

# Methods and Parameters

# Announcements

- Assignment 2 (**Welcome to Java!**) is due on Monday, January 26 at 3:15PM.
  - **Recommendation:** Try to complete the first four parts of the assignment by Friday.
- WiCS Casual CS Dinner is tonight at 6PM on the fifth floor of the Gates building.
  - Wonderful event, highly recommended!

# Passing Parameters

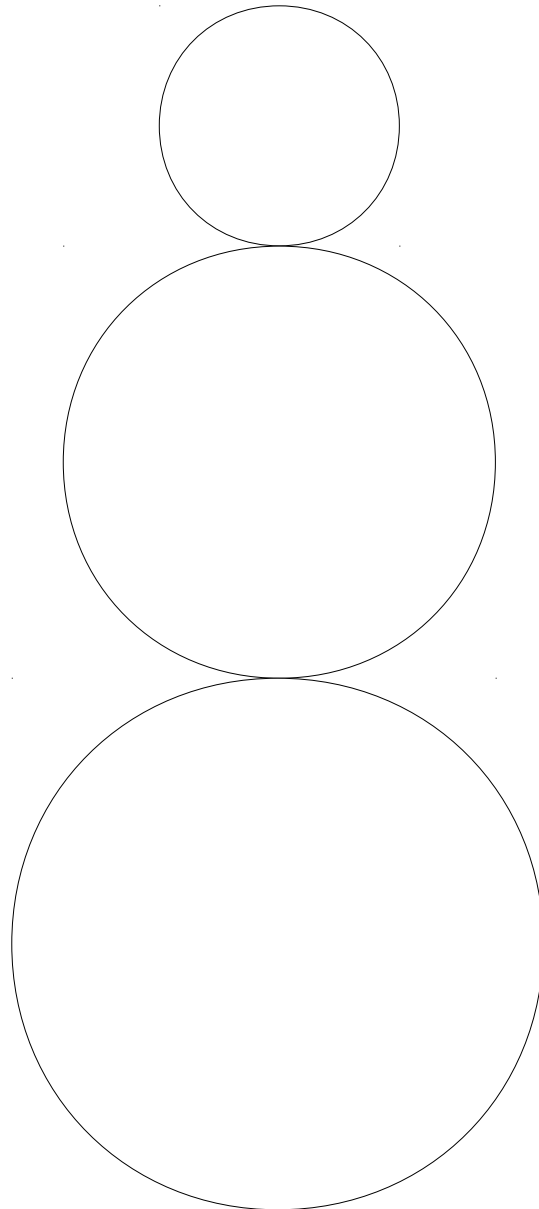
- A method can accept *parameters* when it is called.
- Syntax:

```
private void name(parameters) {  
    /* ... method body ... */  
}
```

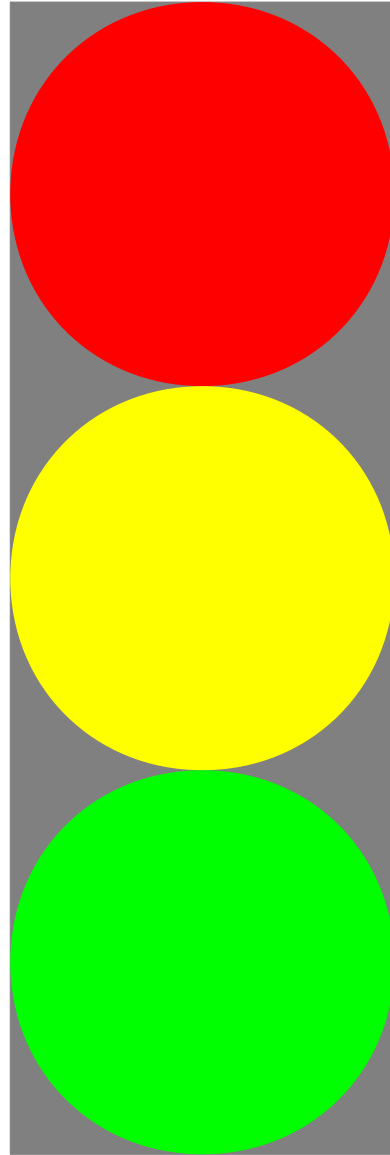
- The values of the parameters inside the method are set when the method is called.
- The values of the parameters can vary between calls.

# Programming with Parameters

# Drawing a Snowman



# Drawing a Stoplight



# Variables, Revisited

# Assignment Statements

- A variable consists of
  - a ***name*** (what is it called?),
  - a ***type*** (what sort of value does it hold?), and
  - a ***value***.
- A variable's name and type can never change.
- However, it *is* possible to change the value stored in a variable.



# Assignment Statements

- A statement of the form

***variable = newValue;***

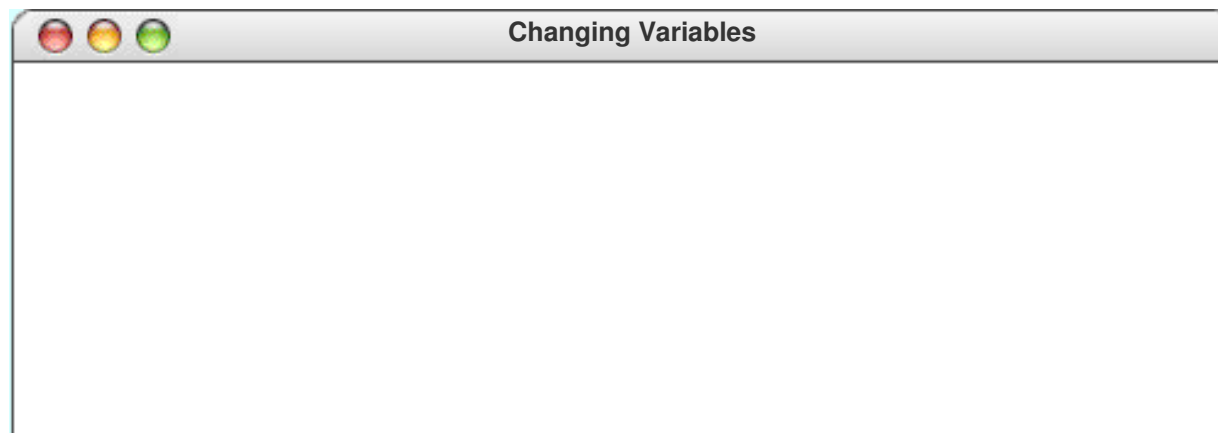
changes ***variable*** so that it now stores ***newValue*** instead of its old value.

- This statement is called an ***assignment statement***.

# An Example

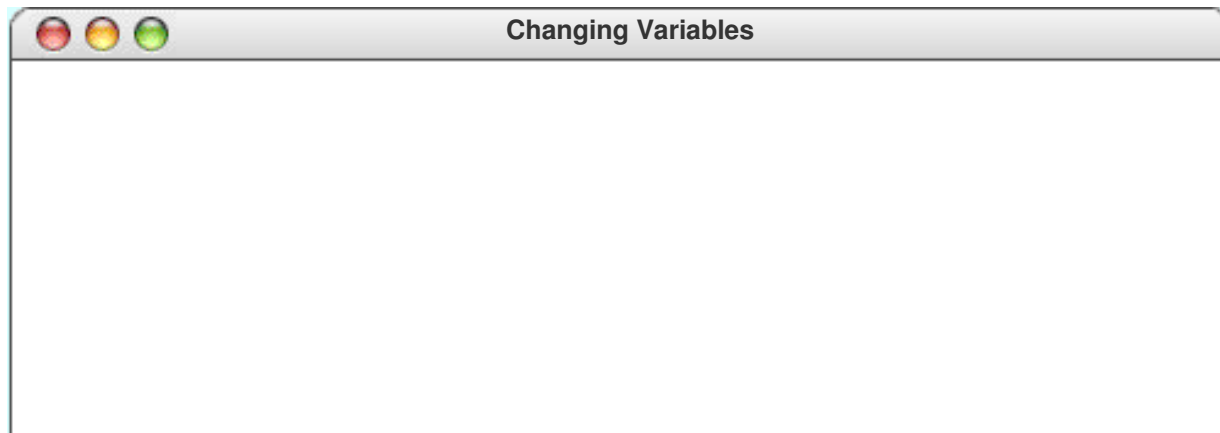
```
public void run() {
```

```
}
```



# An Example

```
public void run() {  
    int favoriteNumber = 4;  
  
}
```



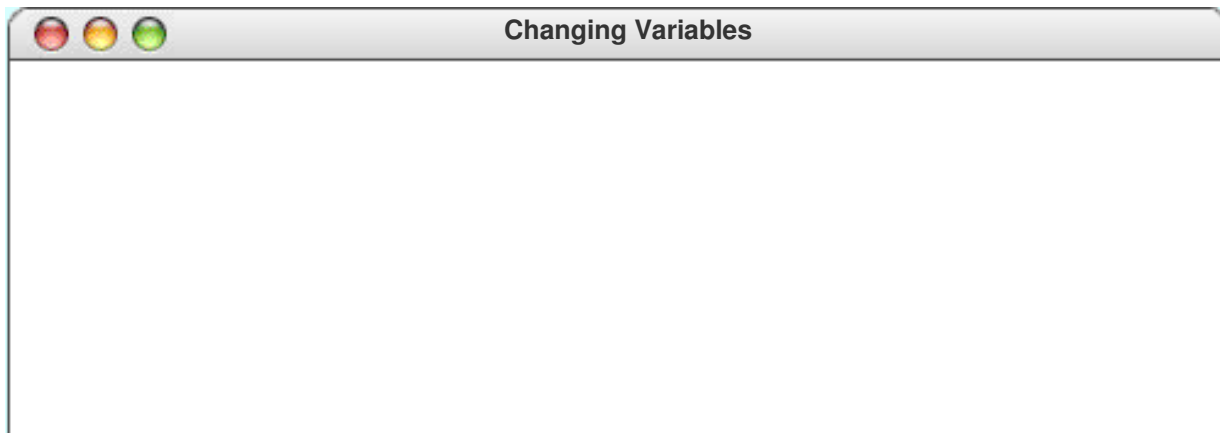
# An Example

```
public void run() {  
    int favoriteNumber = 4;  
}
```

favoriteNumber



}



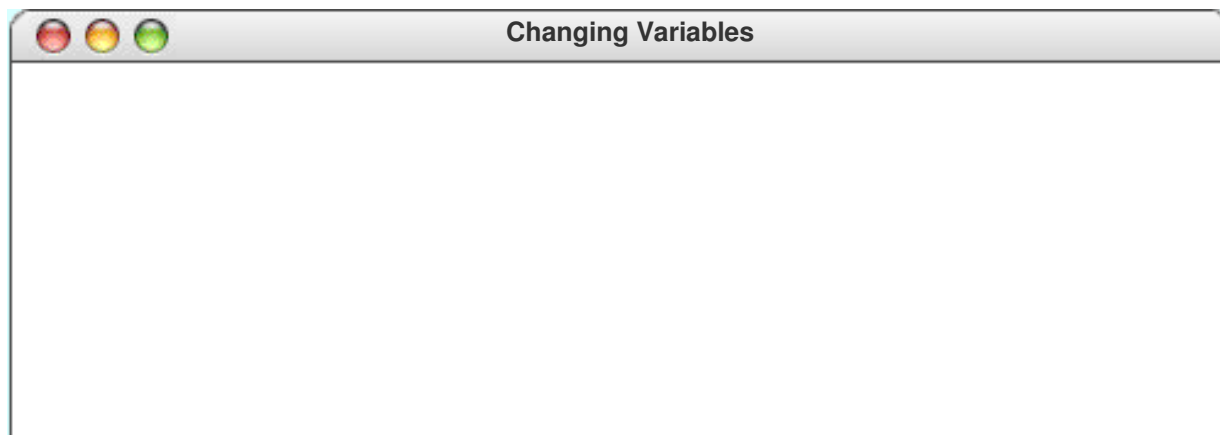
# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);  
}
```

favoriteNumber



}



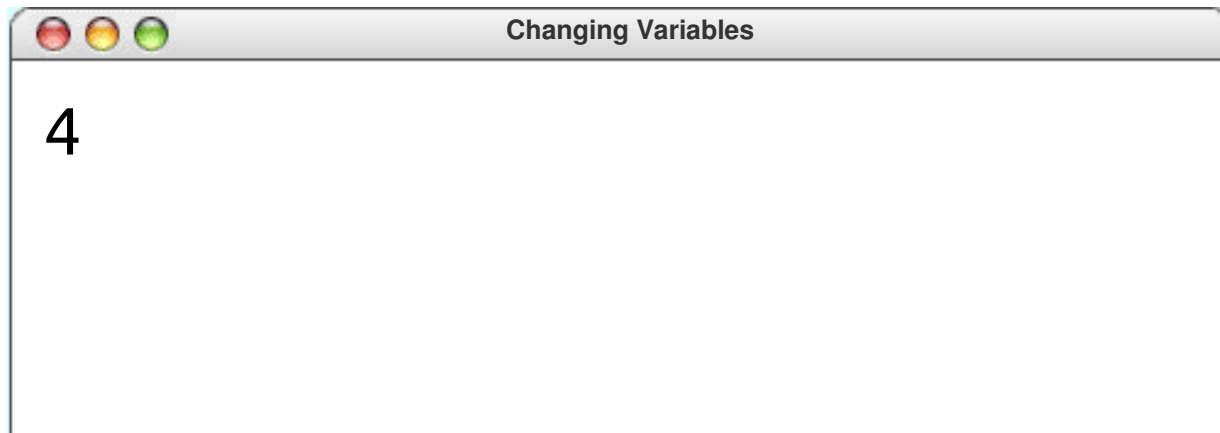
# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);  
}
```

favoriteNumber



}



# An Example

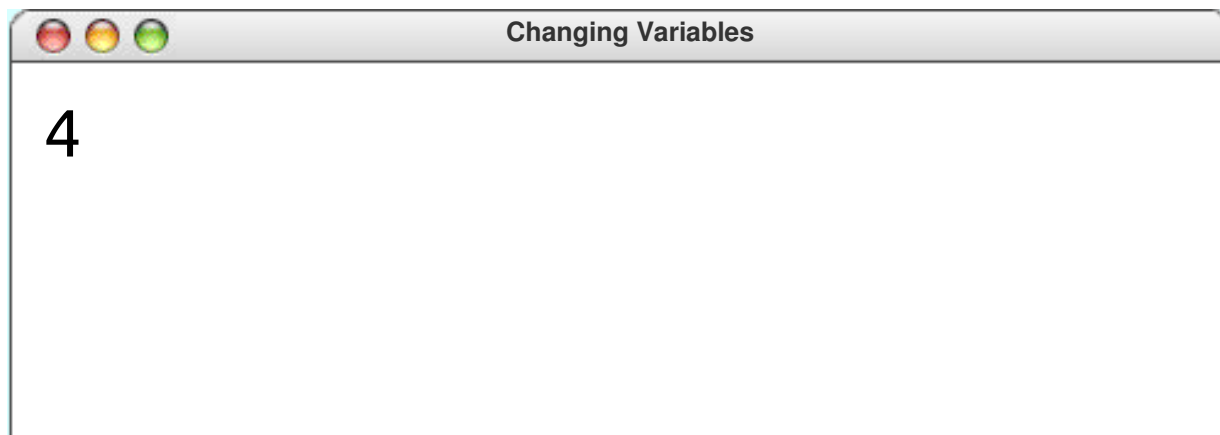
```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

favoriteNumber

4

```
favoriteNumber = 137;
```

```
}
```



# An Example

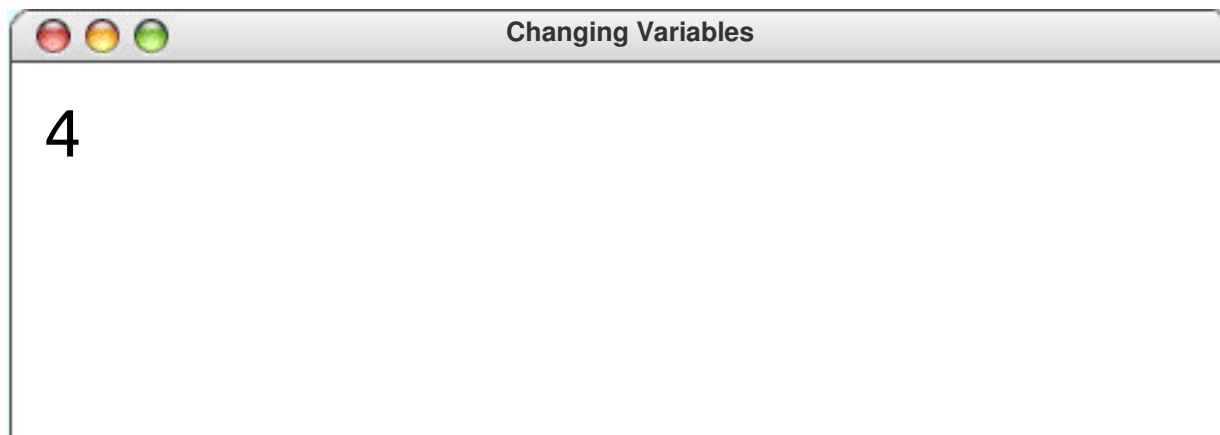
```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

favoriteNumber

137

```
favoriteNumber = 137;
```

```
}
```





# An Example

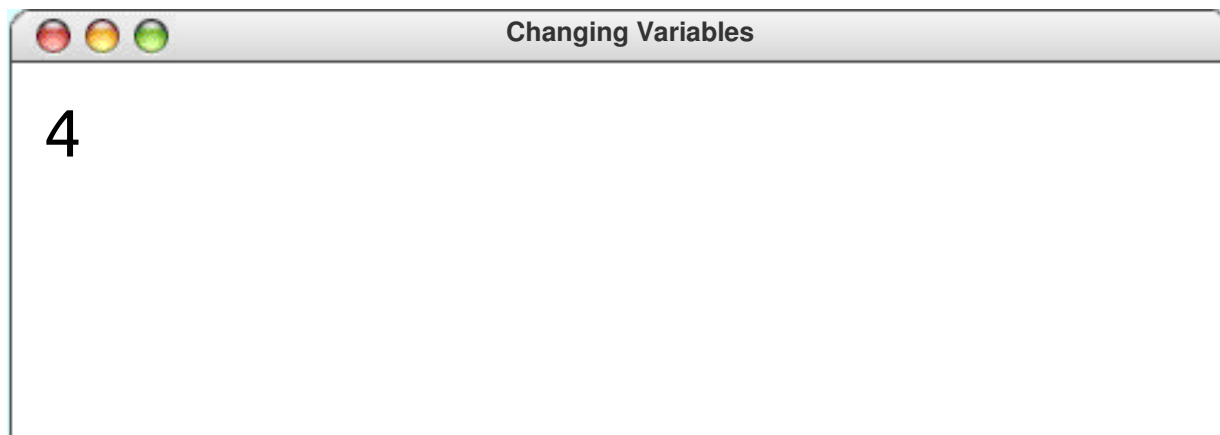
```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

favoriteNumber

137

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
}
```



# An Example

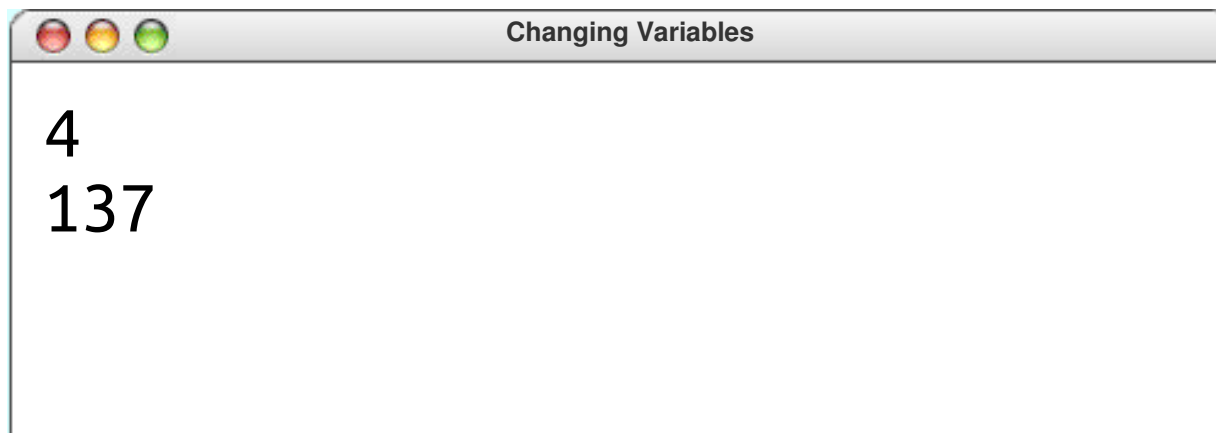
```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

favoriteNumber

137

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
}
```



# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

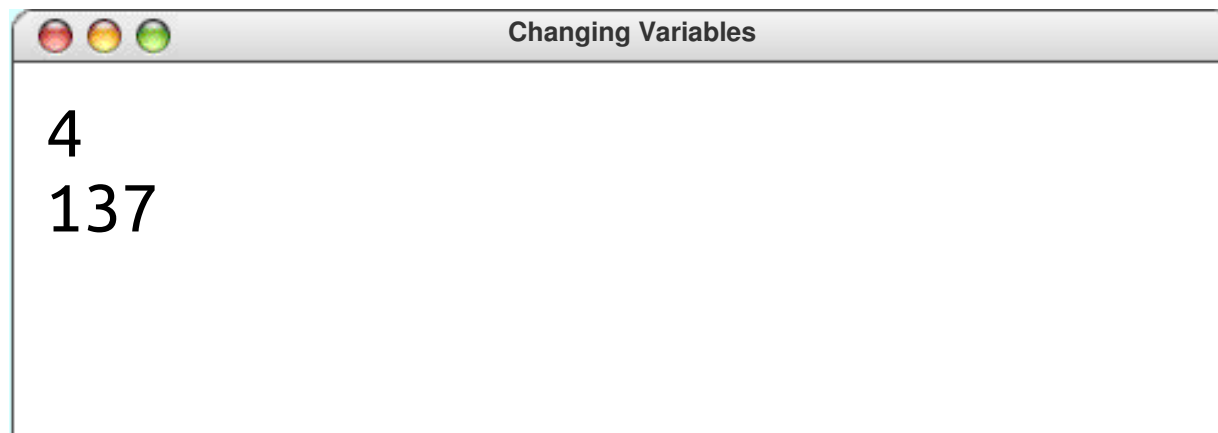
favoriteNumber

137

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
    favoriteNumber = 137 + 42;
```

```
}
```



# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

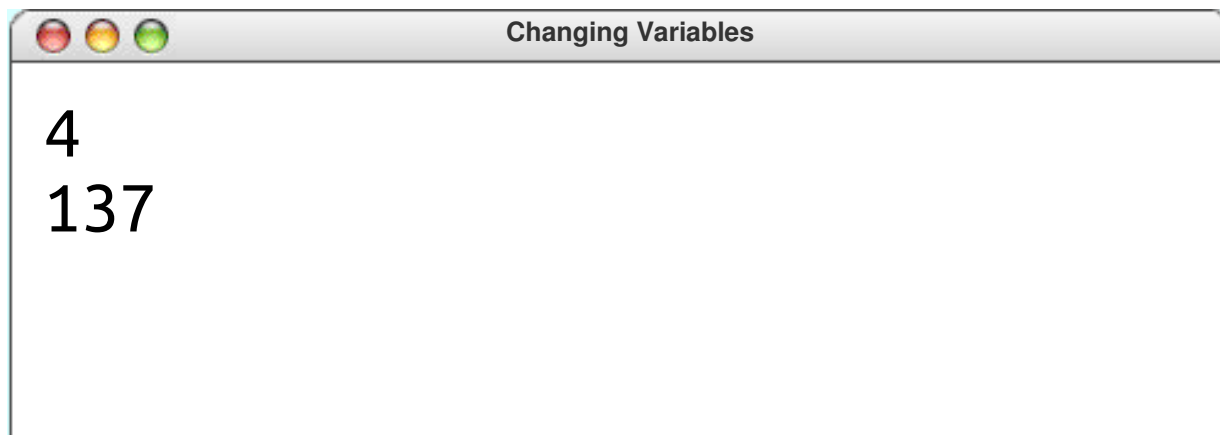
favoriteNumber

179

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
    favoriteNumber = 137 + 42;
```

```
}
```



# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

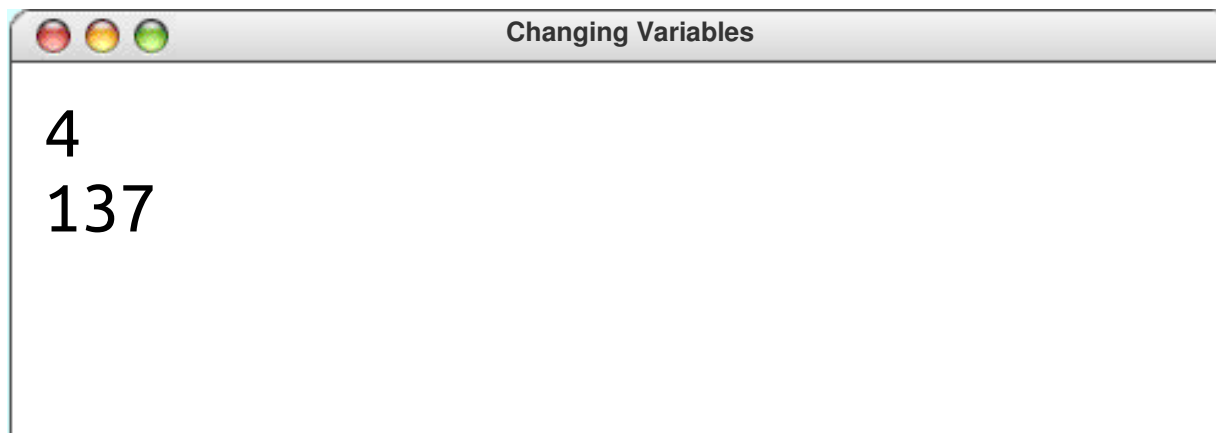
favoriteNumber

179

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
    favoriteNumber = 137 + 42;  
    println(favoriteNumber);
```

```
}
```



# An Example

```
public void run() {  
    int favoriteNumber = 4;  
    println(favoriteNumber);
```

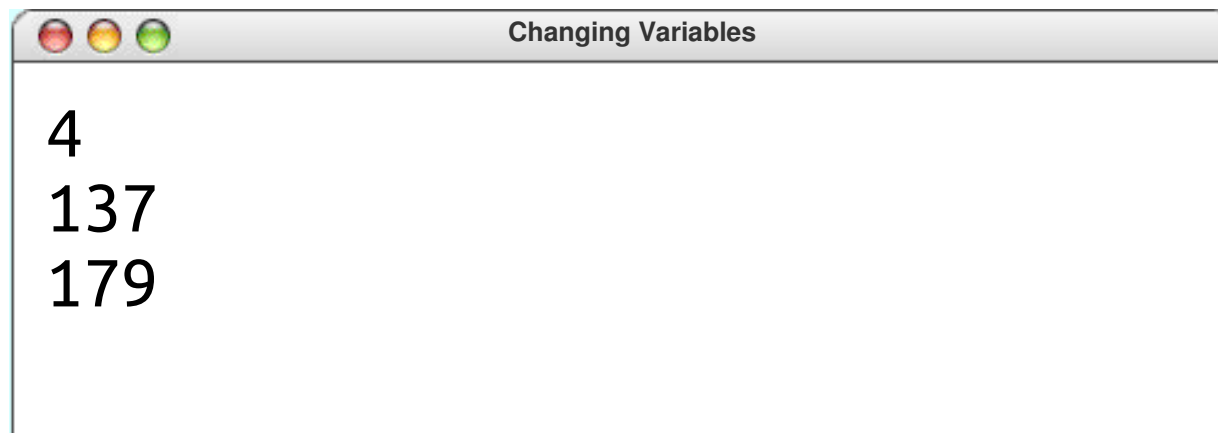
favoriteNumber

179

```
    favoriteNumber = 137;  
    println(favoriteNumber);
```

```
    favoriteNumber = 137 + 42;  
    println(favoriteNumber);
```

```
}
```



# Another Example

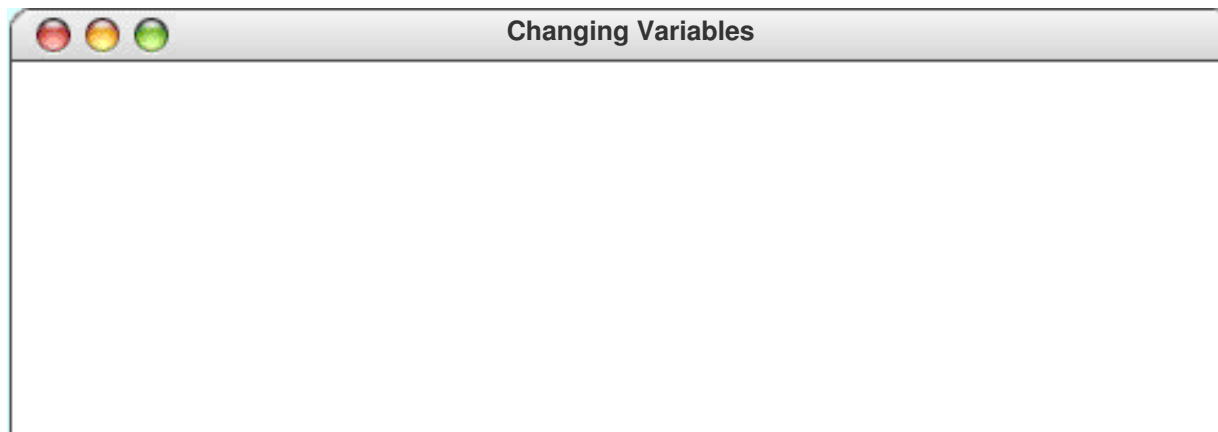
```
public void run() {
```

```
}
```

# Another Example

```
public void run() {
```

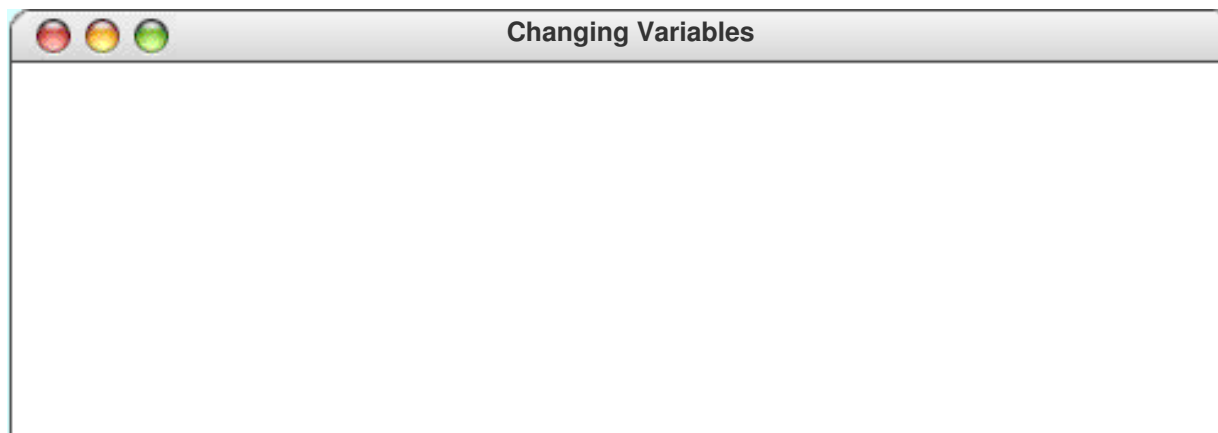
```
}
```





# Another Example

```
public void run() {  
    int a = 5;  
    int b = 7;  
  
}
```



# Another Example

```
public void run() {  
    int a = 5;  
    int b = 7;
```

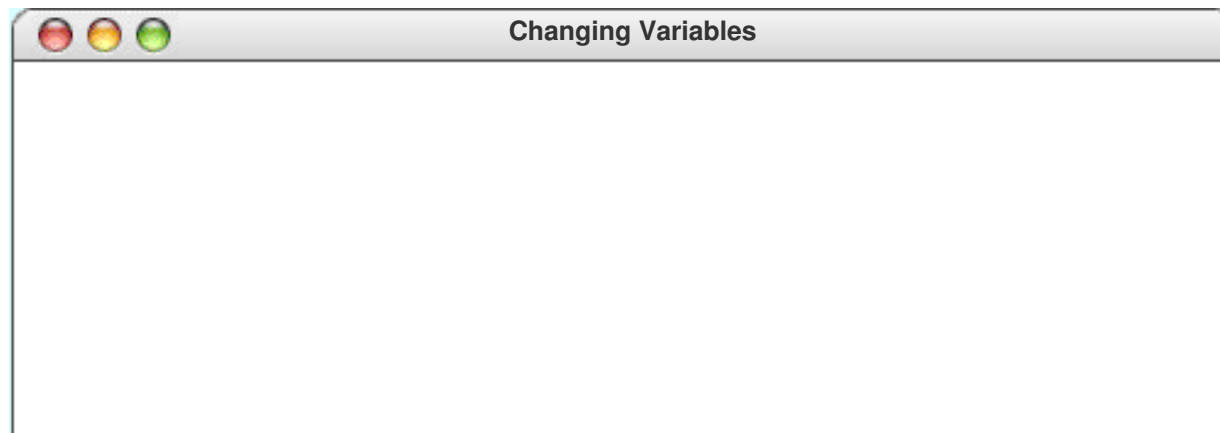
a



b



```
}
```



# Another Example

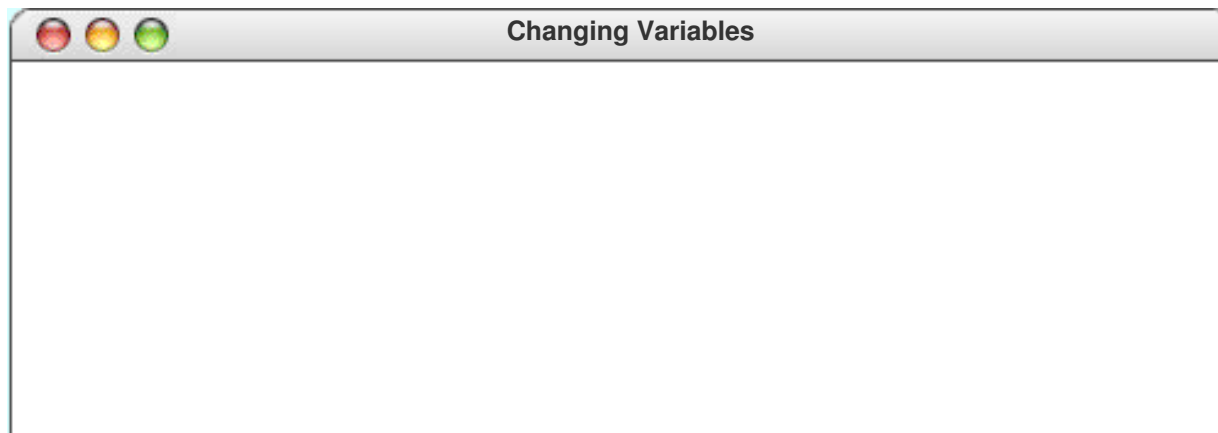
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
  
}
```

a

5

b

7



# Another Example

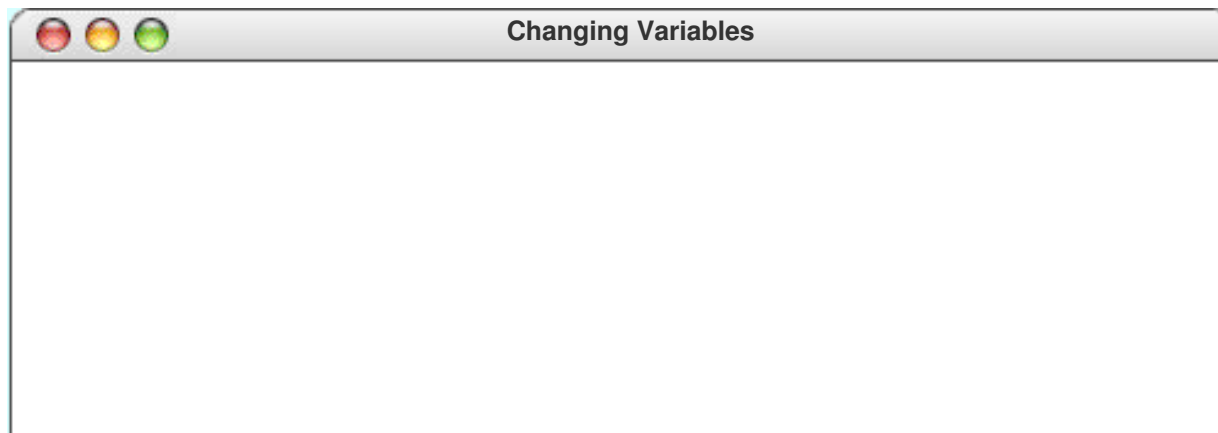
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
  
}
```

a

10

b

7



# Another Example

```
public void run() {  
    int a = 5;  
    int b = 7;
```

a

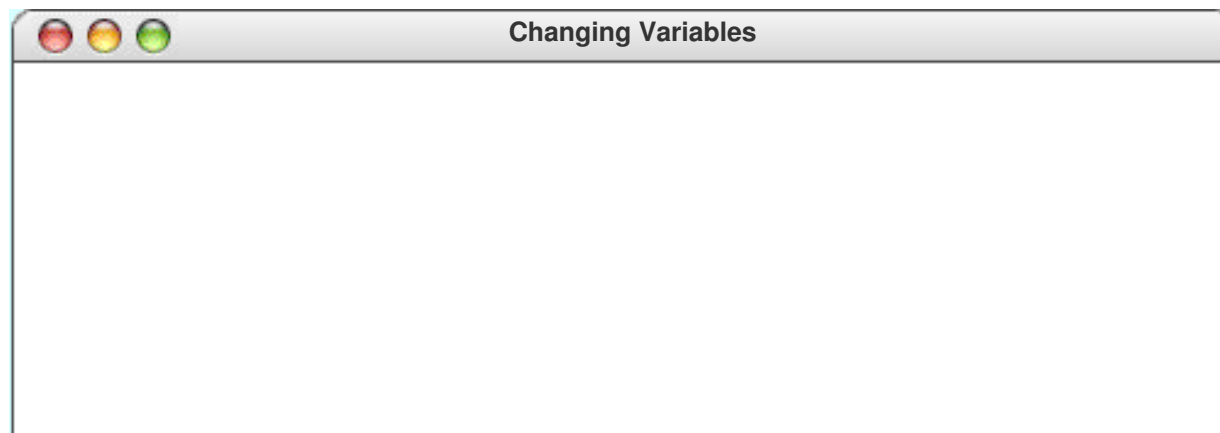
10

b

7

```
    a = b + 3;  
    println(a);
```

```
}
```



# Another Example

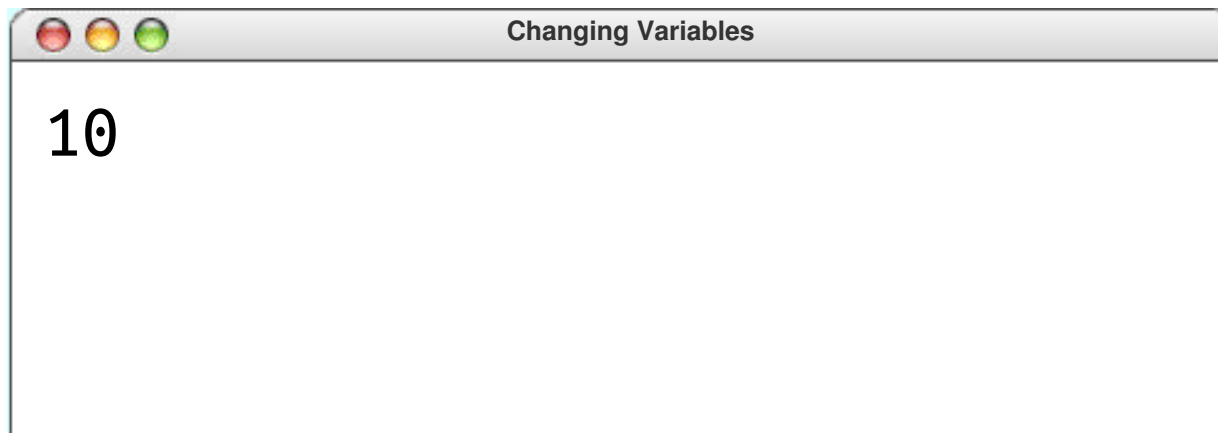
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
}
```

a


10


b

7

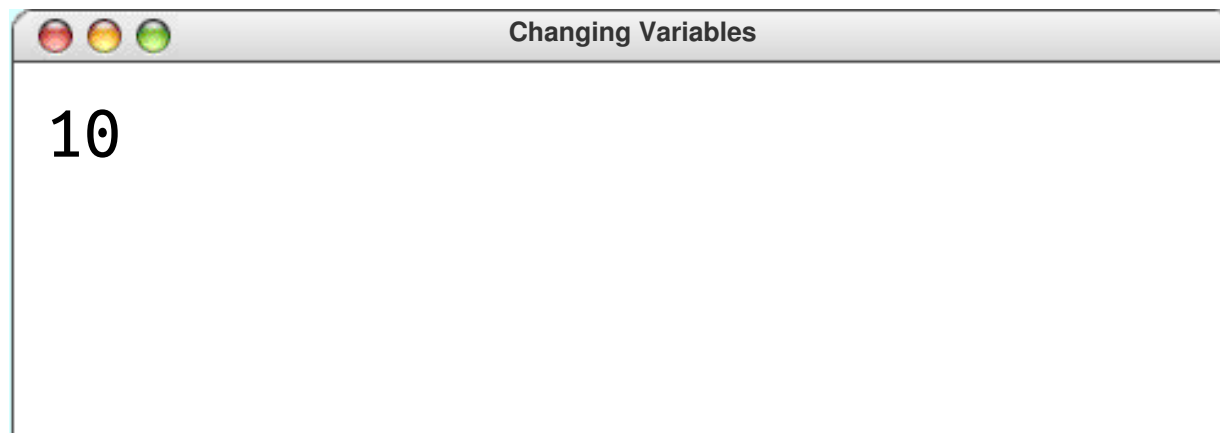


# Another Example

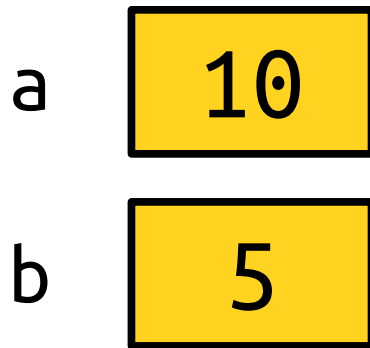
a 

b 

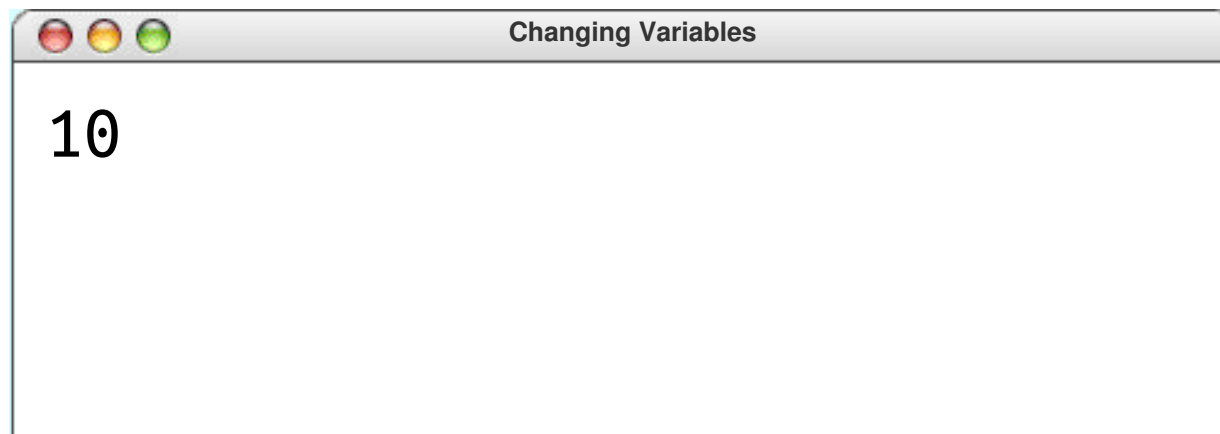
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
  
}
```



# Another Example

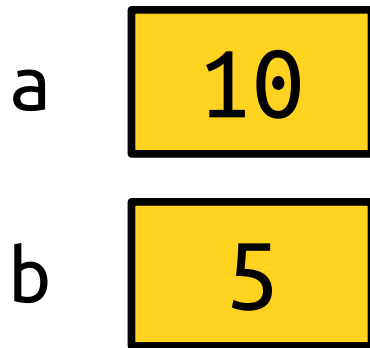


```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
  
}
```

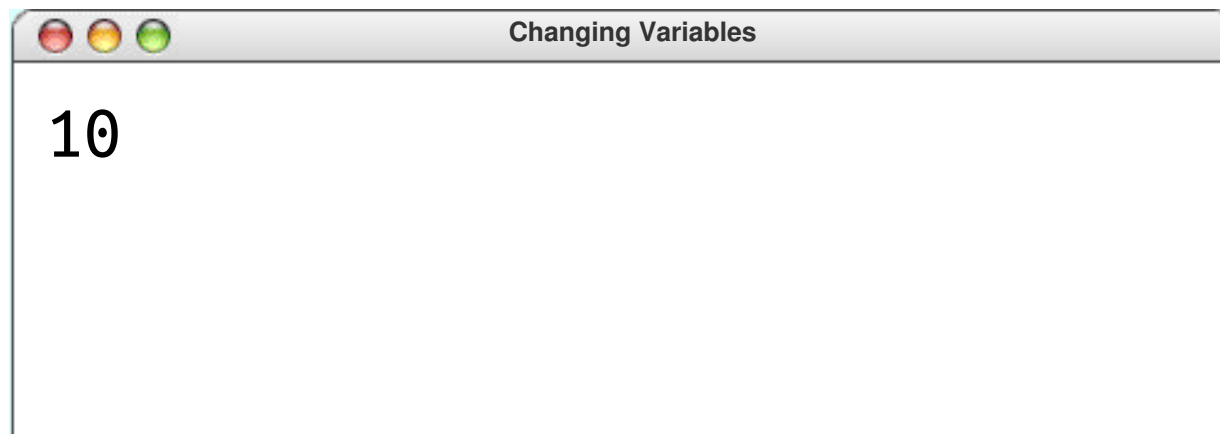




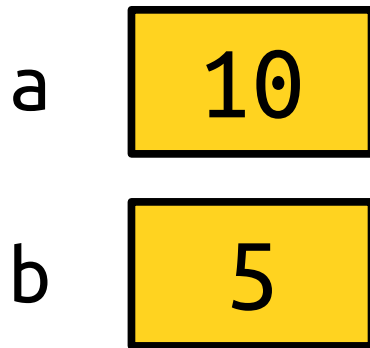
# Another Example



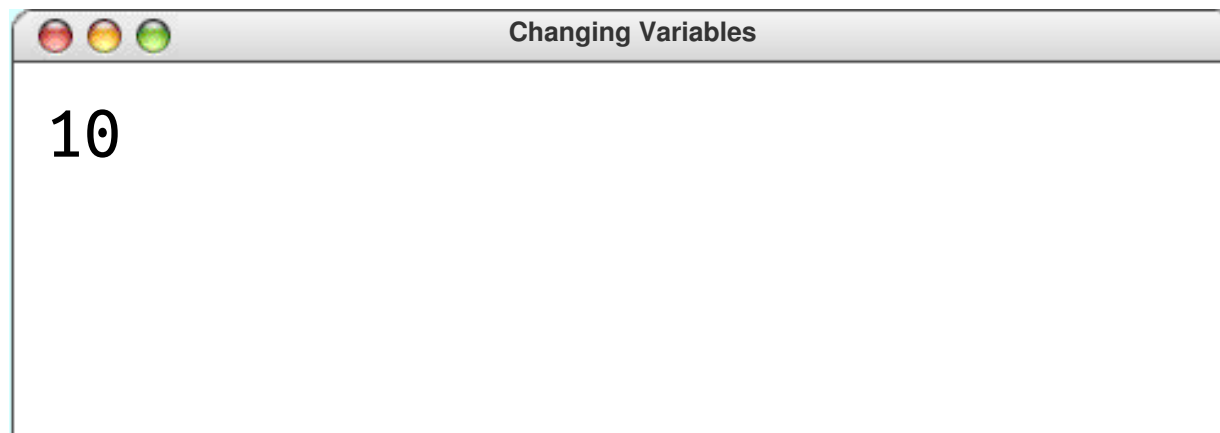
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
  
}
```



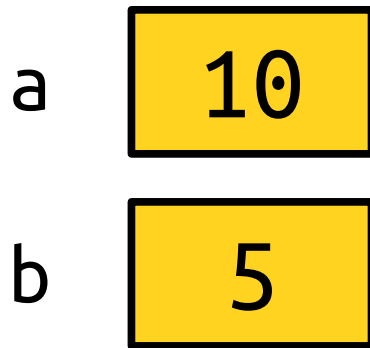
# Another Example



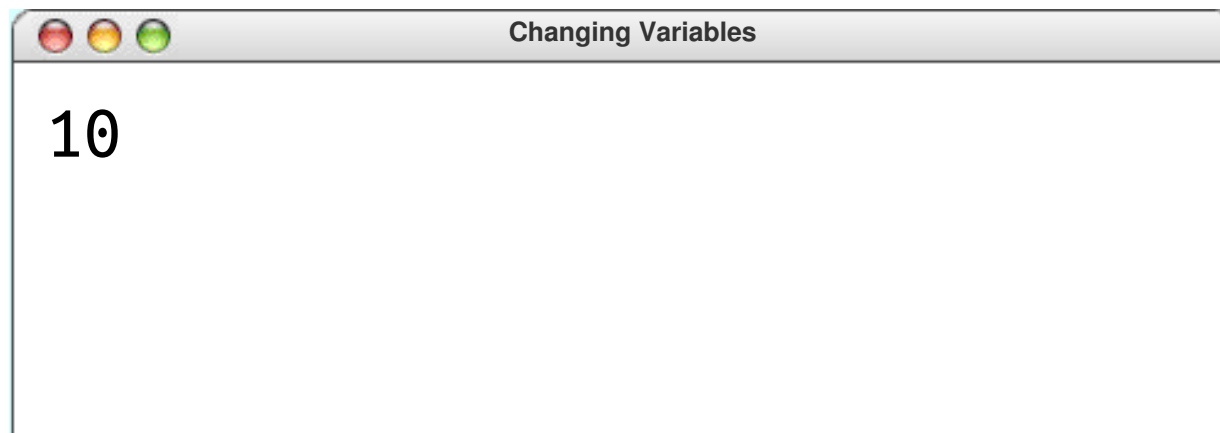
```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
  
}
```



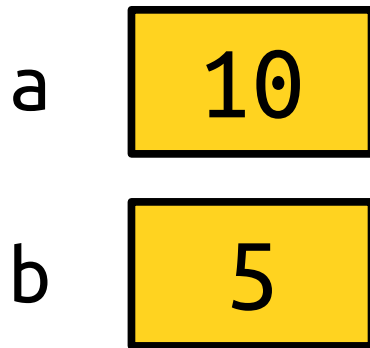
# Another Example



```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
    println(a);  
}
```



# Another Example



```
public void run() {  
    int a = 5;  
    int b = 7;  
  
    a = b + 3;  
    println(a);  
  
    b = 5;  
    println(a);  
}
```

