FACULTY OF ENGINEERING
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USER INPUT

Basic Java Course

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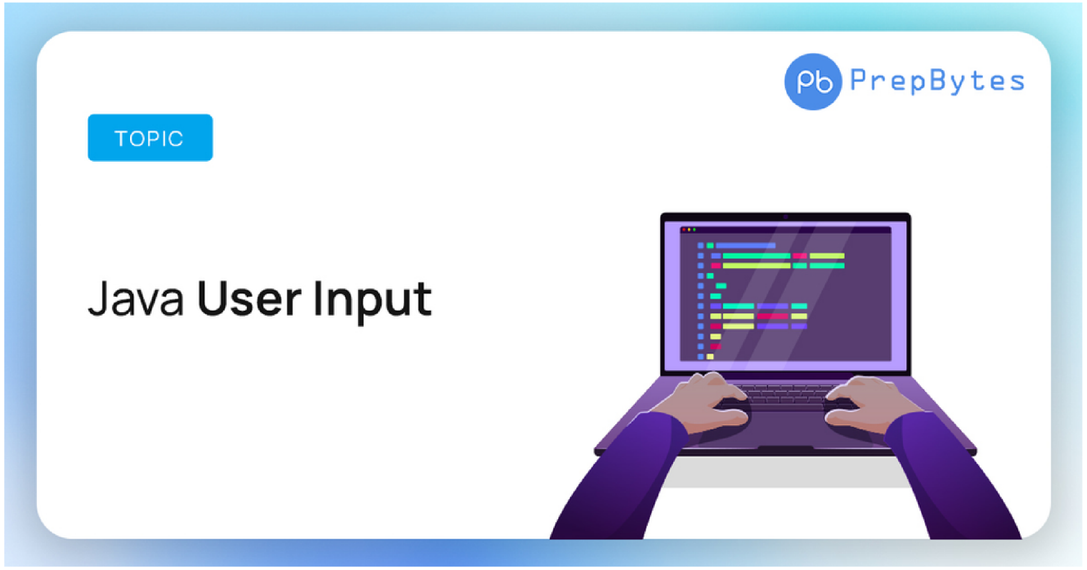
1 INTRODUCTION

- Java user input is a fundamental concept that allows programs to interact with users by reading data they provide.
- This interaction makes programs dynamic and responsive to user actions.
- In Java, the Scanner class from the java.util package is commonly used to read user input from the console.



1 INTRODUCTION

- The Scanner class is used to get user input, and it is found in the java.util package.
- To use the Scanner class, create an object of the class and use any of the available methods found in the Scanner class documentation.

```
import java.util.Scanner;
```
← Importing the Scanner Class

```
Scanner scanner = new Scanner(System.in);
```
↑ Creating a Scanner Object

2 INPUT TYPE

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

Note: Always prompt the user to enter the required data before reading the input.

2 INPUT TYPE

A STRING

- In Java, strings are objects that represent sequences of characters.
- The nextLine() method reads an entire line of input, including spaces, until the end of the line.

Syntax

```
String inputString = scanner.nextLine();
```

2 INPUT TYPE

B INTEGER

- A whole number without any fractional part.
- The nextInt() method reads the next token of input as an integer. It only accepts valid integer input.

Syntax

```
int inputInt = scanner.nextInt();
```

2 INPUT TYPE

C DOUBLE

- A double-precision 64-bit IEEE 754 floating point.
- The nextDouble() method reads the next token of input as a double. It allows for decimal input.

Syntax

```
double inputDouble = scanner.nextDouble();
```

2 INPUT TYPE

D FLOAT

- A single-precision 32-bit IEEE 754 floating point.
- The nextFloat() method reads the next token of input as a float. It also allows for decimal input but with less precision than double.

Syntax

```
float inputFloat = scanner.nextFloat();
```

2 INPUT TYPE

E BOOLEAN

- A data type with only two possible values: true or false.
- The nextBoolean() method reads the next token of input as a boolean. It expects true or false as input.

Syntax

```
boolean inputBoolean = scanner.nextBoolean();
```

2 INPUT TYPE

F LONG

- A 64-bit integer.
- The nextLong() method reads the next token of input as a long. It is used for larger integer values that exceed the range of int.

Syntax

```
long inputLong = scanner.nextLong();
```

2 INPUT TYPE

G SHORT

- A 16-bit integer.
- The nextShort() method reads the next token of input as a short. It is used for smaller integer values.
-

Syntax

```
short inputShort = scanner.nextShort();
```

2 INPUT TYPE

H BYTE

- An 8-bit integer.
- The nextByte() method reads the next token of input as a byte. It is used for very small integer values.

Syntax

```
byte inputByte = scanner.nextByte();
```

2 INPUT TYPE

1 SINGLE WORD(TOKEN)

- A string without spaces, read as a single token.
- The next() method reads the next token from the input. A token is a sequence of characters separated by whitespace.

Syntax

```
String inputToken = scanner.next();
```

END

THANK YOU

FOR YOUR ATTENTION