Tokens

- A token is source-program text that the compiler does not break down into component elements
- The keywords, identifiers, constants, variables, and operators described in this section are examples of tokens. Punctuation characters such as brackets (**[ ]**), braces (**{ }**), parentheses (**( )**), and commas (**,**) are also tokens.

Token

- **Keywords:** keywords are the reverse words with specific meaning or task there are 48 keywords in C++.
- **Identifiers:** It is the name given to a variable, function, array etc. These are the user defined names and consist of the sequence of the letters and digits with a letter as a first character.

Constants

- **Integer constant**-Consists of the digits.
- **Float constant**-Consists of the digits with decimal.
- **Character constant**-single character enclose with in a part of single quote.
- **String constant**-sequence of characters enclosing in double quotes

Operators

- A operator is a symbol that tells the computer to perform certain mathematical or logical operations.
- Two types
  - Unary operator
  - Binary operator

Unary operator

- Unary operator have only one operand.
- It is of 3 types:
  - Unary minus
  - Increment.
    - Post increment
    - Pre increment
  - Decrement:
    - Post decrement
    - Pre decrement

Binary operator

- Binary operator have two operands.
- It is of five types:
  - Arithmetic operators
  - Relation operators
  - Logical operators
  - Assignment operator
  - Conditional operator

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Control statements

- Control Statements are elements in source code that control the flow of program execution. There are blocks using { and }, loops using conditions, switch statements, loops and jumping statements.

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Conditional statements

The if statement: A conditional statement decides whether to execute code based on conditions. It works on or more than two conditions and selects one option

- It is of three types:
  - Simple if-else
  - leader if-else
  - nested if-else

Simple if else

- Syntax:

```
if(condition)
{
True statements
}
else
{
False statements
}
```


SWITCH STATEMENT

- The switch statement is the multi branching statement. Switch statement is used when there is a possibility to make a choice from a number of options.

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Syntax

```
Switch(expression)
{
case 1:
{
}

Case n:
{
}
default:
{
}
}
```

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Iteration statements

- An iteration statement creates a *loop* of code to execute.
- A looping statement is of three types:
  - The for loop
  - The do…while loop
  - The while loop

For loop/do while

- For loop:

  for(initialization; condition; inc/dec)

  {

  Statements

  }

- do..while loop

  initialization

  do

  {

  Statements

  Inc/dec;

  }while(condition);

While loop

- Syntax

```
Initialization;
while(condition)
{
Statements
Inc/dec;
}
```

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Jump statements

- A jump statement can be used to transfer program control using keywords such as break, continue, return, yield, and throw.
  - **break**
  - **continue**
  - **return**