TECHNICAL REPORT Workshop 3

User Stories:

- As an **admin**, I want to create a vehicle, so what I can save it in the catalog.
- As an **admin**, I want to update a vehicle, so what the users can see the new information about it.
- As an **admin**, I want to delete a vehicle, so what the users can't see it anymore in the catalog.
- As a user, I want to see vehicles, so what I can have information about it.
- As a **user**, I want to search vehicles, so what I can have information of a specific vehicle.
- As a **user**, I want to register on Vehicle Application, so what I can keep me informed about the latest vehicles created.
- As an **admin**, I want to register on Vehicle Application, so what I can make changes or create vehicles.
- As a **user** and an **admin**, I want to log in application, so what I can scroll on it.

Entities:

- User
- Admin
- Vehicle
- Engine
- Client Manager

CRC Cards:

User					
• See vehicles.	CatalogFacadeDecorator				
• Search vehicles.					

Admin					
• Create vehicles.	CatalogFacadeDecorator				
• Update vehicles.					
• Delete vehicles					

Client				
• Log in.	LoginFacade			
 Register on app. 				

	Login System					
•	Users' authentication	•	LoginFacade			
•	Users' Register					

LoginFacade				
•	Valide user information	•	CatalogFacade	

CatalogFacade				
Show menu to user.	• Vehicle			

Vehicles			
•	Provide vehicles information.	•	CatalogFacade

	Truck				
•	provide truck information.	•	Vehicle		
•	calculate gas consumption				

	Monitoring System				
•	check the memory consumption.	•	ClientRequest		
•	check time execution of the searches in the				
	application.				
•	save stats in a performance_log file.				

	Client Request					
•	receive user requests.	•	CatalogFacade			
•	respond user request.					

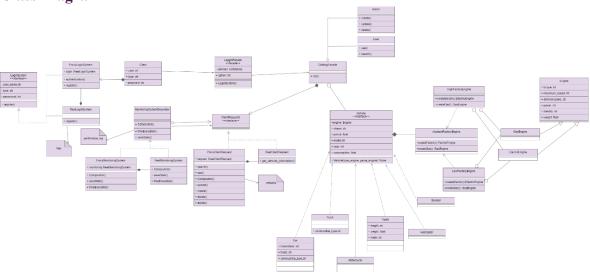
	Catalog Facade Decorator				
•	Show vehicles.	•	CatalogFacade		
•	Search vehicles.				
•	Delete vehicles.				
•	Update vehicles.				
•	Create vehicles.				

Engines		
•	provide engine information	Vehicles

FactoryLowEngines	
• create low price engines.	Vehicles

FactoryHighEngines	
- create high price engines	Vehicles

Class Diagram



As for the class diagram, several design and structural patterns were implemented.

As for the new requirements, there are two facades, one to log in and another one that will appear once the user type is validated.

On the side of LogginFacade a facade was used, and its Login service is given by a Proxy, which is connected to a log.txt file, where all existing users are saved for their respective validation.

Once this is done, it is redirected to a facade for each type of user, in the case user has only two roles, while Admin has 5. This facade is connected to the vehicle class and clientRequest, which receives all user requests, which in turn will be monitored and executed with a Decorator and a proxy. The actions must be saved in a Performace_Log file.

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As for memory reduction, proxies are used to store data in a file and avoid its consumption. To reduce memory for the vehicle and engine class, no viable alternative has been found.