

Heather Walker - DS109-02-20 - Operators Hands-On

For your Hands-On, you will be practicing your new skills with operators, string concatenation, and control flow. For this project, you will be creating a new directory, so please follow the below setup instructions. This Hands-On **will** be graded, so be sure you complete all requirements.

Setup

1. First, open up your command prompt/terminal
2. Within your command prompt/terminal, run the following command:

```
cd desktop
```

3. Next, run the following:

```
cd python_course
```

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

```
mkdir lesson_two_handson
```

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!

Requirements

This hands-on is broken into three parts. Please complete each part within your `main.py` file.

Be sure to zip and submit your entire `lesson_two_handson` directory when finished!

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`

Tip! To add spaces between each word as you concatenate them, use double quotes with a space in between them like so: `" "`.

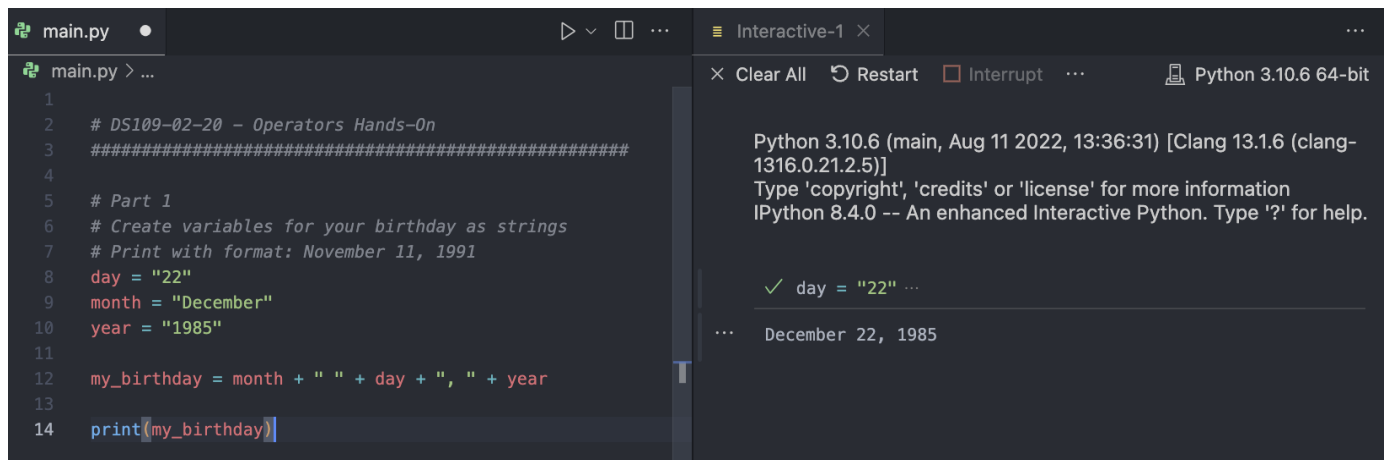
CODE

```
day = "22"
month = "December"
year = "1985"

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

print(my_birthday)
```

OUTPUT



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

```
1 # DS109-02-20 - Operators Hands-On
2 #####
3
4 # Part 1
5 # Create variables for your birthday as strings
6 # Print with format: November 11, 1991
7
8 day = "22"
9 month = "December"
10 year = "1985"
11
12 my_birthday = month + " " + day + ", " + year
13
14 print(my_birthday)
```

The output window on the right shows the following text:

```
Python 3.10.6 (main, Aug 11 2022, 13:36:31) [Clang 13.1.6 (clang-1316.0.21.2.5)]
Type 'copyright', 'credits' or 'license' for more information
IPython 8.4.0 -- An enhanced Interactive Python. Type '?' for help.

✓ day = "22" ...
... December 22, 1985
```

Part 2

1. 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 =
```

2. Print the `final` variable, but all words should be uppercase.
 3. Run this code in the VSCode terminal.
- The output should be `HAPPY BIRTHDAY TO YOU`.

CODE

```
# Output should be: HAPPY BIRTHDAY TO YOU
first = "happy"
second = "birthday"
third = "to"
fourth = "you"

final = first + " " + second + " " + third + " " + fourth

print(final.upper())
```

OUTPUT

```
19 # Part 2
20 #####
21 # Output should be: HAPPY BIRTHDAY TO YOU
22 first = "happy"
23 second = "birthday"
24 third = "to"
25 fourth = "you"
26
27 final = first + " " + second + " " + third + " " + fourth
28
29 print(final.upper())
```

✓ first = "happy" ...
... 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`

Tip! You may need more than one `elif` statement to capture each condition, and the sequence matters.

CODE

```
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.")
else:
    print("Error.")
```

OUTPUT

```
33 # Part 3
34 #####
35 # If under the age of 10, print `Not permitted`
36 # If under the age of 15, print `Permitted with a parent`
37 # If under the age of 18, print `Permitted with anyone over
38 # If 18 or over, print `Permitted to attend alone`
39
40 age = 15
41
42 if age < 10:
43 | print("Not permitted.")
44 elif age < 15:
45 | print("Permitted with a parent.")
46 elif age < 18:
47 | print("Permitted with anyone over 18.")
48 elif age >= 18:
49 | print("Permitted to attend alone.")
50 else:
51 | print("Error.")
```

✓ age = 15 ...

... Permitted with anyone over 18.