

Examrace

Core Java Part III Computer Science YouTube Lecture Handouts

Doorsteptutor material for competitive exams is prepared by world's top subject experts: [get questions, notes, tests, video lectures and more](#)- for all subjects of your exam.

Topics to be covered

Taking Input from Console- Scanner Class

We use scanner class to accept values from the console during run-time. We can use this class by making object of the scanner class.

For Example:

```
Scanner s = new Scanner (System. in) ;
```

Scanner class is a predefined class which is defined in java. util package. that's why to use Scanner class, we have to import java. util package.

Code

```
Import java. util. * ;
```

Here java is main package and util is a sub package created inside. Package, sub package and class is always separated with dot (.) .

Function/Method Name	Use of the Method
nextInt ()	It is used to scan the integer value as an input from the console.
nextFloat ()	It is to scan the float (in decimal from) value as an input from the console.
nextDouble ()	It is used to scan the double (in decimal from) value as an input from the console.
nextLong ()	It is used to scan the long (integer) value as an input from the console.
nextShort ()	It is used to scan the short (integer) value as an input from the console.
nextBoolean ()	It is used to scan the boolean value as an input from the console.
nextLine ()	It is used to scan the string value as an input from the console.
<i>Taking Input from Console- Scanner Class</i>	

Pre-Defined Methods of Scanner Class

Function/Method Name	Use of the Method
<code>nextInt()</code>	It is used to scan the integer value as an input from the console.
<code>nextFloat()</code>	It is used to scan the float (in decimal form) value as an input from the console.
<code>nextDouble()</code>	It is used to scan the double (in decimal form) value as an input from the console.
<code>nextLong()</code>	It is used to scan the long (integer) value as an input from the console.
<code>nextShort()</code>	It is used to scan the short (integer) value as an input from the console.
<code>nextBoolean()</code>	It is used to scan the boolean value as an input from the console.
<code>nextLine()</code>	It is used to scan the String value as an input from the console.

[©Examrace. Report ©violations @https://tips.fbi.gov/](https://tips.fbi.gov/)

Code/Output

```
check_runtime.java - Notepad
File Edit Format View Help
import java.util.Scanner; //importing java.util package
class check_runtime
{
public static void main(String[] args)
{
String name;
int age;
float salary;

Scanner s = new Scanner(System.in); //creating object of Scanner class
System.out.println("Enter your name");
name=s.nextLine();

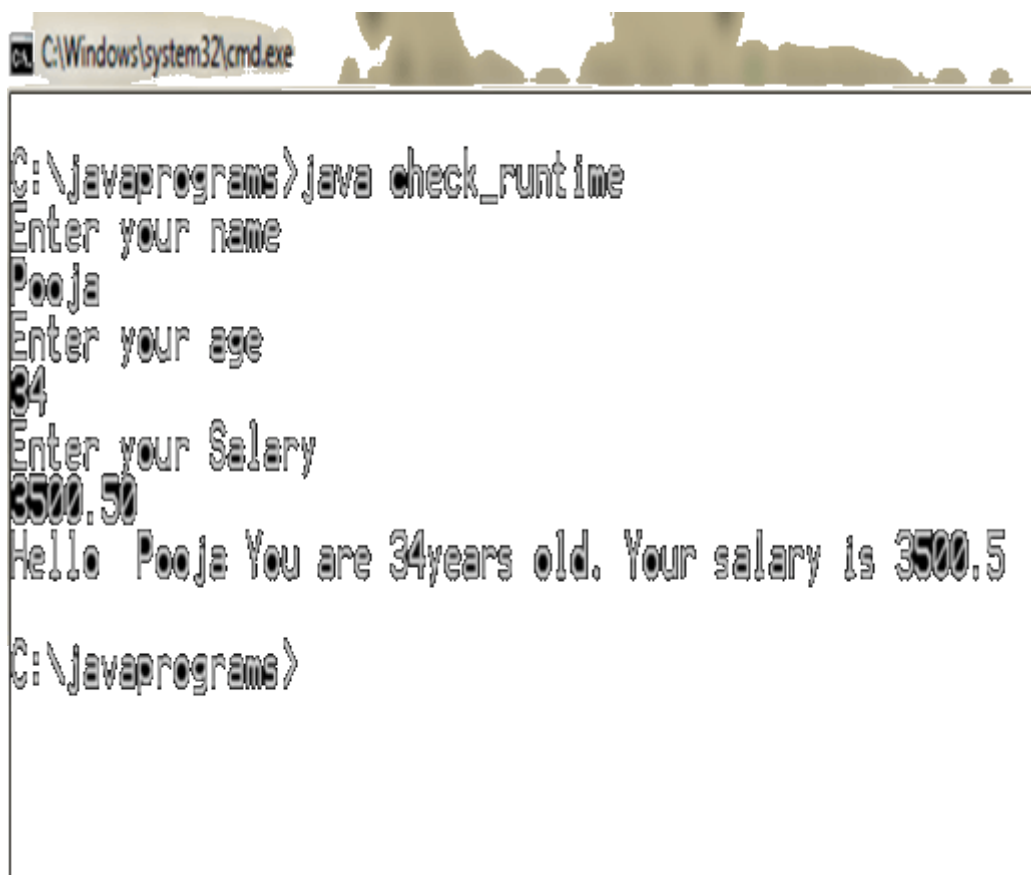
System.out.println("Enter your age");
age=s.nextInt();

System.out.println("Enter your salary ");
salary=s.nextFloat();

System.out.println("Hello "+name+" You are "+age+"years old. Your salary is "+ salary);

}
}
```

[©Examrace. Report ©violations @https://tips.fbi.gov/](https://tips.fbi.gov/)



```
C:\Windows\system32\cmd.exe
C:\javaprograms>java check_runtime
Enter your name
Pooja
Enter your age
34
Enter your Salary
3500.5
Hello Pooja You are 34years old. Your salary is 3500.5
C:\javaprograms>
```

[©Examrace. Report ©violations @https://tips.fbi.gov/](https://tips.fbi.gov/)

Oriented Approach Object

As we know, Java is an object oriented language. It supports various object oriented concepts that are as follows:

- **Object and Classes**
- **Inheritance**
- **Polymorphism**
- **Abstraction**
- **Encapsulation**

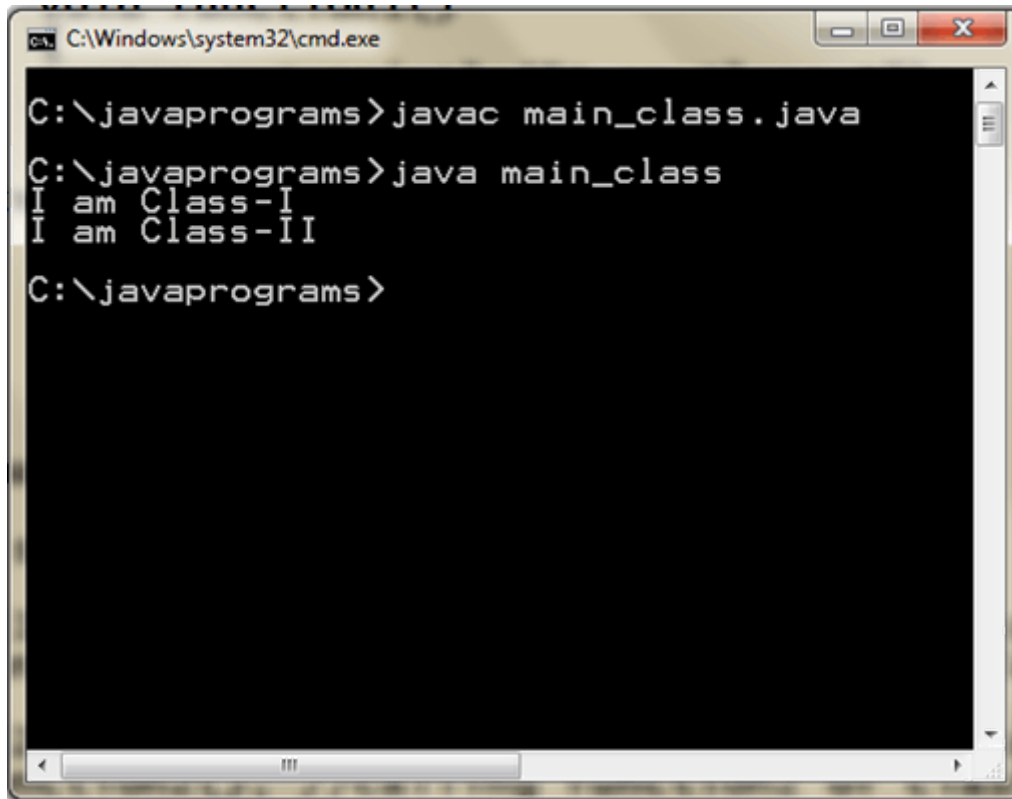
Classes & Objects

- **In java programming, we can use multiple classes in a single program. Classes can be used by creating their objects and using them to call its member function through main class.**
- **As discussed earlier there must be a main class having main function.**

```
main_class.java - Notepad
File Edit Format View Help
class one
{
    void function1()
    {
        System.out.println("I am class-I");
    }
}
class two
{
    void function2()
    {
        System.out.println("I am class-II");
    }
}
class main_class
{
    public static void main(String[] args)
    {
        one obj1=new one(); //creating object of class one
        obj1.function1(); //calling function1 of class one

        two obj2=new two(); //creating object of class two
        obj2.function2(); //calling function2 of class Two
    }
}
```

©Examrace. Report ©violations @<https://tips.fbi.gov/>



```
C:\Windows\system32\cmd.exe

C:\javaprograms>javac main_class.java
C:\javaprograms>java main_class
I am Class-I
I am Class-II
C:\javaprograms>
```

©Examrace. Report ©violations @<https://tips.fbi.gov/>

Functions/Methods

Functions are methods that are created for some specific tasks. Function is a block/container that holds some statements and invoked when it is called.

It can be a public, private, protected, default, final and static. Its specifier defines whether it is accessible from outside the class or not. It can be both pre-defined and user-defined

```
main_class.java - Notepad
File Edit Format View Help

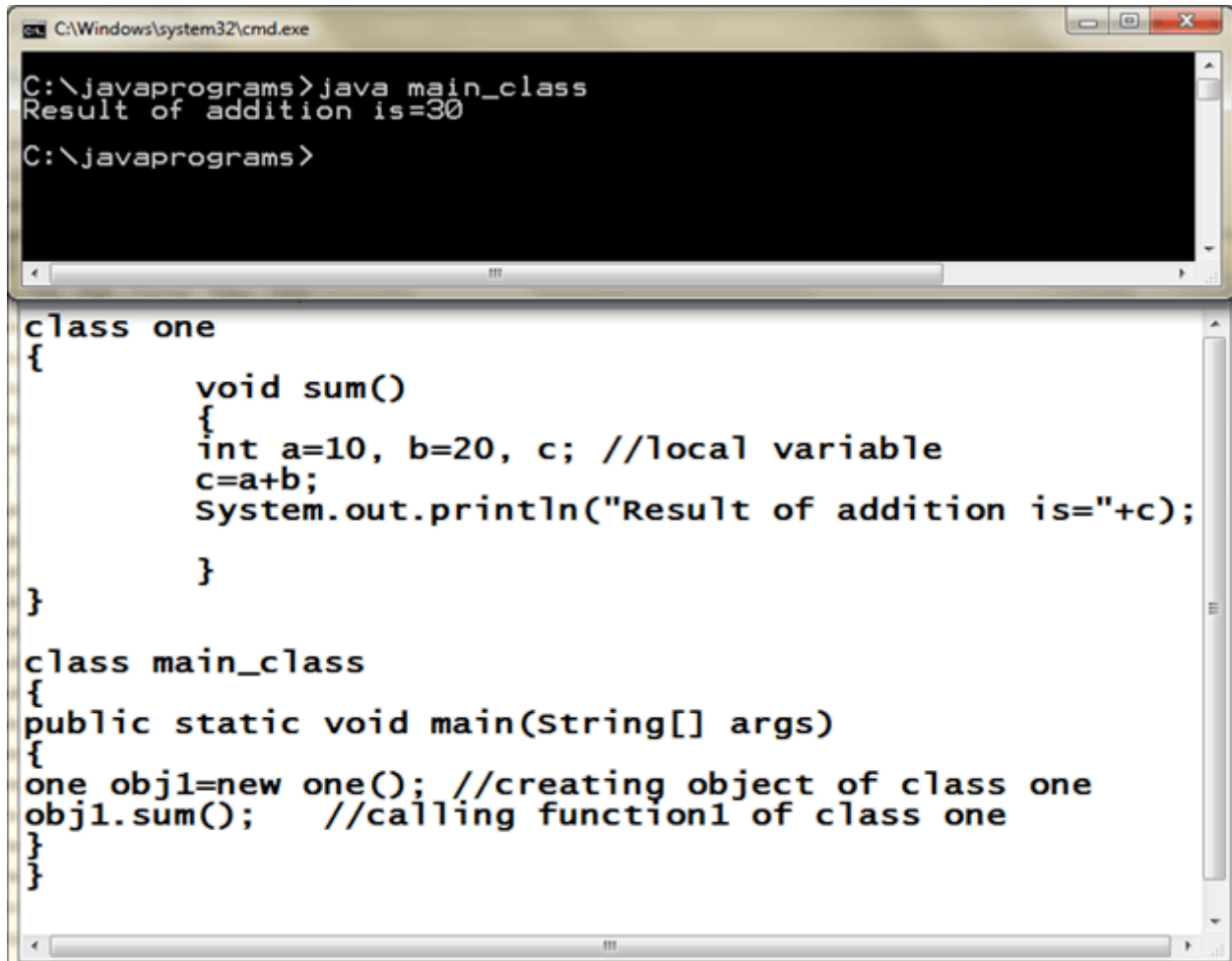
class one
{
    void function1()
    {
        System.out.println("I am class-I");
    }
}
class two
{
    void function2()
    {
        System.out.println("I am class-II");
    }
}
class main_class
{
    public static void main(String[] args)
    {
        one obj1=new one(); //creating object of class one
        obj1.function1(); //calling function1 of class one

        two obj2=new two(); //creating object of class two
        obj2.function2(); //calling function2 of class Two
    }
}
```

©Examrace. Report ©violations @<https://tips.fbi.gov/>

Variable – Local Variable

Local variable is defined inside a function or a method. It is not accessible or used by the another function of the class. It is defined and initialized within the class scope and also destroyed when the function is completed.



```
C:\Windows\system32\cmd.exe
C:\javaprograms>java main_class
Result of addition is=30
C:\javaprograms>

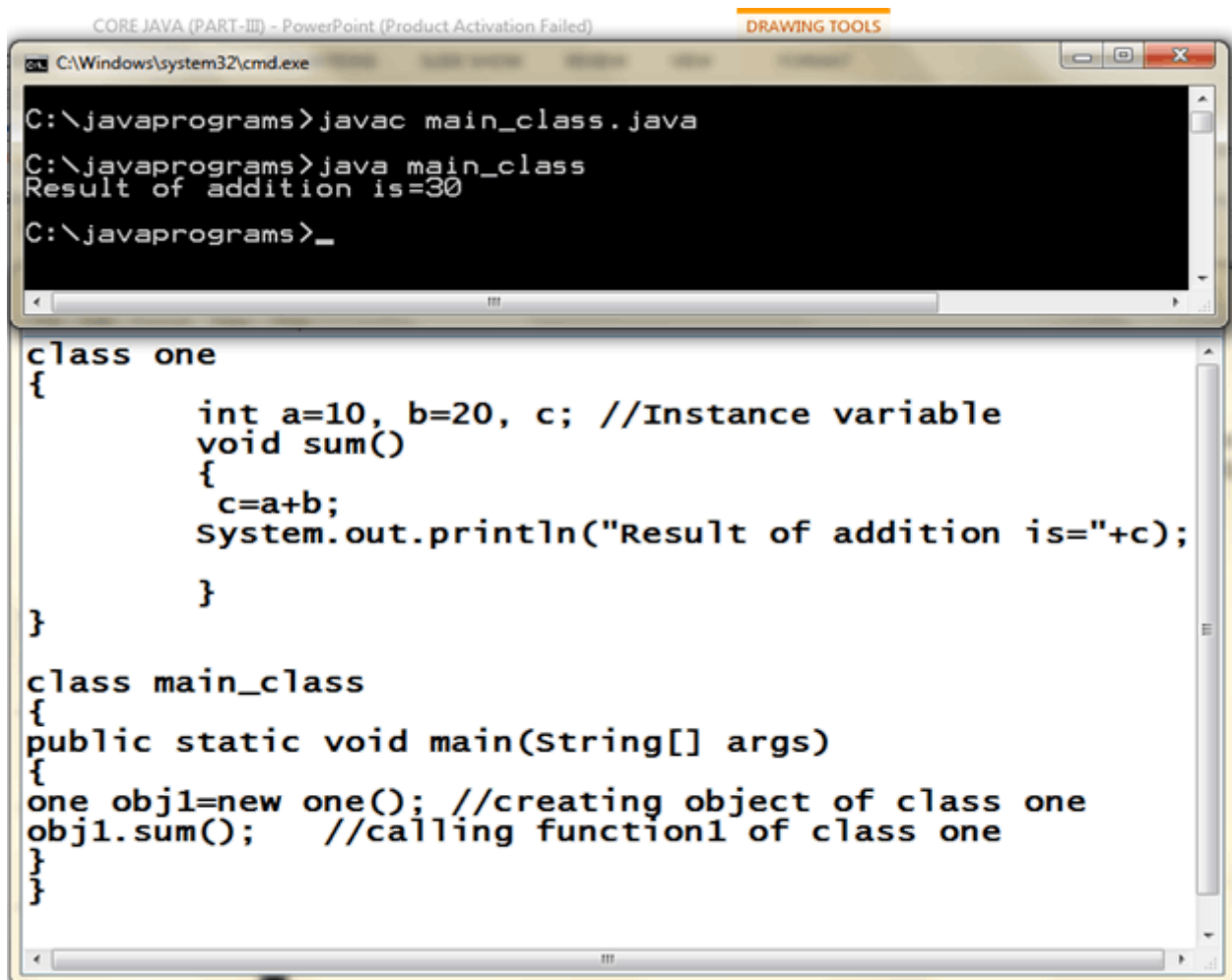
class one
{
    void sum()
    {
        int a=10, b=20, c; //local variable
        c=a+b;
        System.out.println("Result of addition is="+c);
    }
}

class main_class
{
    public static void main(String[] args)
    {
        one obj1=new one(); //creating object of class one
        obj1.sum(); //calling function1 of class one
    }
}
```

©Examrace. Report ©violations @<https://tips.fbi.gov/>

Variable- Instance Variable

Instance variable is defined and can be accessed within the class scope. It can be used by any constructor or method of the same class but cannot be used outside the class.



The image shows a screenshot of a Windows environment. At the top, there is a window titled "CORE JAVA (PART-III) - PowerPoint (Product Activation Failed)" with a "DRAWING TOOLS" toolbar. Below this is a command prompt window with the following text:

```
C:\Windows\system32\cmd.exe
C:\javaprograms>javac main_class.java
C:\javaprograms>java main_class
Result of addition is=30
C:\javaprograms>_
```

Below the command prompt is a code editor window containing the following Java code:

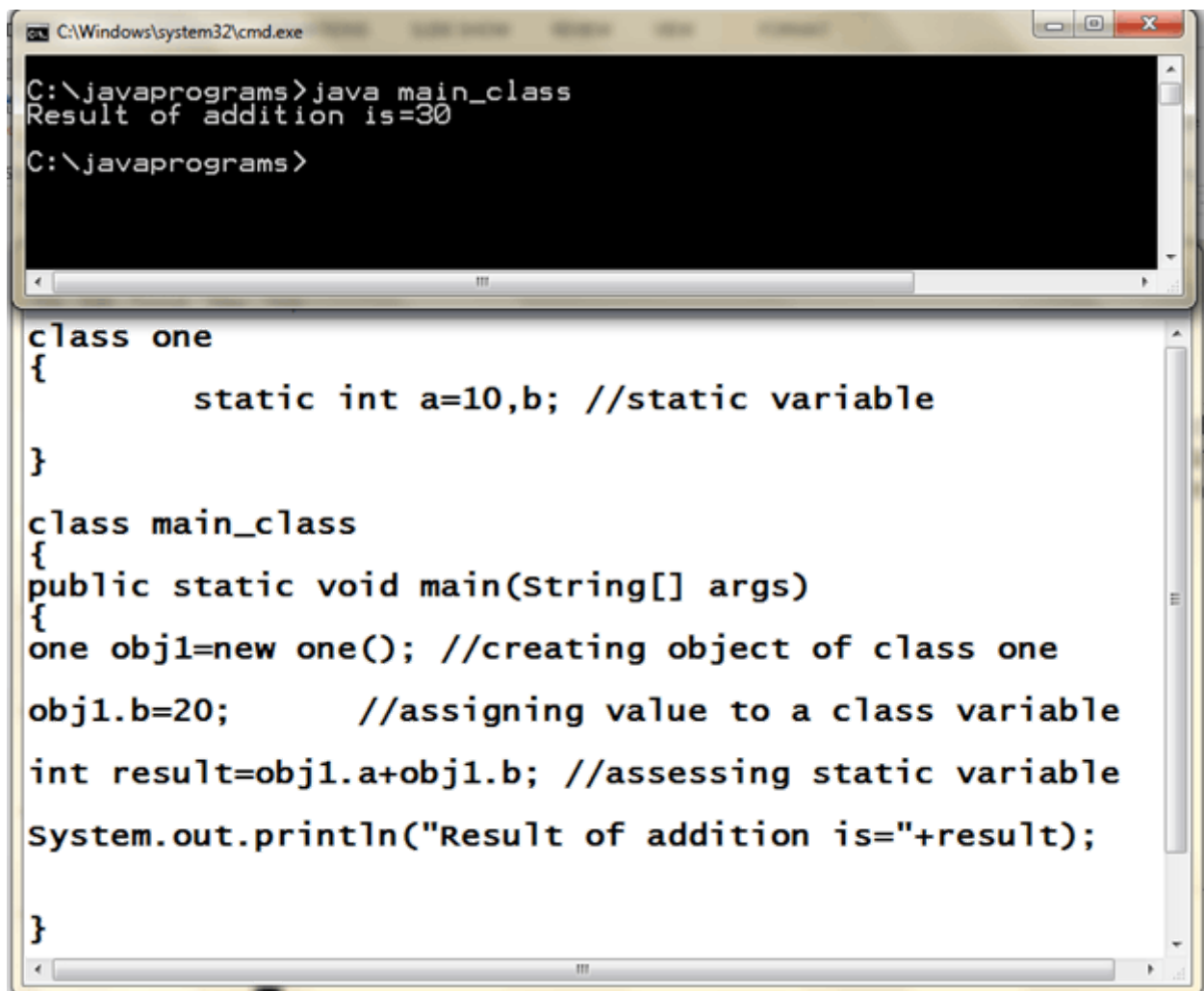
```
class one
{
    int a=10, b=20, c; //Instance variable
    void sum()
    {
        c=a+b;
        System.out.println("Result of addition is="+c);
    }
}

class main_class
{
    public static void main(String[] args)
    {
        one obj1=new one(); //creating object of class one
        obj1.sum(); //calling function1 of class one
    }
}
```

©Examrace. Report ©violations @<https://tips.fbi.gov/>

Variable-Class Variable

Class variable is declared within a class and can be accessed within a class by any method, constructor, also outside the class. It can be declared using static keyword. that's why this is also called static variable. They always initialized whenever a class is instantiate and destroyed when class execution is completed.



```
C:\Windows\system32\cmd.exe
C:\javaprograms>java main_class
Result of addition is=30
C:\javaprograms>
```

```
class one
{
    static int a=10,b; //static variable
}

class main_class
{
public static void main(String[] args)
{
one obj1=new one(); //creating object of class one
obj1.b=20;          //assigning value to a class variable
int result=obj1.a+obj1.b; //assessing static variable
System.out.println("Result of addition is="+result);
}
}
```

©Examrace. Report @violations @<https://tips.fbi.gov/>

Q-1. Which type of variable can be accessed within the class by any member function or outside the class scope?

1. Private
2. Static
3. Default
4. Final

Answer: 2

Q-2. Which is not a function of Scanner class?

1. nextInteger ()
2. nextFloat ()
3. nextDouble ()
4. nextShort ()

Answer: 1

 Mayank

Developed by: [Mindsprite Solutions](#)