OBJECTIVE:

1) To build a otto cycle simulator with engine kinematics using python.

2) Plotting the PV diagram as well as calculating efficiency of the otto cycle.

INTRODUCTION:

We are all familiar with air standard cycles which are used to describe the functioning of  a typical ICE Engine.

Otto cycle and diesel cycle are idealized thermodynamic cycles used for analyzing spark ignition engines and compression ignition engines respectively.

Here, in this project we are going to deal with otto cycle only and build a otto cycle simulator using python and sublime as text editor.

All thermodynamic cases include a system and a surrounding. In an engine cylinder the working fluid is our system and everything excluding this system will be known as surrounding. Air standard cycles are basically a description of what happens to a mass of gas when it is subjected to change of pressure, temperature, volume, heat addition and heat rejection. Our system which is the working fluid is subjected to these changes. The ultimate purpose of these changes would be producing a net work sufficient to run the automobile and its occupants.





