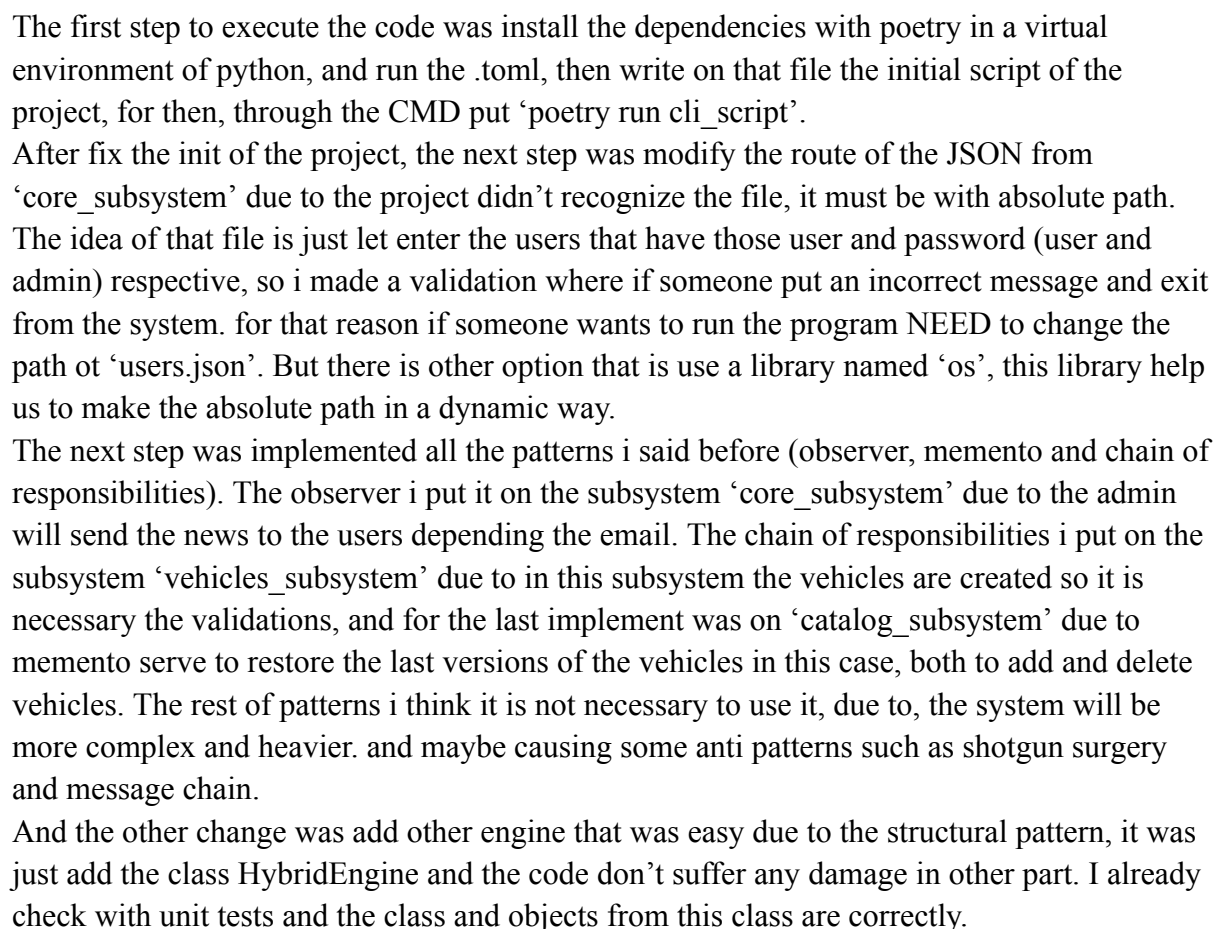


## Technical Report

Juan Diego Lozada Gonzalez 20222020014

The workshop developed was a structure of some design patterns such as creationals, structural and behavioral. Some of the creationals patterns are implemented on the code are, singleton, abstract factory. Those patterns are used for the creation of the engines, due to, there is two types of engine (low, high) and the singleton for created the catalog, reducing the memory letting just create one instance of the class. For structural patterns, we implement facade for make subsystem into the system, hiding the logic the most possible, and trying to achieve Demeter Law, just the near classes know about it. The flyweight serve for reused immutable objects, such as the engines, the engines are created just once and for reducing more and make more simple the code, when the instance is share, have the same memory reference, the proxy is used on the catalog and this add a new layer between two classes for make validations and for make a performance about the time and the memory for the catalog implement decorators, those patterns were implemented before, and some of the behavioral patterns i implement are, first it is necessary to know that the behavioral patterns are used for focus on how the classes distribute their responsibilities, taking account also the anti-patterns, SOLID and code smells. After read the tasks to complete the behavioral patterns to achieve the tasks are observer, due to it serves to notify a group of objects that have some familiar, chain of responsabilites for make the validations when we are creating a vehicle and for last memento the recover the info of the last 3 vehicles searched and the last vehicle deleted. On the diagram appear what is the idea of the functionality of it



In conclusion the code was hard to handle but with time it is possible but i have two exams in 4 hours and i still doing this so i decided to stop the workshop, also i presented some issues such as the push didn't serve and i tried to fix it and i don't know how but i deleted all the folder where i was working so i have to start from zero, the good thing i know how to make simple unit test and i know how to solve problems and help others (like 5 people wrote to help them to run the program) this program help us to know how is the functionality of a real system. Now i have more clear my final project.