From lecture 5

• use dot notation when using string methods with string instances
• use string methods: upper(), lower(), strip(), find(), rfind()
• use the inbuilt functions: min(), max(), round()

```python
phrase = "When in doubt, mumble."
pos1 = phrase.find("in")
pos2 = phrase.rfind("mumb")
pos3 = phrase.rfind("ni")
total = pos1 + pos2 + pos3
print("1. Total: ", total)

phrase_lower = phrase.lower()
print("2. ", phrase_lower[:3])

smallest = min(32.7, 56.4, 3, -1.1, 56.99, -1.2)
largest = max(32.7, 56.4, 3, -1.1, 56.99, -1.2)

num1 = 32.657123
print("3. ", round(num1))
print("4. ", round(num1, 2))```
Exercise

Complete the output if the user enters the number 54 when prompted:

```python
user_number = input("Enter number: ")
print(user_number * 2, user_number * 3, user_number * 4)
```

Enter number: 54
5454 545454 54545454
Exercise

Complete the following program so that it prompts the user for their first name. The program removes a random letter from the first name and prints the resulting name.

```python
import random
first_name = input("Enter name: ")
rand_index = random.randrange(0,len(first_name))
first_name = first_name[:rand_index] + first_name[rand_index + 1:]
print(first_name)
```

Enter name: Adriana
Adriaa

Enter name: Eric
ric

Enter name: Jerry
Jery
Give the smallest and the largest possible random number which can be generated by the following four statements:

```python
import random
print("1.", random.randrange(4, 17, 3))
Smallest = 4, Largest = 16
print("2.", random.randrange(-1, 7, 2))
Smallest = -1, Largest = 5
print("3.", random.randrange(100, 700, 2))
Smallest = 100, Largest = 698
print("4.", random.randrange(50, 100, 10))
Smallest = 50, Largest = 90
```
Exercise

Complete the following program which prompts the user once for the total of 4 dice throws, the program calculates the sum of four random dice throws, and outputs the four dice values and the difference between the user guess and the dice throwing simulation sum (see example outputs):

```python
import random
prompt = "Enter sum (4 dice): "
dice_sum = 0
guess = int(input(prompt))
the_dice = "(

dice1 = random.randrange(1,7)
dice2 = random.randrange(1,7)
dice3 = random.randrange(1,7)
dice4 = random.randrange(1,7)
total = dice1 + dice2 + dice3 + dice4
difference = abs(total - guess)
the_dice = the_dice + str(dice1) + " "+ str(dice2) + " "+
    str(dice3) + " " + str(dice4) + ")"
print("The dice:",the_dice)
print("Your total:", guess, "Dice total:",total)
print("You are out by:", difference)
```

Enter sum (4 dice): 12
The dice: (3 4 3 2)
Your total: 12 Dice total: 12
You are out by: 0

Enter sum (4 dice): 15
The dice: (3 1 4 6)
Your total: 15 Dice total: 14
You are out by: 1

Enter sum (4 dice): 12
The dice: (6 3 6 4)
Your total: 12 Dice total: 19
You are out by: 7