

# Computer Applications

IX

Initialisation :- assigning a value to a variable or giving a value to a variable this process is known as initialisation of a variable. There are two different types of initialisation.

- 1) Static Initialisation
- 2) Dynamic Initialisation.

## 1) Static Initialisation

if a value is assigned to a variable before the execution of a program, then this type of initialisation is known as static initialisation of a variable.

for ex

int A = 2;

double B = 4;

char c = 'A';

## 2) Dynamic Initialisation :-

if a value is assigned to a variable after the execution of a program, in such a way the compiler does not know the value of variable before because it is given by the user after the execution of a program.

Ex: - input the value from the user.



IX

## Input the value in java program or Dynamic Initialisation of a Variable

Whenever a dynamic initialisation of a variable has to be done, two inbuilt classes InputStreamReader and BufferedReader classes will be used by making their objects, and these two classes are the members of or tools of java.io package. Hence whenever the dynamic initialisation is required then java.io package will be called up in the program using import keyword.

Ex.

```
import java.io.*;
```

Method of using two classes

```
import java.io.*;
```

class example

{

```
void main() throws IOException
```

{

```
InputStreamReader isr = new InputStreamReader(System.in);
```

```
BufferedReader br = new BufferedReader(isr);
```

NOTE  
where isr and br are the objects of InputStreamReader and BufferedReader classes.

new :- is the keyword which allocates the memory for the objects.

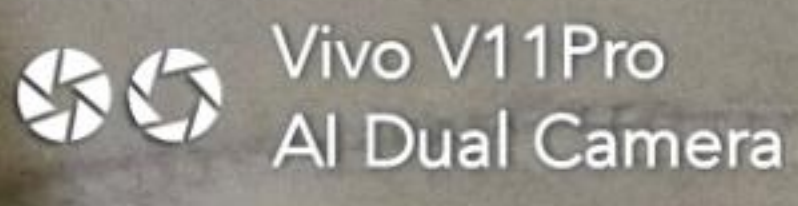
### Wrapper classes

The classes which wrap up the primitive datatypes, in normal language these classes are used to convert string into primitive data types. for each datatype there is a different wrapper class as follows -

<u>Data types</u>	<u>Wrapper class</u>
int	Integer
byte	Byte
short	Short
long	Long
float	Float
double	Double
char	Character
boolean	Boolean

Wrapper classes are the members of java.lang package, which is by default already imported in the program i.e we never call this package.

Behaviour of Input :- Whenever an input is taken in java programming then it receives in form of string, later this string will be converted in the required numerical formats using different methods from the BufferedReader class.



## BufferedReader class

15

This class contains number of methods/functions for receiving the inputs and conversion of string into primitive data types -

1) read() :- This method receives a single character at a time from the user with the help of object of BufferedReader class.

### Syntax

(char) <object>.read();

### Example

char k;

k = (char) br.read();

where br is the object of BufferedReader class.

2) readLine() :- This method receives a string from the user.

### Syntax

<object>.readLine();

### Example

String s;

s = br.readLine();

where br is the object of BufferedReader class.

parseInt() :- This method converts String into integer data type.

Example

```
String s;
int k;
s = br.readLine();
k = Integer.parseInt(s);
```

Wrapper class

where br is the object of BufferedReader class.

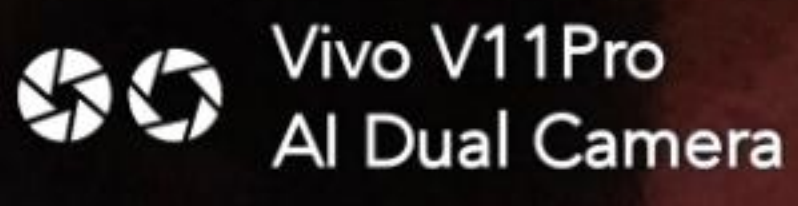
s is the string which is being converted into integer data type with the help of Integer wrapper class and the method parseInt()

parseLong() :- This method converts string into Long data type.

Example

```
String s;
long k;
s = br.readLine();
k = Long.parseLong(s);
```

Wrapper class.



parseFloat() :- This method converts String into float data types. IX

Example

String s;

float k;

k = Float.parseFloat(s);

←  
wrapper class

←  
method

parseDouble() :- This method converts String into double data type.

String s;

double k;

s = br.readLine();

k = Double.parseDouble(s);

←  
wrapper class

←  
method.

Example 1

Write a program to input two values from the user and calculate and display their sum.

Sol<sup>n</sup>

```
import java.io.*;
class addition
{
    void main() throws IOException
    {
        InputStreamReader isr = new InputStreamReader(System.in);
        BufferedReader br = new BufferedReader(isr);
        int x, y, s;
        String s1, s2;
        System.out.println("Enter first number:");
        s1 = br.readLine();
        x = Integer.parseInt(s1);
        System.out.println("Enter second number:");
        s2 = br.readLine();
        y = Integer.parseInt(s2);
        s = x + y;
        System.out.println("Sum: " + s);
    }
}
```

3

