

(Transcript) Java This Keyword



Let's talk a Java Keyword called this. Do you see our fields named studentID and studentName? They are fields also known as instance variables and sometimes called global variables. Java has 3 type of variables: instance variable, class variable, and local variable. In some cases, you may hear a parameter mentioned as a parameter variable because the value can change.

This program has 2 fields aka instance variables with the same name as 2 parameters: studentID and studentName. There's confusion when a program has an instance variable and local variable with the same name.

To avoid confusion, we use keyword this which refers to the instance variable. Therefore, we write this. before studentID = studentID and this.studentName = studentName. Do you see the color of each word? The color gives us a tip regarding which one is the instance and which one is the local. Another tip is clicking the variable. If I click, this.studentID then the instance variable and this.studentID both highlight.

```
public class Student {  
    // Keyword 'this' Refers To A Field Name aka Instance Variable  
    int studentID;  
    String studentName;  
  
    public Student (int studentID, String studentName) {  
        this.studentID = studentID;  
        this.studentName = studentName;  
    }  
}
```

The same happens when clicking studentID inside the parenthesis. We see studentID without this. highlight.

We can use keyword this inside constructors and methods. It's not required to have an instance variable and local variable with the same name. We can choose to provide different names. For example, I will create another constructor

```
public Student (String studName, int studID) {  
    this.studentName = studName; The names are not the same. Also, if we wanted to, we can leave off  
    the keyword this.
```

```
    studentID = studID;
```

```
}
```

```
public Student (String studName, int studID) {  
    this.studentName = studName;  
    studentID = studID;  
}
```

However, it's best to be consistent, you can make both words the same and write keyword this, you can make both words different, or write keyword this when both words are not the same. Either way, just be consistent with your program. Personally, I like my naming conventions to be descriptive so I pick the first 2 syntaxes: this.studentID = studentID and this.studentName = studentName. Also, using the keyword this prevent discrepancies, limit redundancy and increase readability.

Let's test our program by creating a method called:

```
public void displayStudentInfo () {  
    sysout("Student ID = " + this.studentID + "\n" +  
        "Student Name = " + this.studentName + "\n");  
}
```

```
public void displayStudentInfo () {  
    System.out.println("Student ID = " + this.studentID + "\n" +  
        "Student Name = " + this.studentName + "\n");  
}
```

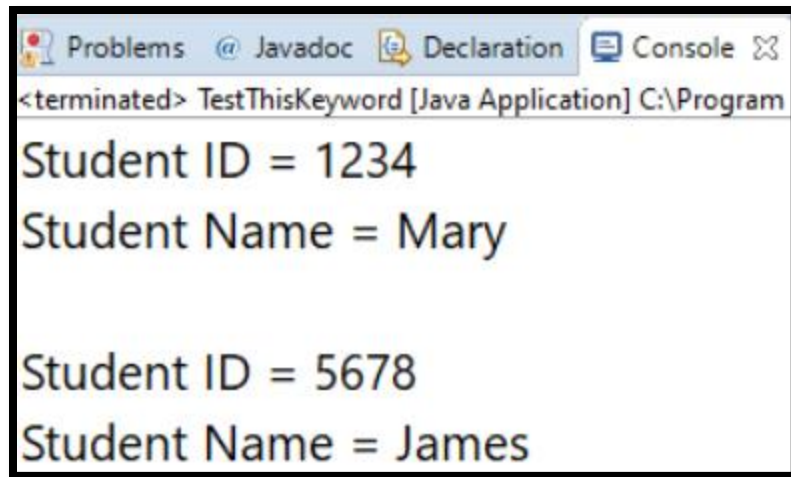
Let's also create another class right click the package, new, Class. The name will be TestThisKeyword and click checkbox for public static void main.

```
Student student1 = new Student(1234, "Mary");  
student1.displayStudentInfo();
```

```
Student student2 = new Student("James", 5678);  
student2.displayStudentInfo();
```

```
public class TestThisKeyword {  
  
    public static void main(String[] args) {  
        Student student1 = new Student(1234, "Mary");  
        student1.displayStudentInfo();  
  
        Student student2 = new Student("James", 5678);  
        student2.displayStudentInfo();  
    }  
}
```

Let's Run. The console shows the correct information for Student ID and Student Name. That's a quick video on the keyword this.



The screenshot shows an IDE console window with tabs for Problems, Javadoc, Declaration, and Console. The title bar indicates the application is 'TestThisKeyword [Java Application]' running at 'C:\Program'. The console output displays two sets of student information: 'Student ID = 1234' and 'Student Name = Mary' on the first line, followed by 'Student ID = 5678' and 'Student Name = James' on the second line.

```
<terminated> TestThisKeyword [Java Application] C:\Program  
Student ID = 1234  
Student Name = Mary  
  
Student ID = 5678  
Student Name = James
```

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