DAY-10 [LITERALS]

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3.LITERALS:

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-->Literals is a value associated to a varible.

TYPES OF LITERALS:

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-->1.INTEGER --> int age = 25;

-->2.FLOATING NUMBER --> float height = 5.9;

-->3.BOOLEAN --> boolean condition = true;

-->4.STRING --> String name = "studyOnline";

NOTE:

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--> float f = 12345678.34567f;

--> float f = 1\_234\_56\_7\_8.34\_56\_7f;

To provide the flexibility to the literal '\_' symbol can be used in the middle of the literal inorder to increse the readability.

Java compiler will remove all the \_ symbol during compilation and consider only original data.

NUMBER SYSTEM:

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In general any programming language,to represent numbers we have to use particular number system.

1.BINARY NUMBER SYSTEM[BASE-2]

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If we want to represent numbers in binary number system then we have to use 0's and 1's, but the number must be prefixed with either 0b or 0B.

ex:1

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BaseExample.java

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//EXAMPLE OF BASE-2 NUMBER SYSTEM

class BaseExample

{

public static void main(String[] args)

{

int a=10;//it is not binary number,it is decimal number

System.out.println(a);

int b = 0b10;

int c = 0b11;

int d = 0B1010;

int e = 0B1012;//binary numbers are o's and 1's

System.out.println(b);//----------> valid

System.out.println(c);//----------> valid

System.out.println(d);//----------> valid

System.out.println(e);//----------> invalid

}

}

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2.OCTAL NUMBER SYSTEM[BASE-8]:

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--> If we want to represent numbers in octal number system then we have to use (0 - 7), but the number must be prefixed with either 0[zero].

ex:1

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BaseExample.java

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//EXAMPLE OF BASE-8 NUMBER SYSTEM

class BaseExample

{

public static void main(String[] args)

{

int a=10;//it is not binary number,it is decimal number

System.out.println(a);

int b=012345;

int c=033;// 24 + 3 =27

int d=05467;

int e=04596;// 9 is not a octal number.

System.out.println(b);//----------> valid

System.out.println(c);//----------> valid

System.out.println(d);//----------> valid

System.out.println(e);//----------> invalid

}

}

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3.DECIMAL NUMBER SYSTEM[BASE-10]:

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-->If we want to represent numbers in decimal number system then we have to use (0 - 9)

but the number need not to prefixed with any symbol.

ex:1

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BaseExample.java

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//EXAMPLE OF BASE-10 NUMBER SYSTEM

class BaseExample

{

public static void main(String[] args)

{

int a=10;//it is not binary number,it is decimal number

System.out.println(a);

int b=12345;

int c=33;

int d=5467;

int e=4596;

System.out.println(b);//----------> valid

System.out.println(c);//----------> valid

System.out.println(d);//----------> valid

System.out.println(e);//----------> valid

}

}

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4.HEXA DECIMAL NUMBER SYSTEM[BASE-16]:

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-->If we want to represent numbers in hexadecimal number system then we have to use (0 - 9)(a - f)

but the number must be prefixed with '0x' and '0X'.

ex:1

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BaseExample.java

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class BaseExample

{

public static void main(String[] args)

{

int a=10;//it is not binary number,it is decimal number

System.out.println(a);

int b=0x23;// 32+3=35

int c=0X102345;

int d=0xface;

int e=0Xbase;// s is not a hexadecimal value.

System.out.println(b);//----------> valid

System.out.println(c);//----------> valid

System.out.println(d);//----------> valid

System.out.println(e);//----------> invalid

}

}

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ESCAPE CHARACTER DESCRIPTION

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--> \n new line

--> \t horizontal line

--> \r carriage return

--> \b back space

--> \f form feed

--> \' single quote

--> \" double qoute

--> \\ black slash

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