

## Language Fundamentals

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### 1. Identifiers

A name in java program is called "identifier"

The name can be a classname, interfacename, enumname, variable name, method name and label name.

```
class Test{
    public static void main(String[] args){
        int x = 10;
    }
}
```

Identifiers: Test, main, String, args, x

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### Rules for Identifiers

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Rule1: The allowed characters in java identifiers are

a to z, A to Z, 0 to 9, \_, \$

Rule2: If we use any other character, then the program would result in "CompileTime Error".

Rule3: Identifiers should not start with digits

eg: PWSKILLS123---> valid

123PWSKILLS---> invalid

Rule4: java identifiers are case sensitive, as such Java language only is case sensitive(JVM)

```
class Test{
    int number = 10;
    int NUMBER = 100;
    int NuMbeR = 1000;
}
```

Rule5: There is no constraint of the length of the java identifiers, but it is not recommended to take the length more than 15.

eg: int physicsWallahAlakhPandeyJavaWithMicroservices = 100;

Rule6: Reserve words or builtin words can't be used as "java identifiers".

if we try to use then it would result in "CompileTimeError".

int, if, float, else, while, for, do, ..... => reserve words/built in words/keywords

Built-in classname, interfacename, enumname can be used as a "identifier".

Even though classname, interfacename, enumname can be used as an identifier, we don't recommend.

eg::

```
class Test{
    public static void main(String[] args){
        int int=10; //CE
        int if =10; //CE
        int while=100; //CE
    }
}
```

```
class Test{
    public static void main(String[] args){
        int String =10;
    }
}
```

```
    }  
}
```

```
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Identify which are valid and invalid identifiers  
+++++
```

1. `_$_` ==> valid
2. `ca$h` ==> valid
3. `java2share` => valid
4. `all@hands` => invalid
5. `123abc` => invalid
6. `Total#` => invalid
7. `Int` => valid(not recommended)
8. `Integer` => valid(not recommended)
9. `int` => invalid(reserve word)
10. `tot123` => valid