Assignment 1

New Attempt

Due Oct 1 by 11:59p.m. **Points** 10 **Submitting** a file upload

Submit the following files

- ipynb
- PDF or html file right **after** you click the "restart the kernel, then re-run the whole notebook (with dialog)" button

Make sure you add comments or markdown cells to explain your code well.

Question 1

Given a list of numbers, say

```
numbers = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89]
```

- write a program that prints out all the elements of the list less than 7.
- Instead of printing the elements one by one, make a new list that has all the elements less than 7 from this list in it and print out this new list.

Question 2

Given assignment of data to this variable `number`, say

```
number = 87956
```

write a program to reverse it. The expected output is

```
65978
```

Test your code for different number inputs.

Question 3

Given a positive integer, say

```
number = 10
```

output the number of square numbers below this integer. A square number is a number represented by a*a. For example, 1, 4, 9, and 16 are all square numbers. The expected output is 3 for `number=10`.

Question 4

- Create a dictionary of a few (3-5) celebrities and their birthdays.
- Print the celebrity names in the dictionary, one name per line.
- Ask the user to input a celebrity name, using the following code

  ```
  name = input()
  ```

  You will need to press `Enter` after inputting the name. Then search the name in the dictionary. If the name is in the dictionary, then output the following result:

  ```
  Benjamin Franklin's birthday is 01/17/1706.
  ```

  Otherwise, print

  ```
  This name is not found.
  ```