if statement

Simple if

Syntax: if (expr)

   statement;

explanation: the statement will be executed when the expression is non zero (or true); when the expression is zero (false) the statement will not be executed.

Example

int a=5, b=6;

if(a>b) printf("a is larger"); //nothing will be printed

if(a<b) printf("a is smaller"); //"a is smaller" will be printed

if(a=b) printf("equal"); //"equal" will be printed because value of
           // expression is 6 which is non zero (true)

if else

- **Syntax:** if (expr) statement1

    else statement2;

explanation:

the statement1 will be executed when the expression is non zero (or true); when the expression is zero (false) the statement2 will be executed.

Example

int a=5, b=6;

if(a>b) printf("a is larger");

else printf("a is smaller"); //"a is smaller" will be printed

Nested if else

<u>Syntax:</u>

if (expr1) statement1

else if (expr2) statement2;

else if (expr3) statement3;

...

else statement4;

<u>explanation:</u>

the statement1 will be executed when the expr1 is non zero (or true);

when the expr1 is zero (false) the expr2 will be checked.

If expr2 is true(non zero) statement2 will be executed.

When expr2 is also zero(false) expr3 will be checked.

If expr3 is true(non zero) statement3 will be executed.

When all the expressions are zero(false) statement4 will be executed.

```c
/*To find the result of students given marks in four papers*/
#include<stdio.h>
#include<conio.h>
void main() {
int m1, m2, m3, m4;
float avg;
clrscr();
printf("Enter marks in four papers: ");
scanf("%d %d %d %d", &m1, &m2, &m3, &m4);
avg = (m1+m2+m3+m4) /4.0;
if((m1<35)||(m2<35)||(m3<35)||(m4<35)) printf("\nFail");
else if(avg>=60) printf("\nFirst Class");
else if(avg>=50) printf("\nSecond Class");
else printf("\nThird Class");
getch();
}
```

Input and output to the Program:

Enter marks in four papers: 34 35 36 37

Fail

Enter marks in four papers: 64 75 66 77

First Class

Enter marks in four papers: 54 55 56 57

Second Class

Enter marks in four papers: 44 45 46 37

Third Class