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# CECS 174 – LAB ASSIGNMENT 3

## OBJECTIVES:

- Able to use a Python 3.x IDE to build Python program(s)
- Implement a solution that requires **selection logic**.
- Write Python code following the algorithm.
- Form a sophisticated expression in Python

## INSTRUCTIONS:

### PART 1

A guitar maker sells a guitar for \$100.00 as the retail price. Quantity discounts are given according to the following rules:

- 10 to 19 guitars quantity will receive a 10% discount.
- 20 to 49 guitars quantity will receive a 20% discount.
- 50 to 99 guitars quantity will receive a 30% discount
- 100 or more guitars quantity will receive a 40% discount.

**Design an algorithm** to solve this problem, **using pseudocode**. **Write code in Python** to ask user to enter a **quantity of purchase** and then

1. Calculate the **discount price**.
2. Calculate the **total price** the buyer will have to pay.

For example, if we order 100 guitars the discount price will be  $(100 * (1 - .4)) = \$60$ . And total price will be  $\$60 * 100 = \$6,000$

### PART 2

**Write a game of dice** and determine win, lose or tie for each game. In this game, the user has 2 dices and the computer has 2 dices.

The rule for the games is as follows:

1. A pair of “**same face**” will beat a pair of different faces. For example, a pair of 1&1 will beat a pair of 6&5.
2. If both user and computer have pair of same face, higher total points will beat lower total points. For example, a pair of 6&6 will beat a pair of 5&5. If computer has 4&4 and user has 4&4, then this is a tie.

Design an app which allows the use to play **1 single time**, (i.e. the app should not let the player to play more than 1 time when the app is run).

## FOR YOUR INFORMATION

Hint1: use random functions in Python to simulate the roll of a dice: <https://www.geeksforgeeks.org/python-randint-function/>

Hint2: read chapter 4 before working on these 2 assignments

## TURN IN INFORMATION

- Turn in **your code and images of your test runs**, (i.e. several runs).
- Your document with have **2 parts** because this assignment has 2 parts.
- Your turn in document must be in **PDF format, 1 single PDF that has 2 parts**. Upload to the BeachBoard account of this class.