

C-Instructions

→ Commands in the program that instruct the compiler to do certain action.

eg: add 2 numbers means compiler not understand we should instruct in terms of code

Types of instructions in C

1. Type Declaration instruction
2. Arithmetic instruction
3. Control instruction

Type Declaration instruction

→ These instructions instruct the compiler about the type of variables used.

→ we have to specify the type of data
eg: int, float, double, character, ^{string} etc

```
void main ()
```

```
{ int var1, var2, var3;
```

```
float Avg;
```

```
char C [5];
```

```
...  
}
```


Arithmetic Instructions

- Instructions are used to perform some arithmetic calculations within the program
- It uses arithmetic operators $+$, $-$, $*$, $/$, $%$, $++$
- The variables in operations is called operands

$$A + B * C = D$$

↓ operands ↓ operators

$$\text{sum} = x + y * z / i;$$

 ↓ operands

- operators have their own precedence
- It first evaluate the instruction within ()
- I - (), II - *, III - /, IV - +, V - -
- & (A+B)/C

Control Instructions

- Instructions used to control the flow of program execution, they maintain certain order

Types of control instructions

1. Sequence control instructions

- Instructions responsible for executing the program one after the others.
- They do not check any conditions.

2. Decision/selection Control Instructions,

- This will have set of conditions to execute the instructions.
- If condition is true it will execute the instruction.

3. Loop Control Instructions

- A set of instruction should be executed for certain number of times this is done by loop control statements.

→ These loop will have iterations

Eg: To display the first three characters of a name.