Conditional statements in C

Three types of conditional statements are-

i. ***if*** statement
ii. ***if..else*** statement
iii. ***switch*** statement

These statements actually contain a block of statements.

if **statement**

If the condition is true then the statements within the if block are executed, but if the condition is false then no any action is taken.

The general form of ***if*** statement is –

```
if(condition)
{
    Statement block
}
```

Example-

```
int  n;
scanf("%d",&n);
if(n<0)
   n=n*(-1);
```

Program: Program to read an integer number and if it is odd then convert it to its next even number and display.

```
#include<stdio.h>
#include<conio.h>
void  main()
{
  int  n;
  clrscr();
  printf("Enter the number: ");
  scanf("%d",&n);
  if(n%2!=0)
```

```
  {
   n=n+1;
   printf("The next even number is: %d",n);
  }
  getch();
}
```

if…else **statement**

The general form of ***if…else*** statement is –

```
if(condition)
{
     Statement block
}
else
   {
        Statement block
   }
```

Here, if block is called true block and the else block is called false block.

Example-

```
int  n;
scanf(“%d”,&n);
   if(n<0)
  {
      n=n*(-1);
      printf(“%d”,n);
   }
 else
    printf(“%d”,n);
```

Program: Program to check whether a given integer number is odd or even

```
#include<stdio.h>
#include<conio.h>
void  main()
```

```
{
  int  n;
  clrscr();
  printf("Enter the number: ");
  scanf("%d",&n);
   if(n%2==0)
    printf("The number is even");
   else
      printf("The number is odd");
    getch();
 }
```

Nested *if* statements

The syntax of nested if statement is as followos-

```
if(condition)
{
        ……
        …….
        if(condition)
        {
                Statement block
        }
        ……
        ……
}
```

Nested *if…else* statement

The syntax of nested if…esle statement is as followos-

```
if(condition)
{
        ……
        …….
        if(condition)
        {
                Statement block
        }
        else
```

```
        {
                Statement block
        }
        ……
        ……
}
else
{
        ……
        …….
        if(condition)
        {
                Statement block
        }
        else
        {
                Statement block
        }
        ……
        ……

}
```

Program: Program to find out and display the largest of among three given numbers

```
#include<stdio.h>
#include<conio.h>
void  main()
{
  int  a,b,c;
  clrscr();
  printf("Enter three  numbers\n ");
  scanf("%d%d%d",&a,&b,&c);
  if(a>b && a>c)
    printf("The largest among the three numbers is: %d",a);
  else if(b>a && b>c)
          printf("The largest among the three numbers is: %d",b);
  else
     printf("The largest among the three numbers is: %d",c);
  getch();
```

```
}
```

***switch* statement**

The general form of the switch statement is –

```
switch(Expression/value)
{
        case value 1:
                        Statement block
                        break;

        case value 2:
                        Statement block
                        break;

        case value 3:
                        Statement block
                        break;

                        .
                        .
                        .
                        .
        case value n:
                        Statement block
                        break;

            default:
                        Statement block
                        break;

};
```

The case values contain only either integer or character value.

Program 4.7 : Program to print an entered digit in word form

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

```
void  main()
{
  int  digit;
  clrscr();
  printf("Enter a digit:  ");
  scanf("%d",&digit);
  switch(digit)
  {
        case 0:
              printf("Zero");
              break;
        case 1:
              printf("One");
              break;
        case 2:
              printf("Two");
              break;
        case 3:
              printf("Three");
              break;
        case 4:
              printf("Four");
              break;
        case 5:
              printf("Five");
              break;
        case 6:
              printf("Six");
              break;
        case 7:
              printf("Seven");
              break;
        case 8:
              printf("Eight");
              break;
        case 9:
              printf("Nine");
              break;
        default:
              printf("Not a digit");
```

```
                    break;


    };
    getch();
}
```