Lone Star
section 4

midterm retake quiz

1. (8.2) Below is a receipt from my recent lunch order.

   (a) Initialize an empty dictionary named receipt, and then add the contents of the receipt as key-value pairs.

   (b) Using the dictionary you created in part a, write code that prints the total cost of all the items on the receipt. The code should work regardless of the contents of the receipt. (meaning don't write print(6+12+3))

Item	**Price**
Side Salad	$6
Chicken Parm	$12
Cookie	$3

2. (6.1) Professor Dumbledore seeks to decipher powerful encoded spells in the Hogwarts Library, their secrets revealed by the first letter of each word. Create a function called *first_letters* that takes the variable *sentence* (a string) and returns a string made up of the first letters of each word in the sentence.

   Examples:

   - first_letters("wingardium leviosa makes objects float") → "wlmof"
   - first_letters("expecto patronum repels dementors") → "eprd"
   - first_letters("the magic is within you") → "tmiwy"

3. (8.3) Write a **function** that takes a dictionary called *names* of tech ids and student names as key-value pairs, and returns a list containing just the student names.

   Examples:

   - get_names({"01475": "Steve", "87469": "Alice", "654123": "Bob" }) → ["Steve", "Alice", "Bob"]
   - get_names({ "ID1": "John", "ID2": "Emma", "ID3": "Liam" }) → ["John", "Emma", "Liam"]
   - get_names({}) → []

Dot Matrix midterm retake quiz
section 5

1. (4.1) Using a loop, write a program that prints every even number between 37 and 1050 (inclusively).

2. (3.2) Write a program that prompts the user to enter three integers and displays the integers in decreasing order (largest to smallest). You may not use the built-in functions *max*(), *min*(), *sort*() or *sorted*().

3. (3.1) Write a program that asks the user for three numbers, and then determines (and outputs) which of the numbers is the smallest. Do not use the built-in function *min*().
   For example,

```
Pick a number: 35
Pick another number: 11
Pick another number: 89
The smallest number is 11.
```

```
Pick a number: 3
Pick another number: 2
Pick another number: 1
The smallest number is 1.
```

Dark Helmet midterm retake quiz
section 4

1. (4.2) Write a program that repeatedly asks the user for integers until a negative integer is given. The program should keep track of the sum of the numbers and print the sum at the end (not including the negative number).

   For example,

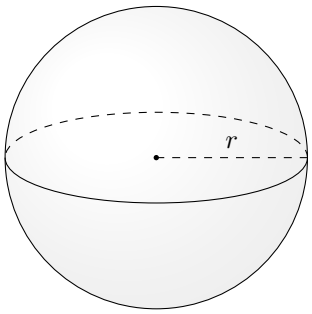
```
Enter an integer: 7
Enter an integer: 10
Enter an integer: 3
Enter an integer: -4
20
```

```
Enter an integer: 1
Enter an integer: 2
Enter an integer: 3
Enter an integer: 4
Enter an integer: 5
Enter an integer: -1
15
```

2. (2.1) You are counting points for a basketball game. Ask the user the amount of 3-pointers scored and the amount 2-pointers scored, find the final points for the team and output the value.
   For example, if a team scored 5 2-pointers and 7 3-pointers, then their score would be 31.
   If a team scored 6 2-pointers and 5 3-pointers, then their score would be 27.

President Skroob midterm retake quiz
section 1

1. (2.3) Write a program that calculates and then outputs the volume of a sphere. The user should be able to pick the radius. Use the value of π from the math module in your calculation.
   Hint: $V = \frac{4}{3}\pi r^3$



2. (3.2) Create a game of Rock, Paper, Scissors that takes user inputs. The first input should be player 1 and the second input should be player 2. Print the winner according to the following rules.

   - Rock beats Scissors
   - Scissors beats Paper
   - Paper beats Rock

   For example:

```
Player 1 choice: Rock
Player 2 choice: Paper
player 2 wins!
```

```
Player 1 choice: Scissors
Player 2 choice: Paper
player 1 wins!
```

```
Player 1 choice: Rock
Player 2 choice: Rock
It's a tie!
```

3. (2.1) A farmer is asking you to tell him how many legs can be counted among all his animals. The farmer breeds three species:

   - chickens, which have **2** legs
   - cows, which have **4** legs
   - pigs, which have **4** legs

   Write a program that asks the farmer how many of each animal he has, and then outputs the total number of legs. For example,

```
How many chickens do you have?: 5
How many cows do you have?: 1
How many pigs do you have?: 3
The total amount of legs on your farm is 26.
```

```
How many chickens do you have?: 3
How many cows do you have?: 4
How many pigs do you have?: 7
The total amount of legs on your farm is 50.
```

4. (3.3) The table below shows the maximum health of characters based on race and class for a new video game I am creating. Write a program that asks the user for the race and the class of their character, and then sets the *health_points* variable according to the table below.

	Race	
Class	Elf	Ogre
Warrior	150	200
Bard	75	100
Wizard	25	50

health_points = -1
#Your code here.

5. (1.2) Write a program that asks the user for
   (a) their first name and
   (b) their age.

   and then outputs a greeting.

```
Enter your name: Ashley
Enter your age: 25
Hello Ashley. 25 is a cool age!
```

Your output should be similar to this.