1)Write a C program to check whether a number is even or odd using switch case.

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

void main()
{
 int num;

 /* Input a number from user */
 printf("Enter any number to check even or odd: ");
 scanf("%d", &num);

 switch (num % 2)
 {
 case 0:
 printf("Number is Even");
 break;

 /* Else if n%2 == 1 */

 case 1:
 printf("Number is Odd");
 break;
 }

getch();
 }
```

2. Write a c program to print multiplication table of any number entered by user.

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

void main()
 {
  int i, num;
  printf("Enter number to print table: ");
  scanf("%d", &num);

  for(i=1; i<=10; i++)
  {
  printf("%d * %d = %d\n", num, i, (num*i));
  }
getch();
 }
```

3.Factorial Program using recursion in C.

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

void main()
{
  int number;
  long fact;
  printf("Enter a number: ");
  scanf("%d", &number);
  fact = factorial(number);
  printf("Factorial of %d is %ld \n", number, fact);
  getch();
}
long factorial(int n)
{
  if (n == 0)
    return 1;
  else
    return(n * factorial(n-1));
}
```

4. Write a program to Swap two numbers using function Call by reference

```
#include <stdio.h>
#include<conio.h>
// Function Prototype
void swapx(int*, int*);
```

```
// Main function
void main()
{
   int a = 10, b = 20;
   // Pass reference
   swapx(&a, &b);
   printf("a=%d b=%d\n", a, b);
   getch();
}
// Function to swap two variables
// by references
void swapx(int* x, int* y)
{
   int t;
   t = *x;
   *x = *y;
   *y = t;
   printf("x=%d y=%d\n", *x, *y);
}
```

5. Write a program to calculate average marks of the students, where student has three subjects using array within structure.

```
#include<stdio.h>
#include<conio.h>
struct stud
{ char name[30];
  int m1,m2,m3;
  float avg;
};
void main()
{ struct stud s1,s2;
```

```
clrscr();
printf("enter name of student:");
scanf("%s",s1.name);
printf("enter the marks of 3 subjects of the student");
scanf("%d %d %d",&s1.m1,&s1.m2,&s1.m3);
s1.avg=(s1.m1+s1.m2+s1.m3)/3;
printf("enter name of student:");
scanf("%s",s2.name);
printf("enter the marks of 3 subjects of the student");
scanf("%d %d %d",&s2.m1,&s2.m2,&s2.m3);
s2.avg=(s2.m1+s2.m2+s2.m3)/3;
printf("first student name: %s",s1.name);
printf("average marks: %f",s1.avg);
printf("second student name: %s",s2.name);
printf("average marks: %f",s2.avg);
getch();
}
```

6. Write a C program to read name and marks of n number of students and store them in a file.

```
#include <stdio.h>
#include<conio.h>
void main()
{
  FILE *fptr;
  char name[50];
  int marks, i, num;
  printf("Enter number of students: ");
  scanf("%d", &num);
  fptr = (fopen("C:\\student.txt", "w"));
  if(fptr == NULL)
  {
  printf("Error!");
```

```
        exit(1);
    }

    for(i = 0; i < num; ++i)
    {
        printf("For student%d\nEnter name: ", i+1);
        scanf("%s", name);

        printf("Enter marks: ");
        scanf("%d", &marks);

        fprintf(fptr,"\nName: %s \nMarks=%d \n", name, marks);
    }

    fclose(fptr);
    getch();
}
```