

## Append a Line to a Text File

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### Textbook

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## Append a Line to a Text File

Now that you know how to read files with Python, this lesson will teach you how to edit them.



### Overview

There are two ways to edit files with Python. The first is to append text to the file, the other is to overwrite the contents of the file completely. You specify what you're doing with the file when you use the `open()` function.

In previous lessons we used this code to open and read our text files.

```
file = open("example.txt", "r")
```

The `r` in this code is to read the file.

If you use the `a` command, you open the file in "append" mode which adds all new text to the end of what's already there.

If you use the `w` command, you open the file in "write" mode which completely deletes the old text and replaces it with your new text! You'll learn about "write" mode in the next lesson.

Once again, we'll use a file called "example.txt" that has this text in it:

```
1 Hello! This is a test file for Skill Struck students!
2 I hope you're enjoying the class so far.
3 Have you learned anything interesting?
4 The skills you're gaining in this class are very valuable!
5
```

## Append Mode

Just as you did for the last lesson, create a file object and open "example.txt". This time, open the file in append mode by including the "a" command in the function.

```
1 file = open("example.txt", "a")
2
```

Now, let's add a new line to the end of our "example.txt" file. To do this, we use the `write()` command. We also close the file afterwards.

```
1 file = open("example.txt", "a")
2 file.write("This is the new line we added!")
3 file.close()
```

Now we need to check to see if it worked! So let's open the file again and see if our Python code wrote another line into the text file.

```
1 file = open("Aimee.txt", "a")
2 file.write("This is the new line we added!")
3 file.close()
4
5 file = open("Aimee.txt", "r")
6 print(file.read())
```

**Try it!**

This will print out the following with our new line added.

```
1 Hello! This is a test file for Skill Struck students!
2 I hope you're enjoying the class so far.
3 Have you learned anything interesting?
4 The skills you're gaining are very valuable!
5 This is the new line we added!
6
```

## Checkpoint

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### Append a Line to a Text File

Write a program that appends the line `I love programming!` to a text file.

Then print the contents of the file.

#### Requirements:

- Open a text file with the intent to append using an `a`
- Write a program that appends the line `I love programming!` to a text file.
- Then print the contents of the file.

### Questions (8)

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#### 1. What would we place in the empty quotation marks to read the text file?

MULTIPLE CHOICE

```
file = open("Aimee.txt", " ")
```

Choose the correct answer:

- A. `r`
- B. `read`
- C. `w`
- D. `txt`

#### 2. What would we place in the empty quotation marks to append a line to the text file?

MULTIPLE CHOICE

```
file = open("example.txt", " ")
```

Choose the correct answer:

- A. `a`
- B. `append`
- C. `app`
- D. `r`

**3. Where will the new line appear in the text file when this code is run?**

```
file = open("example.txt", "a") file.write("This is the new line we added!") file.close()
```

**Choose the correct answer:**

- A. At the top of the text file
- B. In the exact center of the text file
- C. At the end of the text file
- D. It will replace everything in the text file

**4. What happens if you use a w in the empty quotation marks of this code?****Example:**

```
1 file = open("example.txt", " ")
2 file.write("This is the new line we added!")
3 file.close()
```

**Choose the correct answer:**

- A. It will completely delete the old text in the text file and replace it with your new text
- B. It will append the new line to the end of the text file
- C. It will replace all the "w" characters in the text file with the new line
- D. It will append the new line to the beginning of the text file

**5. What does the a stand for in the following code?**

```
file = open("example.txt", "a")
```

**Choose the correct answer:**

- A. append
- B. add
- C. apply
- D. adjust

## 6. What will the following code do?

```
file = open("example.txt", "a") file.write("Sincerely, Inej") file.close()
```

Choose the correct answer:

- A. It will add the line "Sincerely, Inej" to the end of the file named example
- B. It will delete everything in the file named example and replace it with "Sincerely, Inej"
- C. It will look for the words "Sincerely, Inej" in the file named example
- D. It will open the file named "Sincerely, Inej"

## 7. Debug the following code:

Code to Debug:

```
1 file = open("example.txt", "append")
2 file.write("This is the new line we added!")
3 file.close()
```

## 8. Debug the following code:

Code to Debug:

```
1 file = open("example.text", "a")
2 file.write("This is the new line we added!")
3 file.close()
```

## Challenges (2)

### 1. Pen Pal

You've written a letter to your pen pal and saved it in a text file named letter.txt. You realized that you forgot to sign your letter! Luckily, you know Python!

Create a Python program that will add the line " **From your Pen Pal** " to the end of a text file named **letter.txt** .

Read the file to make sure it appended correctly.

**Requirements:**

- Open a text file with the intent to append using an **a**
- Write a program that appends the line **From your Pen Pal** to a text file.
- Then print the contents of the file.

## 2. Custom Line

Ask the user what line they want to add to the end of the text file!

1. Create an input that asks the user what line they want to add to the text file and assign it to a variable named `response` .
2. Create a Python program that will add the custom line to the end of a text file named `report.txt` .
3. Read the file to make sure it appended correctly.

### Requirements:

- Create an input and assign it to a variable named `response` .
- Open a text file with the intent to append using an `a`
- Write a program that appends the variable named `response` to the text file.
- Print the contents of the text file.

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## Answer Keys & Solutions

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### Checkpoint Solutions

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#### Append a Line to a Text File

```
1 file = open("example.txt", "a")
2 file.write("I love programming!")
3 file.close()
4
5 file = open("example.txt", "r")
6 print(file.read())
```

### Questions

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#### 1. What would we place in the empty quotation marks to read the text file?

MULTIPLE CHOICE

Correct Answer:

- |         |             |
|---------|-------------|
| A. r    | ✓ Correct   |
| B. read | ✗ Incorrect |
| C. w    | ✗ Incorrect |
| D. txt  | ✗ Incorrect |

#### Explanation:

It is a single letter

#### 2. What would we place in the empty quotation marks to append a line to the text file?

MULTIPLE CHOICE

Correct Answer:

- |           |             |
|-----------|-------------|
| A. a      | ✓ Correct   |
| B. append | ✗ Incorrect |
| C. app    | ✗ Incorrect |

D. r

✗ Incorrect

**Explanation:**

It is a single letter

**3. Where will the new line appear in the text file when this code is run?**

MULTIPLE CHOICE

**Correct Answer:**

A. At the top of the text file

✗ Incorrect

B. In the exact center of the text file

✗ Incorrect

C. At the end of the text file

✓ Correct

D. It will replace everything in the text file

✗ Incorrect

**Explanation:**

When we append to a list, it attaches to the end.

**4. What happens if you use a w in the empty quotation marks of this code?**

MULTIPLE CHOICE

**Correct Answer:**

A. It will completely delete the old text in the text file and replace it with your new text

✓ Correct

B. It will append the new line to the end of the text file

✗ Incorrect

C. It will replace all the "w" characters in the text file with the new line

✗ Incorrect

D. It will append the new line to the beginning of the text file

✗ Incorrect

**Explanation:**

The w stands for "write"

**5. What does the a stand for in the following code?**

MULTIPLE CHOICE

**Correct Answer:**



A. append

✓ Correct

B. add

✗ Incorrect

C. apply

✗ Incorrect

D. adjust

✗ Incorrect

#### Explanation:

The a places more text at the end of the file

## 6. What will the following code do?

MULTIPLE CHOICE

#### Correct Answer:

A. It will add the line "Sincerely, Inej" to the end of the file named example

✓ Correct

B. It will delete everything in the file named example and replace it with "Sincerely, Inej"

✗ Incorrect

C. It will look for the words "Sincerely, Inej" in the file named example

✗ Incorrect

D. It will open the file named "Sincerely, Inej"

✗ Incorrect

#### Explanation:

The a stands for append

## 7. Debug the following code:

DEBUG CODE

#### Incorrect Code:

```
1 file = open("example.txt", "append")
2 file.write("This is the new line we added!")
3 file.close()
```

#### Correct Solution:

```
1 file = open("example.txt", "a")
2 file.write("This is the new line we added!")
3 file.close()
```

#### Explanation:

append needs to be something else

## 8. Debug the following code:

### Incorrect Code:

```
1 file = open("example.text", "a")
2 file.write("This is the new line we added!")
3 file.close()
```

### Correct Solution:

```
1 file = open("example.txt", "a")
2 file.write("This is the new line we added!")
3 file.close()
```

### Explanation:

The text file needs a different extension

## Challenges

### 1. Pen Pal

#### Solution:

```
1 file = open("letter.txt", "a")
2 file.write("From your Pen Pal")
3 file.close()
4
5 file = open("letter.txt", "r")
6 print(file.read())
```

### 2. Custom Line

#### Solution:

```
1 response = input("What do you want to add to the end of the file?")
2 file = open("example.txt", "a")
3 file.write(response)
4 file.close()
5
6 file = open("example.txt", "r")
7 print(file.read())
```