Scanner class in JAVA

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Scanner class

- Is used to get <mark>user input</mark>

- In java.util package

- To use the class, first create an object of the class

- Then use the methods available in the class

- Eg., nextLine() is used to read Strings

Simple Example

```java
class Main {
  public static void main(String[] args) {
    Scanner myObj = new Scanner(System.in);
    String userName;

    // Enter username and press Enter
    System.out.println("Enter username");
    userName = myObj.nextLine();

    System.out.println("Username is: " + userName);
  }
}
```

Methods in Scanner class

Method	Description
nextBoolean()	Reads a boolean value from the user
nextByte()	Reads a byte value from the user
nextDouble()	Reads a double value from the user
nextFloat()	Reads a float value from the user
nextInt()	Reads a int value from the user
nextLine()	Reads a String value from the user
nextLong()	Reads a long value from the user
nextShort()	Reads a short value from the user

Example (1)

```java
import java.util.Scanner;

class Main {
  public static void main(String[] args) {
    Scanner myObj = new Scanner(System.in);

    System.out.println("Enter name, age and salary:");

    // String input
    String name = myObj.nextLine();

    // Numerical input
    int age = myObj.nextInt();
    double salary = myObj.nextDouble();

    // Output input by user
    System.out.println("Name: " + name);
    System.out.println("Age: " + age);
    System.out.println("Salary: " + salary);
  }
}
```

Example (2)

```java
// Java program to read data of various types using Scanner class.
import java.util.Scanner;
public class ScannerDemo1
{
    public static void main(String[] args)
    {
        // Declare the object and initialize with
        // predefined standard input object
        Scanner sc = new Scanner(System.in);

        // String input
        String name = sc.nextLine();

        // Character input
        char gender = sc.next().charAt(0);

        // Numerical data input
        // byte, short and float can be read
        // using similar-named functions.
        int age = sc.nextInt();
        long mobileNo = sc.nextLong();
        double cgpa = sc.nextDouble();

        // Print the values to check if the input was correctly obtained.
        System.out.println("Name: "+name);
        System.out.println("Gender: "+gender);
        System.out.println("Age: "+age);
        System.out.println("Mobile Number: "+mobileNo);
        System.out.println("CGPA: "+cgpa);
    }
}
```

Example (3)

```java
// Java program to read some values using Scanner
// class and print their mean.
import java.util.Scanner;

public class ScannerDemo2
{
    public static void main(String[] args)
    {
        // Declare an object and initialize with
        // predefined standard input object
        Scanner sc = new Scanner(System.in);

        // Initialize sum and count of input elements
        int sum = 0, count = 0;

        // Check if an int value is available
        while (sc.hasNextInt())
        {
            // Read an int value
            int num = sc.nextInt();
            sum += num;
            count++;
        }
        int mean = sum / count;
        System.out.println("Mean: " + mean);
    }
}
```

The End