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## Communicating Boolean values (true/false) between humans and computer

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- **Representing Boolean values in computer**

- In **Java**, we use a **Boolean variable** to store **Boolean values**

**Example:**

```
Boolean x;

x = true;
```

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- **Representing Boolean values for *Humans***

- Humans **usually** use **Strings** to represent **Boolean values**:

String	Representation
"true"	means: true
"false"	means: false

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- **Overcoming (translating) between the 2 representations**

- We write **methods** to **convert** between the **representations** used by **humans** and the **computer**

- **Methods:**

```
boolean parseBoolean( String s ): return a boolean value translated from
                                the input string s
                                If s == "true", we return true
                                If s == "false", we return false

String toString( boolean x ): return a String that represents the boolean
                              value x
                              If x == true, we return "true"
                              If x == false, we return false
```

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- **The conversion methods in Java**

- They are very simple and easy to understand:

```

public class BooleanIO
{
    public static boolean parseBoolean( String s )
    {
        if ( s.equals("true") )
            return true;
        else
            return false;
    }

    public static String toString( boolean x )
    {
        if ( x == true )
            return "true";
        else
            return "false";
    }
}

```

- Here's a program that show to use **parseBoolean()** (to allow a user to enter a **Boolean value** to the computer)

```

Scanner in = new Scanner( System.in );

String input;

boolean x;

System.out.print("Enter a boolean value: ");
input = in.nextLine();

x = BooleanIO.parseBoolean(input);

```

- **Example Program:** (Demo above code)

*Example*

- The **class** that contains the **conversion methods**: [click here](#)
- The **BooleanDemo** test Prog file: [click here](#)

#### How to run the program:

- **Right click** on link and **save** in a scratch directory
- To compile: `javac BooleanDemo.java`
- To run: `java BooleanDemox`

#### • Postscript

- The **Java library** *already* has these **methods** !!

- You can use this instead:

```
boolean x;  
  
x = Boolean.parseBoolean( "true" );  
  
or  
  
x = Boolean.parseBoolean( "false" );
```

See: [click here](#)

