1. **Java Keywords – The Language of 50 Keywords**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **private** | **public** | **this** | **super** | **class** | **default** |
| **break** | **extends** | **goto** | **if** | **return** | **else** |
| **for** | **try** | **enum** | **void** | **throws** | **implements** |
| **catch** | **new** | **package** | **import** | **char** | **int** |
| **switch** | **throw** | **interface** | **byte** | **finally** | **protected** |
| **float** | **import** | **continue** | **case** | **transient** | **long** |
| **boolean** | **volatile** | **synchronised** | **while** | **do** | **instance of** |
| **assert** | **const** | **abstract** | **strictfp** | **short** | **final** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| abstract | assert | boolean | break | byte |
| case | catch | char | class | const\* |
| continue | default | do | double | else |
| enum | extends | final | finally | float |
| for | goto\* | if | implements | import |
| instanceof | int | interface | long | native |
| new | package | private | protected | public |
| return | short | static | strictfp | super |
| switch | synchronized | this | throw | Throws |
| transient | try | void | volatile | while |

1. **Variables & Datatype**

**Code 1:**

public class Hello

{

public static void main(String[] args)

{

System.out.println("Hello World!");

}

}

**Code 2: Primitive Datatype - Integer**

public class Hello {

public static void main(String[] args) {

int max = 2147483647;

int min = -2147483648;

short shortMax = 32767;

short shortMin = -32768;

long longMax = 9223372036854775807L;

long longMin = -9223372036854775808L;

byte byteMax = 127;

byte byteMin = -128;

}

}

**Code 3: Primitive Datatype - Float**

public class Hello {

public static void main(String[] args) {

/\*

int value1 = 9/2;

float value2 = 10f/6f;

double value3 = 10d/6d;

System.out.println("value 1 = "+ value1);

System.out.println("value 2 = "+ value2);

System.out.println("value 3 = "+ value3);

\*/

int marker = 512;

double percentage = marker \* 0.46f;

System.out.println("percentage:"+percentage);

}

}

**Code 4: Boolean & Unicode**

public class Hello {

public static void main(String[] args) {

boolean var = false;

System.out.println(var);

char var1 = '\u00A7';

System.out.println(var1);

}

}

**Code 5: String**

public class Hello

{

public static void main(String[] args) {

String var = new String("Hello world");

System.out.println(var);

}

}

**Code 6: Typecasting**

public class Hello

{

public static void main(String[] args) {

float f = 10.532f;

long l = (long) f;

System.out.println(l);

}

}

|  |
| --- |
| 15.666  15.666 |

**Code 7: Arithmetic Operators**

**public** **class** Hello

{

**public** **static** **void** main(String[] args) {

**int** x = 10, y=20;

System.***out***.println(x+y);

System.***out***.println(--x);

System.***out***.println(++y);

}

}

Output:

30

9

21

Code 8: Decision making with operators

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** x = 5;

**if**(x != 5)

{

System.***out***.println("Value of x is not 5");

}

**else**

{

System.***out***.println("Value of x is 5");

}

}

}

**Code 9: Decision making with operators**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** x = 8, y = 7;

**if**(x >= y)

{

System.***out***.println("true");

}

**else**

{

System.***out***.println("false");

}

}

}

**Code 10: Decision making with operators**

**public** **class** Hello {

**public** **static** **void** main(String[] args) {

**int** x = 10; **int** y = 11;

**if**(!(x < y) || (x == y))

{

System.***out***.println("Condition is TRUE");

}

**else**

{

System.***out***.println("Condition is FALSE");

}

/\*

int ageOfBoy = 36;

int ageOfGirl = 25;

if ((ageOfBoy >= 21) && (ageOfGirl >= 18))

{

System.out.println("ready to get married!");

}

else

{

System.out.println("Wait for it kiddo!");

}

\*/

}

}

**Code 11: Ternary Operator**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** x = 10;

x = (10 == x) ? 1 : 0;

System.***out***.println(x);

}

}

**Code 12: Assignment Operator**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** x = 4;

//x += 5; // x = x + 5

//x -= 5; // x = x - 5

//x \*= 5; // x = x \* 5

//x /= 4; // x = x / 4

x %= 5; // x = x % 5

System.***out***.println(x);

}

}

**Code 13: Making decision with if else**

**public** **class** Hello {

**public** **static** **void** main(String[] args) {

**int** x = 5;

**if** (x == 5)

{

**if** (x >= 5)

{

System.***out***.println("X is greater than 5");

}

**else**

{

System.***out***.println("X is smaller than 5");

}

}

**if**(x == 5)

{

System.***out***.println("X equals to 5");

}

**else** **if**(x > 5)

{

System.***out***.println("X is greater to 5");

}

**else**

{

System.***out***.println("X is smaller than 5");

}

}

}

**Code 14: Switch Case in Java (int)**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** x = 10;

**if** (x == 1)

{ System.***out***.println("The value of x is 1"); }

**else** **if**

(x== 2)

{

System.***out***.println("The value of x is 2"); }

**else** **if** (x == 3)

{

System.***out***.println("The value of x is 3"); }

**else**

{

System.***out***.println("The value of x is other than 1,2,3");

}

**switch** (x)

{

**case** 1:

System.***out***.println("The value of x is 1");

**break**;

**case** 2:

System.***out***.println("The value of x is 2");

**break**;

**case** 3:

System.***out***.println("The value of x is 3");

**break**;

**default**:

System.***out***.println("The value of x is other than 1,2,3");

**break**;

}

}

}

**Code 15: Switch Case in Java (Char)**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**char** x = 'F';

**switch** (x)

{

**case** 'a' :

**case** 'A' :

System.***out***.println("The value of x is a");

**break**;

**case** 'b':

**case** 'B' :

System.***out***.println("The value of x is b");

**break**;

**case** 'c':

**case** 'C' :

System.***out***.println("The value of x is c");

**break**;

**default**:

System.***out***.println("The value of x is other than a,b,c");

**break**;

}

}

}

**Code 15: Switch Case in Java (String)**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

String name = "te";

**switch** (name.toLowerCase())

{

**case** "author":

System.***out***.println("Vikas");

**break**;

**case** "team":

System.***out***.println("Team Java Full Stack");

**break**;

**case** "editor":

System.***out***.println("Vishnu & Krishna");

**break**;

**default**:

System.***out***.println("Invalid entry");

**break**;

}

}

**Code 16: for loop**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**for**(**int** i = 1; i<=1000 ; i++) //(int i = 1000; i<=1;i--)

{

System.***out***.print("Value of i:");

System.***out***.println(i);

}

}

}

**Code 17: for loop**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** number = 8;

**boolean** isPrime = **true**;

**for**(**int** i = 2; i < number/2; i++)

{

**if**(number % i == 0)

{

isPrime = **false**;

}

}

**if**(isPrime == **true**)

{

System.***out***.println("The number is a prime number");

}

**else**

{

System.***out***.println("The number is not a prime number");

}

}

}

**Code 18: While Loop**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** i=99;

**while**(i<=100)

{

System.***out***.println(i);

i++;

}

}

}

**Code 19: While Loop**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**int** i = 11;

**do**

{

System.***out***.println(i);

i++;

}**while**(i<=1);

}

}

Code 20: for, while, do while loop

**public** **class** Hello {

**public** **static** **void** main(String[] args)

{

// for loop

**for**(**int** i=1,j=1; i<10||j<10;i++,j++)

{

j++;

System.***out***.println("i="+i+" and j="+j);

}

// while loop

**int** i=1,j=1;

**while**(i<10 || j<10)

{

i++; j++;

System.***out***.println("i="+i+" and j="+j);

}

// Do while loop

**int** i = 1, j = 1;

**do** {

i++;

j++;

System.***out***.println("i=" + i + " and j=" + j);

} **while** (i < 10 || j < 10);

}

}

Code 21: break & continue

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**for**(**int** i=1; i<=10; i++)

{

**if**(i == 1)

{

**continue**; // break;

}

System.***out***.println(i);

}

}

}

**Code 22: Nested loops**

**public** **class** Hello

{

**public** **static** **void** main(String[] args)

{

**for**(**int** i=1; i<=10; i++)

{

**for**(**int** j=1; j<=10; j++)

{

System.***out***.println("Value of i:"+i+" and value of j:"+j);

}

System.***out***.println("\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*");

}

}

}

Output:

Value of i:1 and value of j:1

Value of i:1 and value of j:2

Value of i:1 and value of j:3

Value of i:1 and value of j:4

Value of i:1 and value of j:5

Value of i:1 and value of j:6

Value of i:1 and value of j:7

Value of i:1 and value of j:8

Value of i:1 and value of j:9

Value of i:1 and value of j:10

**Assignment**

@

@@

@@@

@@@@

@@@@@

**Code 23:**

**public** **class** Hello {

**public** **static** **void** main(String[] args)

{

**for** (**int** i = 1; i <= 5; i++)

{

**for** (**int** j = 1; j <= i; j++)

{

System.***out***.print('@');

}

System.***out***.println();

}

}

}