Literals:

A **Constant Value** in Java is created by a **Literal** *Representation*.

Constant Value can't change during the execution of the program.

```
int a = 10;

float f = 10.0f

char ch = 'd';

String s = "This is a Literal";
```

Literals many be number or text which represents a value

int a = 10;

int is a Data Type → Keyword

a is a Variable → Identifier

10 is a Constant Value. → Literals

10 .0f is a Constant Value. → Literals

There are basically **5 types** of **Literals** present in Java programming language.

1. **Integer Literals**
2. **Floating Point Literals**
3. **Character Literals**
4. **String Literals**
5. **Boolean Literals**

Number Systems Format in Computer Machines

1. Binary (base 2)
2. Octal (base 8)
3. Decimal (base 10)
4. Hexadecimal (base 16)

Binary:
Supports 0`s and 1`s
Prefix b, or B
Ex: **int binaryValue = 0b00101;** //5

Octal:
Supports 0, 1, 2, 3, 4, 5, 6 , 7
Prefix 0
Ex: **int octalValue = 01200;** // 640

Decimal
Supports 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
Prefix: Don’t have any prefix !!!
Ex: int id= 10;

Hexadecimal
Supports 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
A, B, C, D, E, F
Prefix: ox or oX
Ex: int hexaDecimalValue = 0XACE;

```java
//Integer Literals
public class Eg1 {

public static void main(String[] args) {

int a = 10; // 10 is literal
int b = 20; // 20 is literal
int c = 30; // 30 is literal

int d = a + b + c;
System.out.println(d); // 60

}
}
```

```
//Floating Point Literals
public class Eg2 {

public static void main(String[] args) {

double d1 = 3.4d;
float f1 = 3.4f;

System.out.println(d1); // 3.4
System.out.println(f1); // 3.4

}
}
```

```java
//Char Literals
public class Eg3 {

public static void main(String[] args) {

char ch1 = 'd'; // -- TEXT
System.out.println(ch1); //d

char ch2 = 69;          //--- Decimal
System.out.println(ch2); //E

char ch3 = '\u0042';  // --- UNICODE
System.out.println(ch3); // B
}

}
```

```
//String Literals
public class Eg4 {

public static void main(String[] args) {

String str1 = "Lenovo";
String str2 = "Hp";

System.out.println(str1); //Lenovo
System.out.println(str2); //Hp

}
}
```

```
public class Eg5 {

public static void main(String[] args) {

int decimalValue = 123; // Supports 0, 1, 2, 3, 4, 5, 6, 7, 8, 9
int octalValue = 01200; // Supports 0, 1, 2, 3, 4, 5, 6 , 7
int hexaDecimalvalue = 0XACE; // Supports 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, A, B, C, D, E, F
int binaryValue = 0b00101; // Supports 0`s and 1`s

System.out.println(decimalValue); // 123
System.out.println(octalValue); // 640
System.out.println(hexaDecimalvalue); // 2766
System.out.println(binaryValue); // 5
}

}
```