

Setup

1. First, open up your command prompt/terminal

Within your command prompt/terminal, run the following command:

```
cd desktop
```

- 2.

Next, run the following:

```
cd python_course
```

- 3.

Run the following to create a new directory for this project:

```
mkdir lesson_two_handson
```

- 4.

5. Open up a new window in VSCode.

6. Click on the "Explorer" button on the left-hand side of the VSCode window.

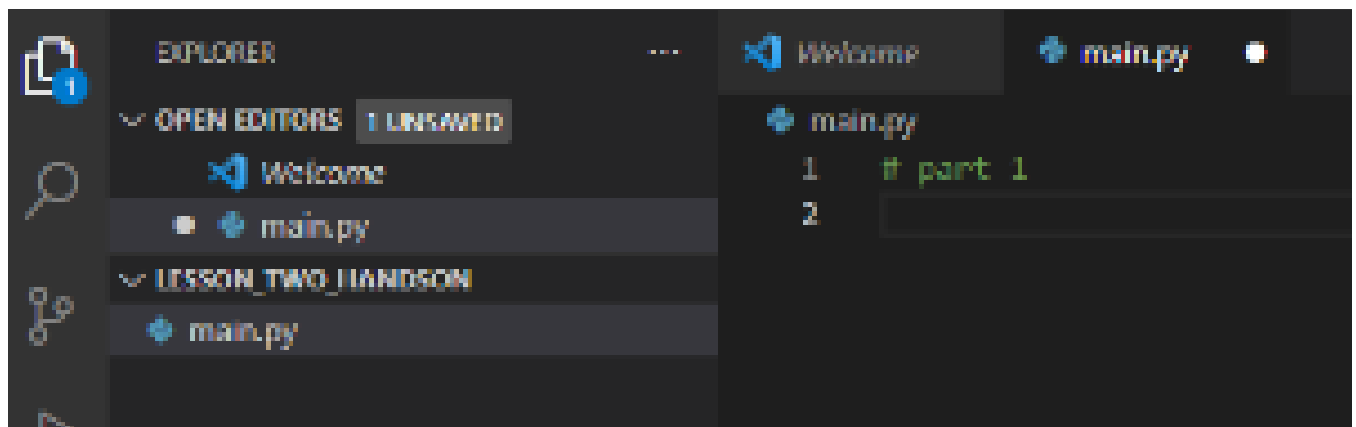
7. Click the Open Folder button.

8. Select the lesson_two_handson directory within the python_course folder on your Desktop. Click the Open button.

9. Create a new file named main.py by one of the following three ways:

- To the right of LESSON_TWO_HANDSON in the EXPLORER is a button that looks like a piece of paper with a plus symbol in its top-left corner. If you hover your mouse over this button for a moment, a popup will appear indicating that this button will create a new file.
- Choose File > New File from the app's menu.
- Press Control + N in Windows or Command + N on a Mac (the plus means "and at the same time").

Now you are ready to get started on your Lesson 2 Hands-On!



```
Command Prompt
Microsoft Windows [Version 10.0.19042.1118]
(c) Microsoft Corporation. All rights reserved.
main: C:\Users\music>cd desktop
C:\Users\music\Desktop>cd python_course
C:\Users\music\Desktop\python_course>mkdir lesson_two
C:\Users\music\Desktop\python_course>mkdir lesson_two_handson
C:\Users\music\Desktop\python_course>
```

Part 1

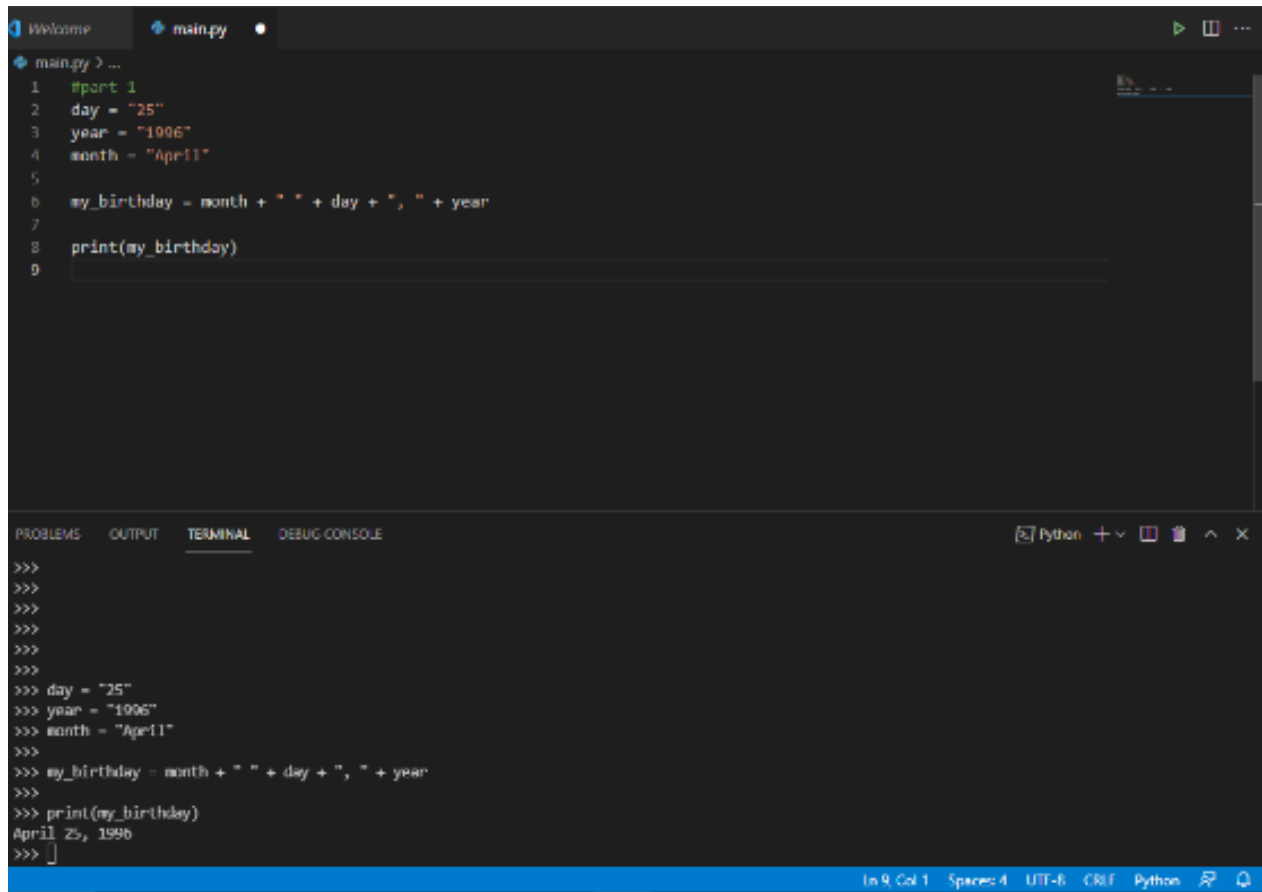
Create a program that will concatenate string variables together to form your birthday.

1. Create three variables named day, month and year
2. Concatenate each of these variables to create your full birthday.
Hint! You cannot concatenate strings and integers, so all variables will need to be strings
3. Assign the concatenation to a fourth variable named my_birthday.
4. Finally, print the variable my_birthday to see if you have the format identical to the one in the example below:
 - For example, if your birthday is on November 11th of 1991, then the format/output should be November 11, 1991

```
#part 1
day = "25"
year = "1996"
month = "April"

my_birthday = month + " " + day + ", " + year

print(my_birthday)
SyntaxError: invalid syntax
```



The screenshot shows a VS Code editor with a file named `main.py`. The code in the editor is as follows:

```
1 #part 1
2 day = "25"
3 year = "1996"
4 month = "April"
5
6 my_birthday = month + " " + day + ", " + year
7
8 print(my_birthday)
9
```

Below the editor, the terminal window is open, showing the execution of the script. The output is:

```
>>>
>>>
>>>
>>>
>>>
>>>
>>> day = "25"
>>> year = "1996"
>>> month = "April"
>>>
>>> my_birthday = month + " " + day + ", " + year
>>>
>>> print(my_birthday)
April 25, 1996
>>>
```

The status bar at the bottom indicates the file is at line 9, column 1, with 4 spaces, UTF-8 encoding, and CR/LF line endings.

Part 2

Concatenate the variables first, second, third, and fourth and set this concatenation to the variable final:

first = "happy"

second = "birthday"

third = "to"

fourth = "you"

final =

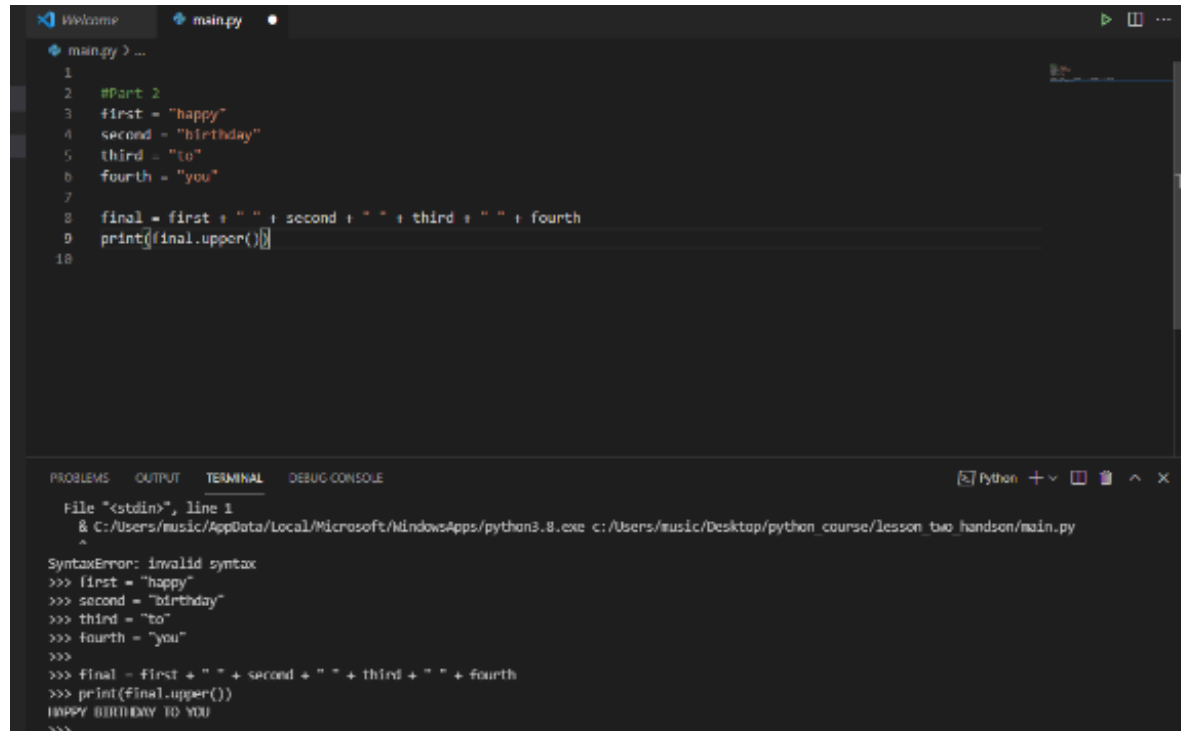
Print the final variable, but all words should be uppercase.

Run this code in the VSCode terminal.

The output should be HAPPY BIRTHDAY TO YOU.

```
#Part 2
first = "happy"
second = "birthday"
third = "to"
fourth = "you"
```

```
final = first + " " + second + " " + third + " " + fourth
print(final.upper())
```



The screenshot shows a Python IDE with a file named `main.py`. The code in the editor is as follows:

```
1
2 #Part 2
3 first = "happy"
4 second = "birthday"
5 third = "to"
6 fourth = "you"
7
8 final = first + " " + second + " " + third + " " + fourth
9 print(final.upper())
10
```

The bottom panel shows the terminal output for the execution of `main.py`:

```
File "<stdin>", line 1
  & C:/Users/music/AppData/Local/Microsoft/WindowsApps/python3.8.exe c:/Users/music/Desktop/python_course/lesson_two_handson/main.py
  ^
SyntaxError: invalid syntax

>>> first = "happy"
>>> second = "birthday"
>>> third = "to"
>>> fourth = "you"
>>>
>>> final = first + " " + second + " " + third + " " + fourth
>>> print(final.upper())
HAPPY BIRTHDAY TO YOU
>>>
```

Part 3

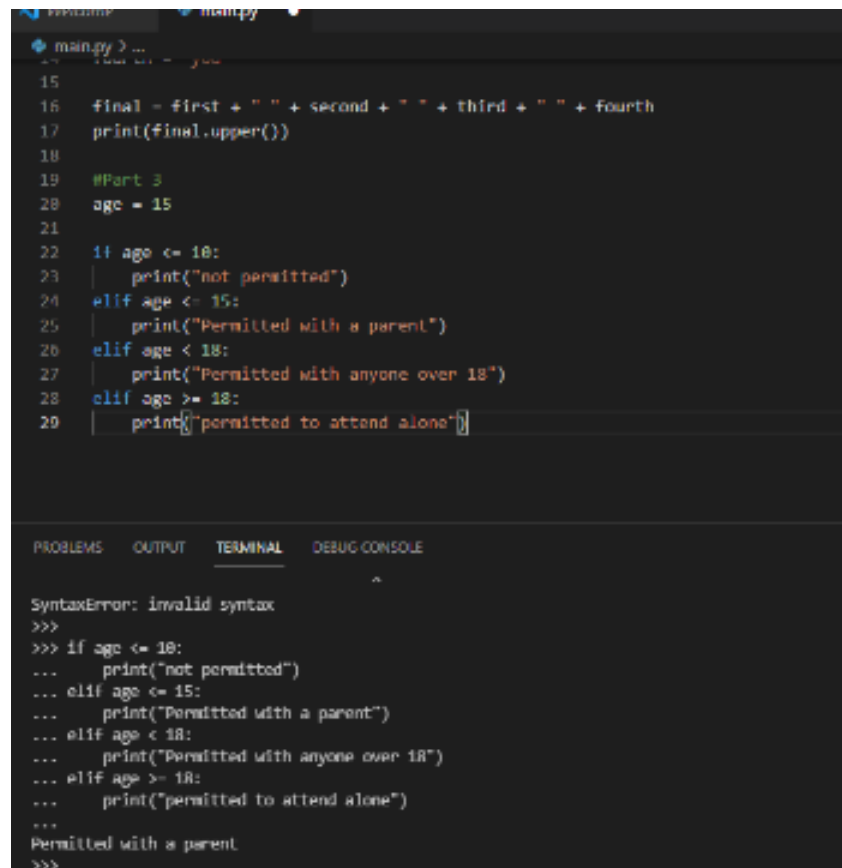
Finally, add code to your program that determines if the given age allows the attendee to see the movie, printing out a specific message based on the age. There should be four possible outputs:

- If under the age of 10, print Not permitted
- If under the age of 15, print Permitted with a parent
- If under the age of 18, print Permitted with anyone over 18
- If 18 or over, print Permitted to attend alone

```
#Part 3
age = 15

if age <= 10:
    print("not permitted")
elif age <= 15:
    print("Permitted with a parent")
elif age < 18:
```

```
        print("Permitted with anyone over 18")
elif age >= 18:
    print("permitted to attend alone")
```



The screenshot shows a code editor with a file named `main.py`. The code defines a function `final` that concatenates four strings and prints the result in uppercase. It then sets `age = 15` and uses an `if-elif` structure to check age-based permissions. The terminal window at the bottom shows the execution of this code, resulting in the output "Permitted with a parent".

```
15
16 final = first + " " + second + " " + third + " " + fourth
17 print(final.upper())
18
19 #Part 3
20 age = 15
21
22 if age <= 10:
23     print("not permitted")
24 elif age <= 15:
25     print("Permitted with a parent")
26 elif age < 18:
27     print("Permitted with anyone over 18")
28 elif age >= 18:
29     print("permitted to attend alone")
```

PROBLEMS OUTPUT **TERMINAL** DEBUG CONSOLE

```
SyntaxError: invalid syntax
>>>
>>> if age <= 10:
...     print("not permitted")
... elif age <= 15:
...     print("Permitted with a parent")
... elif age < 18:
...     print("Permitted with anyone over 18")
... elif age >= 18:
...     print("permitted to attend alone")
...
Permitted with a parent
>>>
```