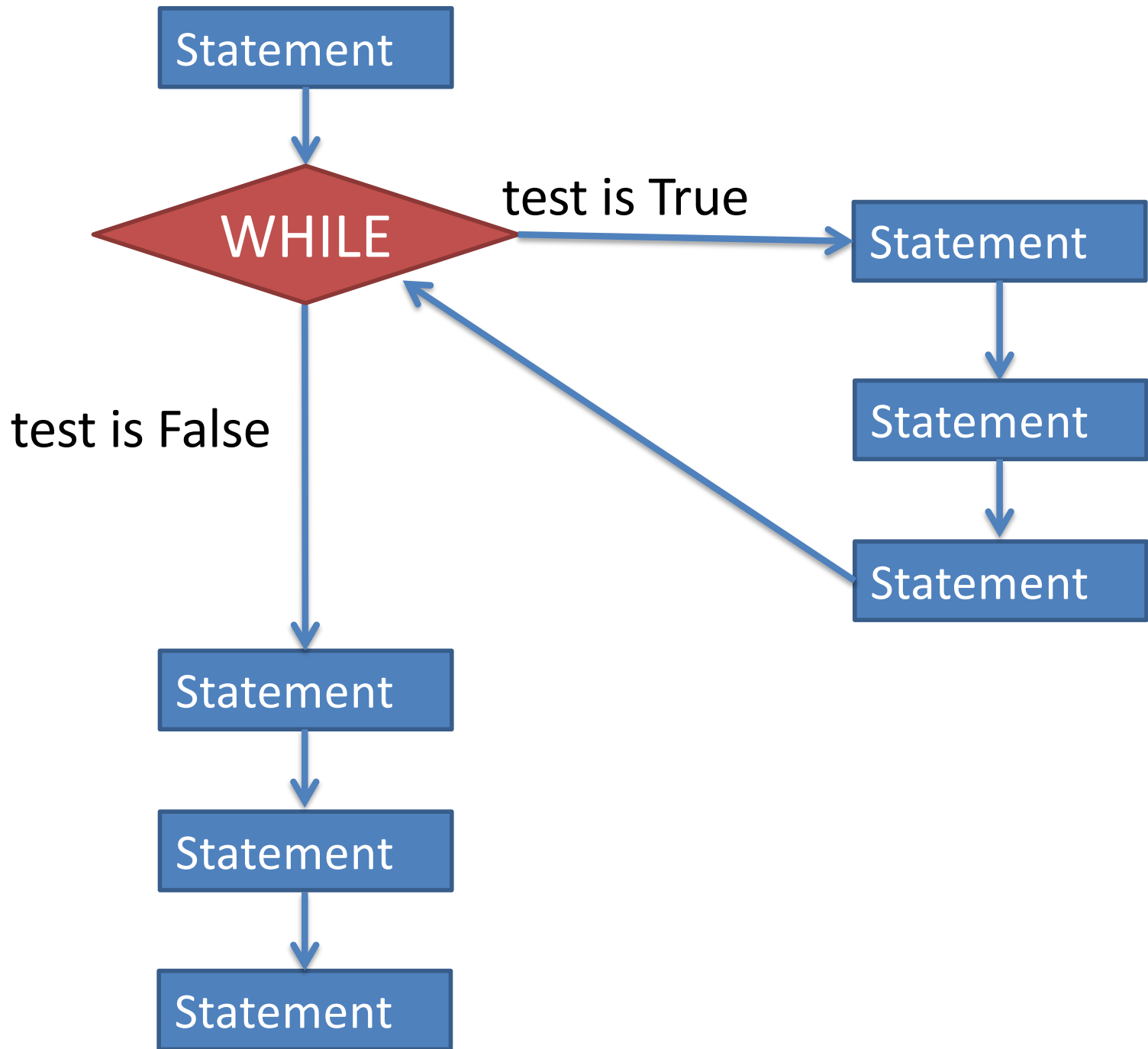


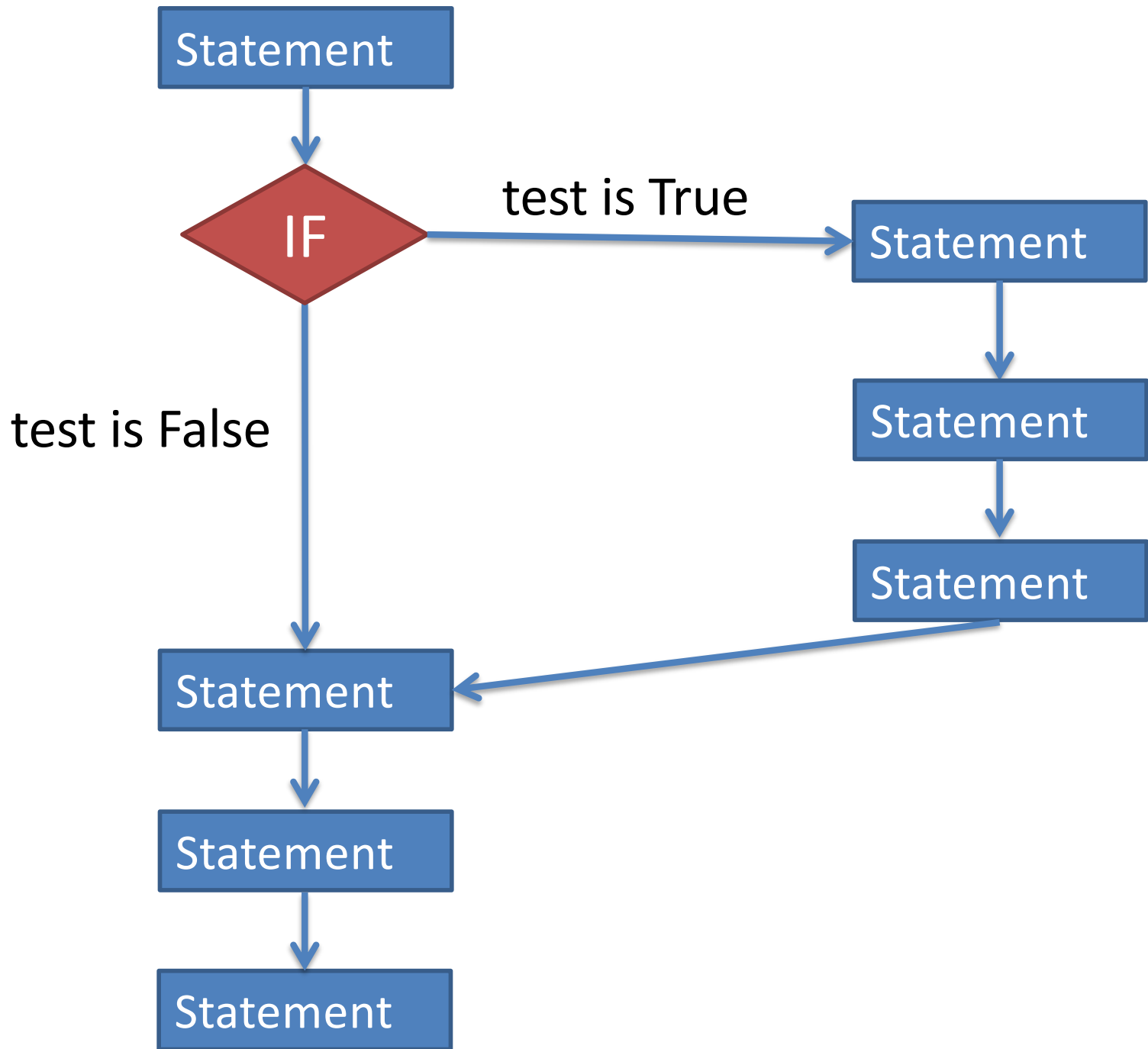
Loops

```
while test :  
    statement  
    statement  
    more statements...  
statement  
statement  
more statements...
```

The *test* must be something that is True or False.

The indented statements are called the body of the loop.





Common idiom for asking the user if they want to keep looping:

```
# Set up a variable to manage the loop.
```

```
run_loop = "yes"
```

```
while run_loop == "yes":
```

```
    # Put whatever you want to happen
```

```
    # multiple times in this space.
```

```
    # Ask the user if they want to do it again.
```

```
    run_loop = input("Do you want to run it again? ")
```

Program 1: Write a complete program that allows the user to type in two names from the keyboard. The program will print whichever name comes earlier in the alphabet. Then ask the user if they want to do it again and repeat if so, until the user wants to stop. (Don't write a separate function for this; put everything in the main function.)

Program 2: Modify the postage program so that it stops automatically when the user types in a zero-ounce letter. That is, there won't be an explicit question anymore about the user wanting to loop or not. (Bonus—make the program not print a price of zero for a zero-ounce letter).

Program 3: Modify your bullseye program so that the user can input the locations (keyboard or mouse) for any number of bullseyes, and it will draw them until they want to stop.