

Scanner Class Examples in Java

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Input Methods in Java

In Java, the **Scanner** class provides various methods to read input from the user. Here are some commonly used methods:

- **nextInt()**: This method reads the next integer value entered by the user. It skips any whitespace and reads until the next whitespace or newline character.
- **nextDouble()**: Similar to **nextInt()**, this method reads the next double value entered by the user.
- **nextBoolean()**: This method reads the next boolean value entered by the user. It reads the next token and attempts to interpret it as a boolean value.
- **nextLine()**: This method reads the next line of text entered by the user. It reads all characters until the end of the line, including white-space.

Input Methods in Java

In Java, the **Scanner** class provides various methods to read input from the user. Here are some commonly used methods:

- **next()**: This method reads the next token entered by the user. It stops reading when it encounters whitespace or a newline character.
- **nextChar()**: Unfortunately, there is no **nextChar()** method in the **Scanner** class. To read a single character, you can use **next().charAt(0)** after reading a string token.

Scanner Class Examples in Java

Reading Integer Input:

```
import java.util.Scanner;

public class IntegerInputExample {
    public static void main(String [] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter an integer: ");
        int num = scanner.nextInt();
        System.out.println("You entered: " + num);
    }
}
```

Scanner Class Examples in Java

Reading Floating-Point Input:

```
import java.util.Scanner;
```

```
public class FloatInputExample {  
    public static void main(String[] args) {  
        Scanner scanner = new Scanner(System.in);  
        System.out.print("Enter a floating-point number: ");  
        double num = scanner.nextDouble();  
        System.out.println("You entered: " + num);  
    }  
}
```

Reading String Input:

```
import java.util.Scanner;
public class StringInputExample {
    public static void main(String [] args) {
        Scanner scanner = new Scanner(System.in);
        System.out.print("Enter a string: -");
        String input = scanner.nextLine();
        System.out.println("You entered: -" + input);
    }
}
```

Single Char Input

- Java provides a simple way to read a single character input from the keyboard.
- We can utilize the **Scanner** class to achieve this.

```
import java.util.Scanner;
public class SingleCharInputExample {
public static void main(String[] args) {
    Scanner obj = new Scanner(System.in);
    System.out.println("Enter a single character:");
    char input = obj.next().charAt(0);
    System.out.println("You entered: -" + input);
}
}
```

Single Char Input

In source code:

- We import the Scanner class.
- Inside the main method, we create a new Scanner object to read input from the standard input stream (System.in).
- We prompt the user to enter a single character.
- We use the next() method to read the input as a string and then use charAt(0) to extract the first character from the input string.
- Finally, we print out the character entered by the user.