**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;

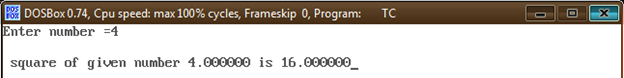
return p;

}

**Output:**

Enter number=4

square of a given number 4.000000 is 16.000000

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**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

