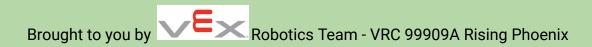




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Python Mini Project Python Basics: After Lesson 9



Class Recap

So far we have learned the very basics of Python:

- Variable and data types
- Operators
- Test (if-statement)
- Loop (for/while loop)
- Python Collections List
- I/O (input/output)

We can start writing code to solve some real problems for us. Please review all prior chapters before attempting this project.

How to write code to solve a problem?

Step 1: Shutdown your laptop and solve the problem yourself first. Note down all the steps in your solution.

Step 2: Write those steps down in <u>pseudocode</u>. Pseudocode is really just a simple way of writing programming code in plain English. It uses short sentences to write code for programs before you actually create it in Python syntax.

Pseudocode example:

- 1) Set an initial flag to be "false"
- 2) Allow user to input a integer
- 3) Start with integer 2 and check if that integer can be divided by 2
- 4) Repeat the above step with 3, 4, ... until we find a number that can evenly divide into that integer. At that point, flip the flag to "true" and jump to the next step. If not, continue until we reach that integer.
- 5) If flag is "false", display the integer as a prime number.

 If flag is "true", display the integer as a composite number.

Step 3: Write out your Python code following the steps detailed in pseudocode.

Project Instructions:

- 1) Get 2 integers from user
- 2) Find all the factors for each integer and store them in a list
- 3) Find the GCF (Greatest Common Factor) for these 2 integers and display to console
- 4) Challenge question: Find the LCM (Least Common Multiple) for these 2 integers and display to the console
- 5) Display if these 2 integers are primary numbers or not.