

Your submission for this tutorial must include your full name and you nine-digit student number as a comment at the top of every source file you submit. All source code files must be written using the Python 3 programming language and must run on the course's official virtual machine.

Exercise A: "Prime Numbers"

For this exercise you will design and implement a function (and not just a program) that takes a single integer as an argument and has a Boolean return value. This function should only return True if and only if the integer passed as an argument is a prime number. Prime numbers are integers strictly greater than one that can only be evenly divided (i.e., long divided without producing a remainder) by themselves and the value 1. After you have written this function, write a program with a loop that allows the user to repeatedly input a number and receive feedback about whether or not that number is a prime number, ensuring the user always has the option to end the program.

In order to complete this task, you will need to:

- devise a test for "primeness" that will use a looping control structure and modulation

Your submission for this exercise:

- must be a source code file with filename¹ `'comp1405_f21_#####_tutorial_05_a.py'`
- must use a counter-controlled loop to determine if a number is prime or not
- must include a prime number function with one integer argument and one Boolean return
- must use the correct loop for an interface that allows the user use the function repeatedly

Exercise B: "Simple Games"

For this exercise you will design and implement a program (again using functions that you write yourself) that allows the user to play either "Rock-Paper-Scissors" or "Tic-Tac-Toe" with a computer player. Both of these games can be played randomly by a computer player, but if you are feeling particularly ambitious, it isn't difficult to get an artificial Tic-Tac-Toe player to play slightly better than randomly....

In order to complete this task, you will need to:

- ensure you know how "Rock-Paper-Scissors" and/or "Tic-Tac-Toe" are played

Your submission for this exercise:

- must be a source code file with filename `'comp1405_f21_#####_tutorial_05_b.py'`
- must include a "main" function that is called at the end of your program
- must have the remaining functionality organized into separate functions
- must ensure that the user input is always a valid option for your game

¹ You must replace the number signs in the filename with your official nine-digit student identification number.