



## 5.9. Common turtle Errors

Below we'll describe common errors that beginning programmers encounter when writing turtle code. Some of these errors can be applied to other instances as well!

### 1. Forgetting a Parenthesis

Save & Run

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Show in CodeLens

```
1 import turtle
2 wn = turtle.Screen()
3 alex = turtle.Turtle()
4
5 alex.forward(50
6 alex.right(90)
7
```

Activity: 1 -- ActiveCode (ac3\_9\_1)

### Error

SyntaxError: bad input on line 6

### Description

This message indicates that Python can't figure out the syntax of a particular statement. Some examples are assigning to a literal, or a function call

### To Fix

Check your assignment statements and make sure that the left hand side of the assignment is a variable, not a literal or a function.

When you run the example above you'll see how an error occurs. This is because we accidentally left off the ")" when we tell alex to move forward. This is a common error for programmers of any skill level - it's easy to miss one and not notice! If you get a syntax error like this or - especially in this textbook - one that says there was bad syntax on a line that isn't visible to you then likely you're missing a parenthesis, quotation, or bracket.

### 2. Issues with Variable Names

Sometimes we misspell a variable name, either by making it capitalized when it wasn't previously capitalized or switching letters around. Other times we accidentally refer to the wrong variable name. Checkout the code below for some examples.

Save & Run

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Show in CodeLens

```
1 import turtle
2 wn = turtle.Screen()
3 alex = Turtle.turtle()    #switched turtle and Turtle
4
5 alex.forward(50)
6 alex.right(90)
7
```

Activity: 2 -- ActiveCode (ac3\_9\_2)

### Error

NameError: name 'Turtle' is not defined on line 3

### Description

A name error almost always means that you have used a variable before it has a value. Often this may be a simple typo, so check the spelling carefully.

## To Fix

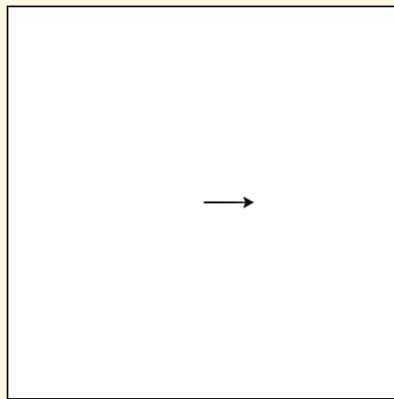
Check the right hand side of assignment statements and your function calls, this is the most likely place for a `NameError` to be found.

Save & Run

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Show in CodeLens

```
1 import turtle
2 wn = turtle.Screen()
3 jane = turtle.Turtle()
4
5 jane.forward(50)
6 right.jane(90)           #switched the variable for jane with the direction to t
7
```



Activity: 3 -- ActiveCode (ac3\_9\_3)

## Error

`NameError: name 'right' is not defined on line 6`

## Description

A name error almost always means that you have used a variable before it has a value. Often this may be a simple typo, so check the spelling carefully.

## To Fix

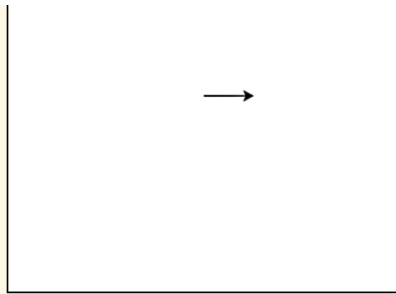
Check the right hand side of assignment statements and your function calls, this is the most likely place for a `NameError` to be found.

Save & Run

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Show in CodeLens

```
1 import turtle
2 wn = turtle.Screen()
3 jane = turtle.Turtle()
4
5 jane.forward(50)
6 Jane.right(90)           #capitalized the variable Jane even though all others wei
7
```



Activity: 4 -- ActiveCode (ac3\_9\_4)

## Error

NameError: name 'June' is not defined on line 6

## Description

A name error almost always means that you have used a variable before it has a value. Often this may be a simple typo, so check the spelling carefully.

## To Fix

Check the right hand side of assignment statements and your function calls, this is the most likely place for a NameError to be found.

### 3. Incorrect Arguments

We can also incorrectly provide arguments to a method or function. When that happens, you'll see an error message like the one below.

Save & Run

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Show in CodeLens

```
1 import turtle
2 wn = turtle.Screen()
3 june = turtle.Turtle()
4
5 for _ in range():
6     june.color("green", "yellow")
7     june.forward("50")
8     june.right(90)
9
```

Activity: 5 -- ActiveCode (ac3\_9\_5)

## Error

TypeError: range() takes at least 1 arguments (0 given) on line 5

## Description

Type errors most often occur when an expression tries to combine two objects with types that should not be combined. Like raising a string to a power

## To Fix

To fix a type error you will most likely need to trace through your code and make sure the variables have the types you expect them to have. It may be helpful to print out each variable along the way to be sure its value is what you think it should be.

We wanted to iterate and draw a square, but we forgot to specify how many times we should iterate over the for loop. As a result, we ran into an error because the range function requires at least one argument. Try fixing this so that the code builds a square. Do you think you'll run into other problems? Predict what will happen and then try it out!

You have attempted 6 of 5 activities on this page

✓ Completed. Well Done!

5.8. Incremental Programming>

Incremental Programming>

5.10. Exercises>

