conio.h>

void swap(int *a,int *b);           //function prototype

void main()
{
    int m=22,n=44;

    clrscr();

    printf("Values before swap m=%d & n=%d",m,n);
    swap(&m,&n);                      //function calling by reference

    getch();
}

void swap(int *a,int *b)           //function defination
{
    int tmp;
    tmp=*a;
    *a=*b;
    *b=tmp;
    printf("\n Values after swap a=%d & b=%d",*a,*b);
}

```

Output:

Values before swap m=22 & n=44
 Values after swap a=44 & b=22

