Lesson 3 Practice Hands-On

Directions

For your Lesson 3 Practice Hands-On, you will be working with your new knowledge of lists and loops. For this project, you will be creating a new directory, so please follow the below setup instructions. This Hands-On will not be graded, but we encourage you to complete it. The best way to become a great programmer is to practice! Once you have submitted your project, you will be able to access the solution on the next page.

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_three_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_three_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_THREE_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 3 Practice Hands-On!

Requirements

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

Part 1

1. Create a list of the following first names: Kurt, David, Katherine.
2. The variable name for the above list should be list_of_names.
3. Use a for loop to loop through each name in the list and print the following question: Where is _____ today?

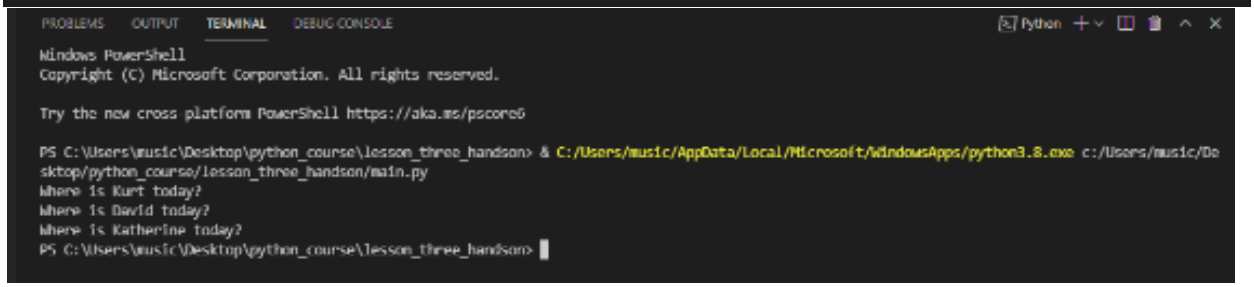
- Each name should replace the blank within the question.

The output should look like the following:
Where is Kurt today?
Where is David today?

4. Where is Katherine today?

```
# Part 1
list_of_names = ['Kurt', 'David', 'Katherine']

for name in list_of_names:
    print("Where is " + name + " today?")
```



Part 2

1. Create three separate lists with the following variable names: my_favorite_cars, my_favorite_flowers, my_favorite_animals
    - my_favorite_cars should include 3 different cars
    - my_favorite_flowers should include 4 different flowers
    - my_favorite_animals should include 5 different animals
2. Concatenate the above three lists into a single list named my_favorite_things.
3. Use a for loop to iterate over each element of the my_favorite_things combined list. Print out each item with an even length.
    - The output should show only items in the my_favorite_things list that have an even number of letters.

```
# Part 2

my_favorite_cars = ["BMW", "Toyota", "Mazda"]
my_favorite_flowers = ["Rose", "Sunflower", "Tulip", "Daisy"]
my_favorite_animals = ["Cat", "Dog", "Giraffe", "Elephant", "Lion"]

my_favorite_things = my_favorite_cars + my_favorite_flowers +
my_favorite_animals

for thing in my_favorite_things:
    if len(thing) % 2 == 0:
```

```
        print(thing)
```

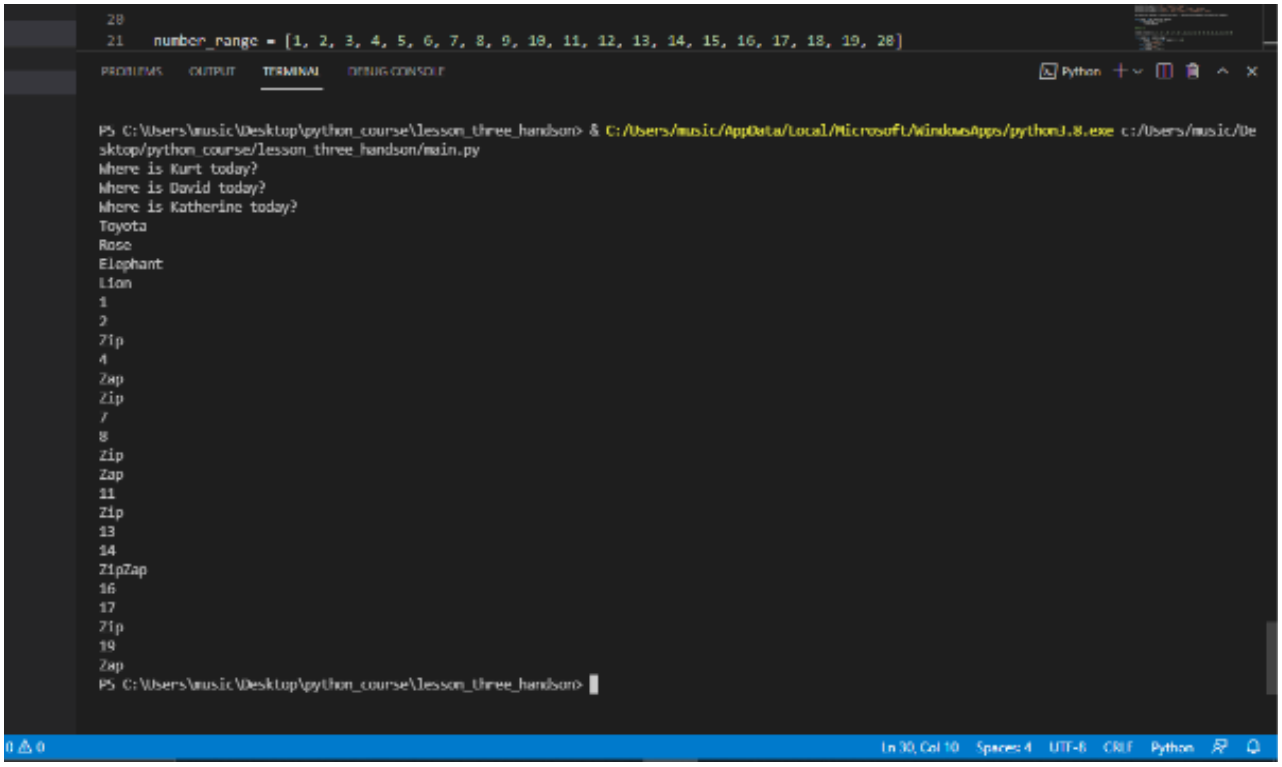
Part 3

Finally, add to your program new code that does the following:

1. Create a list named number_range that includes the numbers 1 - 20
2. Loop through the list
3. For every number that is divisible by 3 and 5, print ZipZap
4. For every number that is divisible by 3, print Zip
5. For every number that is divisible by 5, print Zap
6. If the number is not divisible by any of the three, then just print the number.

```
number_range = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17,
18, 19, 20]

for number in number_range:
    if number % 3 == 0 and number % 5 == 0:
        print('ZipZap')
    elif number % 3 == 0:
        print('Zip')
    elif number % 5 == 0:
        print('Zap')
    else:
        print(number)
```


20
21 number_range = [1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20]
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE
Python
PS C:\Users\music\Desktop\python_course\lesson_three_handson> & C:/Users/music/AppData/Local/Microsoft/WindowsApps/python3.8.exe c:/Users/music/Desktop/python_course/lesson_three_handson/main.py
Where is Kurt today?
Where is David today?
Where is Katherine today?
Toyota
Rose
Elephant
Lion
1
2
Zip
4
Zap
Zip
7
8
Zip
Zap
11
Zip
13
14
ZipZap
16
17
Zip
19
Zap
PS C:\Users\music\Desktop\python_course\lesson_three_handson>
0 0
Ln 30, Col 10 Spaces: 4 UTF-8 CRLF Python