★ EXPRESSIONS

* Expressions are mainly classified into

1. Arithmetic expressions.
2. Relational expressions.
3. Logical expressions.

1. Arithmetic expressions

* An expression that involves arithmetic operators is called arithmetic expression.

* Arithmetic expression are further classified into

a) Integer expressions - Arithmetic expression that contain only integer operands is called integer expression.

Eg: $x+y$, where x and y are integers.

b) Floating point expression - Arithmetic expression that contain only floating point data is called floating point expression.

Eg: $x+y$, where x and y are floating point data.

2. Relational expressions

* The expression that contain relational operators is called relational expression.

Eg: $x > y$

3. Logical expressions

* Expression that contain logical operators are called logical operations.

Eg :- x >=y && y<=z

★ ## TYPE CONVERSION

* When an operation is performed on the operands with different data type, the data type of one operand will be converted to another and its called type conversion.

* Type conversion can be done in 2 ways.

1) Implicit type conversion (Type promotion)

2) Explicit type conversion (Type casting)

1) Implicit type conversion

* When an expression involves different data types c++ converts the lower sized operand to the type of highest sized operand and its called as implicit type conversion or type promotion.

Eg :-

```
#include<iostream.h>
void main()
{
int a,b;
float c;
cout<<"enter numbers";
cin>>a>>b;
c=a+b; /* type promotion will be applied by converting int to float
        as float is the highest compared to int data type. output will
        be a floating point value.*/
cout<<c;}
```

2) Explicit type conversion

* In this type conversion programmer will manually perform the conversion. i e. the data type of the result of operation will be specified by the programmer.

syntax

```
(type) expression
```

```
Eg:- int x,y,z;
     floatc;
     c=(float)x+y/z;
```

* The result of the operation will be converted to float before storing in to the variable 'c'.