Session-3

Java Tokens

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Java Tokens

Token: The smallest individual entity used in a program (or code) is known as a token or Java token.

It is divided into five (5) categories given below:

- Keywords
- Identifiers (or Variables)
- Literals (or Constants)
- Separators (or Punctuators)
- Operators

Keywords

- The keywords are the special reserved words that convey specific meaning to the Java compiler.

Or

- Keywords are the predefined reserved words used in programming that have a special meaning known to complier.

- ***For Example:- if, public, class, System, for(), switch, break, etc.***

- ***Note: Keywords cannot be used as variable names.***

Identifier (or Variables)

- Those quantities which change their values during the program execution are called identifiers or variables.

Or

- It is the name of memory area used to store data values.

- **Rules for assigning Identifier**:

1. Keyword cannot be used as an Identifier or variable or data member.
2. Spacing and special characters cannot be used, rather use underscore (_).
3. Uppercase and lowercase are distinct in Java environment.

- **Declaration of variable:**

  int a; // Here ***int*** is the data type which tells us the type of data being stored and ***a*** is the name of variable.

- **Initialization of variable:**

  int a=5; // Here the value 5 is assigned to the variable a.
  float x=0.5// Here the value 0.5 will be assigned to the variable x.

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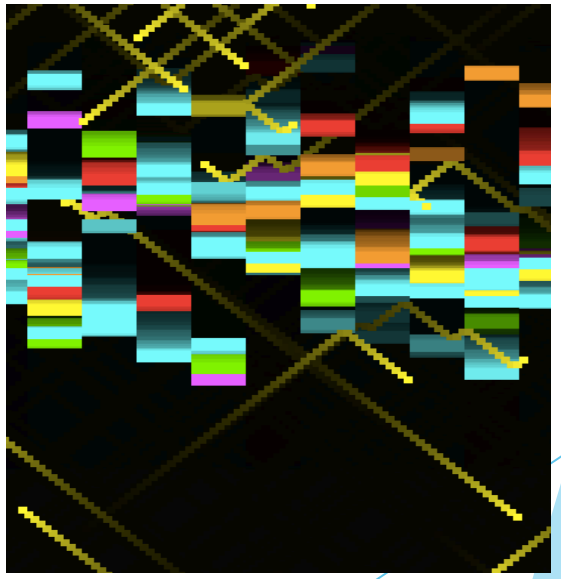
Literals (or Constants)

- The quantity which does not change its value during the program execution is called Literal or constant.

Or

- They are the data items that are fixed data values.
- A constant is always stored by an identifier.
- *Java allows several kinds of literals:*
- *Integer Literals*
- *Floating Literals*
- *Boolean Literals*
- *Character-Literal*
- *String-Literals*
- *Null Literal*



Separators (or Punctuators)

- Separators help define the structure of a program.
- They are specific symbols used as punctuators that indicate how group of codes are divided and arranged.
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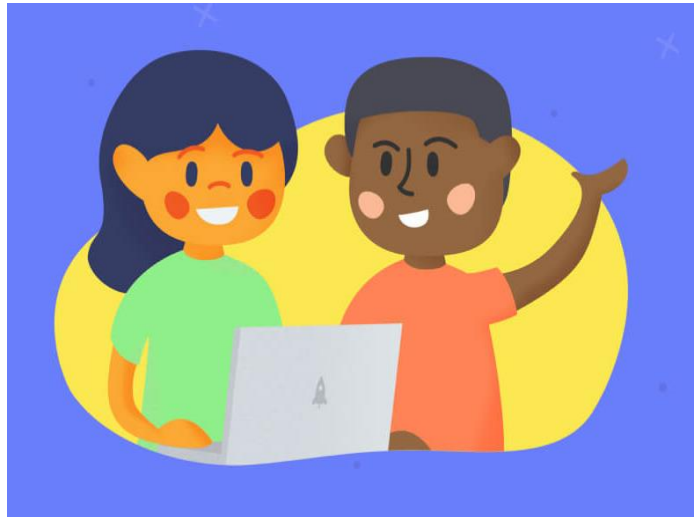
- The following nine ASCII characters are the separators:
  ( ) { } [ ] ; , .



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Operators

- Operators are the symbol which specifies the type of operation to be performed on the operands.

Or

- Operators are the special symbols that cause an action to take place.
- **Operands**: These are the values on which certain operations are performed. It can be a variable or a constant.
- **Expression**: It is a valid combination of operators & operands.
- ***Operators are classified as: -***

1. **Unary Operators**: The operators which require only one operand to work upon are called unary operators.
   Ex: *++, --*
2. **Binary Operators**: The operators which require two operands to work upon are called binary operators. Ex: +,-,*/,etc.
3. **Ternary Operators**: The operators which require three operands to work upon are called ternary operators.
   Syntax: ***variable = condition? Values True: False;***

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Thank You!!

Happy Learning