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Java Identifiers

In programming languages, identifiers are used for identification purpose. In Java an identifier can be a class name, method name, variable name or a label. For example :

```
public class Test
{
    public static void main(String[] args)
    {
        int a = 20;
    }
}
```

In the above java code, we have 5 identifiers namely :

- **Test** : class name.
- **main** : method name.
- **String** : predefined class name.
- **args** : variable name.
- **a** : variable name.

Rules for defining Java Identifiers

There are certain rules for defining a valid java identifiers. These rules must be followed, otherwise we get compile-time error. These rules are also valid for other languages like C,C++.

- The only allowed characters for identifiers are all alphanumeric characters([**A-Z**],[**a-z**],[**0-9**]), '\$'(dollar sign) and '_' (underscore).For example "geek@" is not a valid java identifier as it contain '@' – special character.
- Identifiers should **not** start with digits([**0-9**]). For example "123geeks" is a not a valid java identifier.
- Java identifiers are **case-sensitive**.
- There is no limit on the length of the identifier but it is advisable to use an optimum length of 4 – 15 letters only.
- **Reserved Words** can't be used as an identifier. For example "int while = 20;" is an invalid statement as while is a reserved word. There are **53** reserved words in Java.

Examples of valid identifiers :



```
MyVariable  
MYVARIABLE  
myvariable  
x  
i  
x1  
i1  
_myvariable  
$myvariable  
sum_of_array  
geeks123
```

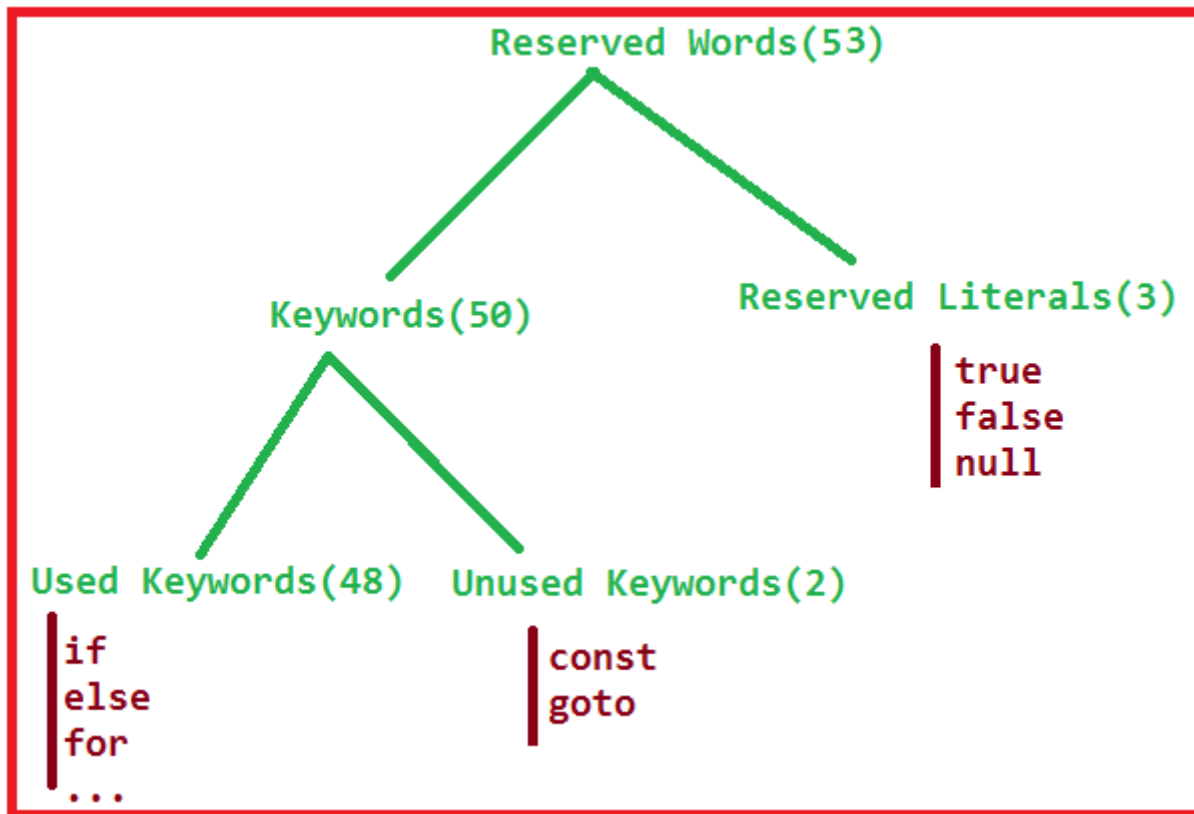
Examples of invalid identifiers :

```
My Variable // contains a space  
123geeks // Begins with a digit  
a+c // plus sign is not an alphanumeric character  
variable-2 // hyphen is not an alphanumeric character  
sum_&_difference // ampersand is not an alphanumeric character
```

Reserved Words

Any programming language reserves some words to represent functionalities defined by that language. These words are called reserved words. They can be briefly categorized into two parts : **keywords**(50) and **literals**(3).

keywords define functionalities and literals defines a value.



Identifiers are used by symbol tables in various analyzing phases(like lexical,syntax,semantic) of a compiler architecture.

Note : The keywords `const` and `goto` are reserved, even though they are not currently used. In place of `const`, `final` keyword is used. Some keywords like `strictfp` are included in later versions of Java.

This article is contributed by **Gaurav Miglani**. If you like GeeksforGeeks and would like to contribute, you can also write an article using contribute.geeksforgeeks.org or mail your article to contribute@geeksforgeeks.org. See your article appearing on the GeeksforGeeks main page and help other Geeks.

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