Documentation for JAVA

## **Variables**

import java.lang.Math.\*;

import java.io.\*;

|  |  |
| --- | --- |
| Primitive Data Types | int (32-bit)/ long(64-bit)/ float/ double/ Boolean/ char/ |
| Reference/Object Data Types | Reference variables are created using defined constructors of the classes |
| Declaration | Int a, b, c; int a=10, b=10; char a=’a’; |
|  |  |
| Local Variables | Declared in methods, constructors, or blocks. |
| Instance Variables |  |
| Class/Static Variables | Public static final String DEPARTMENT=”Development”; |
|  |  |

## **Modifiers**

|  |  |
| --- | --- |
| Access Modifiers | Public/ Private/ Protected |
|  |  |
|  |  |
| Non Access Modifiers | Static variables (class vars )  Final (can only be initialized once)  / abstract/ synchronized/ volatile |
|  |  |

## **Operators**

|  |  |
| --- | --- |
| && ( and ) || ( or ) ! ( not ) | Bitwise Operators. https://www.tutorialspoint.com/java/java\_basic\_operators.htm |
| Conditional operator (? : ) |  |
|  |  |

## **Loop Control**

|  |  |  |
| --- | --- | --- |
| While(x<20){  } | | Do {  }while (x<20); |
| For (int x = 10; x < 20; x=x+1){  } | | Enhanced for loop  Int [] numbers={10,20,30,40,50};  For (int x : numbers){  } |
| If (x<20) {  }else{} | If (x<20){  If (x<10) { } } | If (x<20) {  }else if (x<10){ } else {} |
| switch(Grade){ case ‘A’: ;break; case ‘B’: ; break; … default : ; } | | |

## **Numbers Class and methods**

Number class: <https://www.tutorialspoint.com/java/java_numbers.htm>

Characters class: <https://www.tutorialspoint.com/java/java_characters.htm>

String Class: <https://www.tutorialspoint.com/java/java_strings.htm>

|  |  |
| --- | --- |
| Wrapper classes | Integer, Long, Byte, Double, Float, Short |
| xxxValue() | Converts the value of *this* Number object to the xxx data type and returns it. |
| compareTo() | Compares *this* Number object to the argument |
| Equals() | Determines whether *this* number object is equal to the argument |
| valueOf() | Returns an Integer object holding the value of the specified primitive |
| toString() | Returns a String object representing the value of a specified int or Integer. |

## **Escape Sequences**

|  |  |  |  |
| --- | --- | --- | --- |
| \t | tab | \’ | Single quote character |
| \b | backspace | \” | Double quote |
| \n | A newline | \\ | backslash |
| \r | Carriage return | \f | Form feed indentation(Not valid) |

Characters class: <https://www.tutorialspoint.com/java/java_characters.htm>

## **Array**

|  |  |
| --- | --- |
| double [] Numbers={}; | double Numbers[]; |
| Numbers=new double[arraySize]; |  |
| Passing Arrays to Methods  printArray(new int[]{1, 2, 3, 4, 5, 6}); | public static void printArray(int[] array) {  for (int i = 0; i < array.length; i++) {  System.out.print(array[i] + "\n");}} |
| ***Arrays Class*** | Public static int binarySearch(Object[] a, Object key) |
| Public static void sort(Object [] a) |  |

## **Date class**

https://www.tutorialspoint.com/java/java\_date\_time.htm

|  |  |
| --- | --- |
| import java.util.Date; | System.out.println("Current Date: " + ft.format(dNow)); |
| import java.text.\*; |  |
|  |  |

## **Method**

https://www.tutorialspoint.com/java/java\_methods.htm

|  |  |
| --- | --- |
| Method Overloading | Keyword: **this** |
| constructors | Default constructor is needed for “this” |
| Finalize()  Not quite understand  https://stackoverflow.com/questions/2506488/when-is-the-finalize-method-called-in-java | Used to ensure that an object terminates cleanly  protected void finalize(){} |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

## **Sample**

|  |  |
| --- | --- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |