

Key point: *An if statement is a construct that enables a program to specify alternative paths of execution.*

- A one-way **if** statement executes an action if and only if the condition is **true**.

```
if (boolean-expression) {  
    statement(s);  
}
```

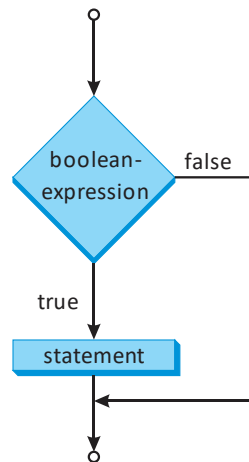


Figure 3.1 (a) An **if** statement executes statements if the **boolean-expression** evaluates to **true**.

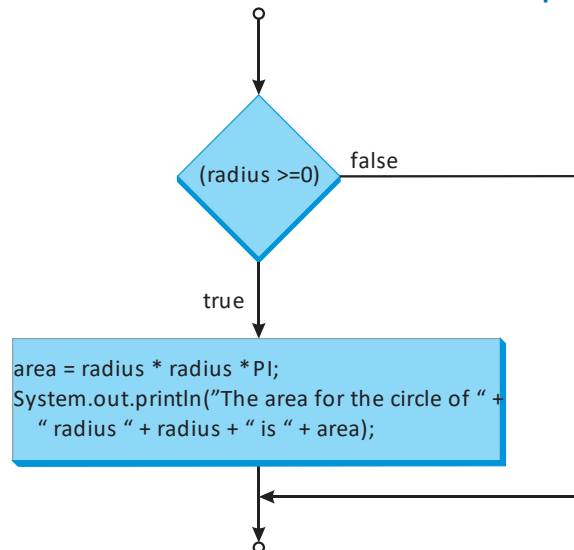


Figure 3.1 (b) An **if** statement executes statements if the **boolean-expression** evaluates to **true**.

```
if (radius >= 0) {  
    area = radius * radius * PI;  
    System.out.println("The area for the circle of " +  
        radius + " is " + area);  
}
```

<pre>if i > 0 { System.out.println("i is positive"); }</pre>	<pre>if (i > 0) { System.out.println("i is positive"); }</pre>
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(a) Wrong

(b) Correct

(a) and (b) are equivalent

<pre>if (i > 0) { System.out.println("i is positive"); }</pre>	<pre>if (i > 0) System.out.println("i is positive");</pre>
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(a)

(b)

Listing 3.2 SimpleIfDemo.java

```
1  import java.util.Scanner;  
2  
3  public class SimpleIfDemo {  
4      public static void main(String[] args) {  
5          Scanner input = new Scanner(System.in);  
6          System.out.print("Enter an integer: ");  
7          int number = input.nextInt();  
8  
9          if (number % 5 == 0)  
10             System.out.println("HiFive");  
11  
12             if (number % 2 == 0)  
13                 System.out.println("HiEven");  
14     }  
15 }
```

```
run:  
Enter an integer: 4  
HiEven  
BUILD SUCCESSFUL (total time: 9 seconds)
```

```
run:  
Enter an integer: 30  
HiFive  
HiEven  
BUILD SUCCESSFUL (total time: 6 seconds)
```