**Two Stroke Engine Simulator (PSEUDOCODE)**

Develop a C# program representing a simple two-stroke engine model using separate classes for the engine, piston, spark plug, and controller.

Use threads to simulate the piston movement. A controller class should trigger the spark plug at the right time when the piston is at the top of the stroke, and the spark plug should interact with the piston to move it downward. Print out the piston state and spark plug activity.

<http://www.animatedengines.com/twostroke.html>

Bonus:

Calculate live piston speed in 'miles per hour' assuming a stroke of 2 inches and a varying random engine speed between 0 and 1,000 rpm. Print the piston speed as the program runs.

<https://www.cartechbooks.com/techtips/pistonspeed/>

Piston at Top - SPEED is ZERO

Ignite

Power Process Starts

Burn Fuel causes Thermal Heat Energy

**Move Up Piston Complete – 1 Stroke Complete**

**Move Down Piston Start – 2 Stroke Start**

Crank Case Compression of Fuel

Proppet Valve Closes

Transfer/ Exhaust Process Start

Piston at Bottom

Exhaust Port Exposed

Compressed Fuel/Air from Crank Case enters Main Cylinder

Exhaust Gases Out Exhaust Port some Fresh Fuel/Air also Escapes

**Move Down Piston Complete – 2 Stroke Complete**

Intake Start

**Move Up Piston Start – 1 Stroke Start**

Proppet Valve Opens

Fresh fuel/air mixture enters Crank Case

Cylinder Compression of Fuel

**REPEAT**