Directions

For your 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

Requirements

- This hands-on is broken into three parts. Please complete each part within your `main.py` file.
- Zip and submit your entire `lesson_three_handson` directory when finished!

Part 1

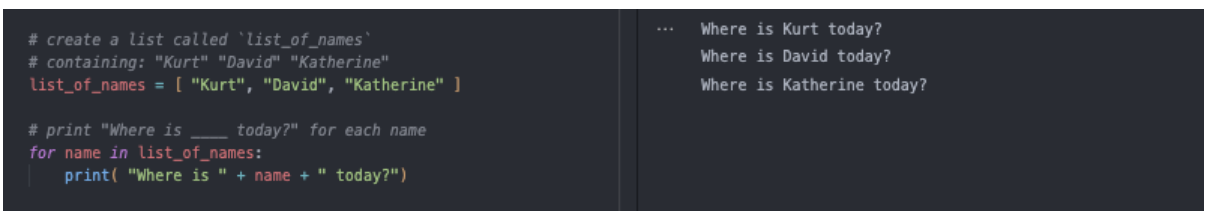
1. Create a list of the following first names: `Kurt`, `David`, `Katherine`.
2. The variable name for the above list should be `list_of_names`.
3. Use a `for` loop to loop through each name in the list and print the following question: `Where is _____ today?`
    - Each name should replace the blank within the question.
4. The output should look like the following:

```
Where is Kurt today?
Where is David today?
Where is Katherine today?
```

INPUT

```
# create a list called `list_of_names`
# containing: "Kurt" "David" "Katherine"
list_of_names = [ "Kurt", "David", "Katherine" ]

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

OUTPUT



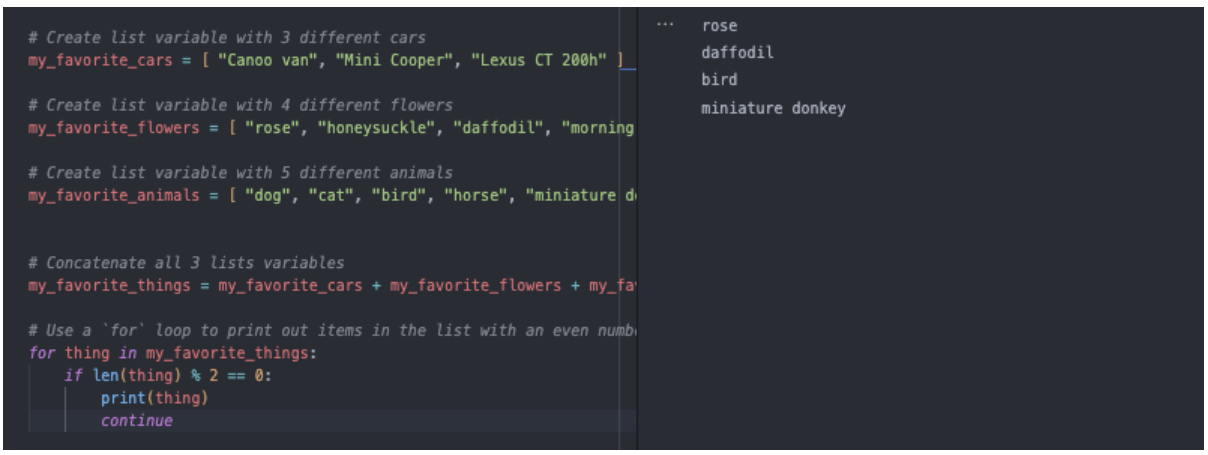
Part 2

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.

INPUT

```
# Create list variable with 3 different cars
my_favorite_cars = [ "Canoo van", "Mini Cooper", "Lexus CT 200h" ]

# Create list variable with 4 different flowers
my_favorite_flowers = [ "rose", "honeysuckle", "daffodil", "morning glory" ]

# Create list variable with 5 different animals
my_favorite_animals = [ "dog", "cat", "bird", "horse", "miniature donkey" ]


# Concatenate all 3 lists variables
my_favorite_things = my_favorite_cars + my_favorite_flowers + my_favorite_animals

# Use a `for` loop to print out items in the list with an even number of letters
for thing in my_favorite_things:
    if len(thing) % 2 == 0:
        print(thing)
        continue

print( "The loop is over." )
```

OUTPUT



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.

▶ Your output should look like the following:

INPUT

```
# Create a list with numbers from 1 - 20
number_range = list(range(1,21))
# printing list and adding line breaks
print(number_range, end='\n\n')

# Loop through the list and print the number
# when it meets the specified criteria
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)
```

OUTPUT