

## COMP3005 Assignment #5

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### Problem 1:

This project will provide users with a website that they can store their dream cars and showcase their collection to other users. Users will also be able to add as many cars as they want to their garage, without the financial implications. Many iconic cars have become novelties as time as appreciated them throughout the years. Most people simply can't afford to drop tens (even hundreds in some cases) of thousands of dollars on car's that are sometimes decades old.

Each user will be assigned one garage, and each garage will be assigned to one user. In a garage, each user can have many cars and each car can belong to multiple garages. Each car entity has the following attributes: make, model, year, colour, engine, drivetrain and will also have a unique id.

The database gets even more detailed by having a separate entity for the engine component of the car. While the car will have the engine name and type of the car, the engine entity will have attributes like horsepower and engine displacement. Each car can only have one engine, but an engine can belong to multiple cars.

The following table is explanations of all of the attributes in this proposed database:

attribute	comment
user_id	User's unique ID
username	Name/alias the user goes by
garage_id	A garage's unique ID
car_id	A car's unique ID
car_in_garage_id	The id of the car in a given garage
make	The manufacturer who made the car, eg. Honda
model	The model name the manufacturer has given the ca, eg. Civic
year	The year the car was produced
engine	The name of the engine. This will be a key that references the engine_name attribute of the engine entity.
hp	The amount of power the engine produces, measured in horsepower (hp)
drivetrain	This is how the car drivers and determines what wheels are moving. Eg. FWD meaning

	front-wheel drive. The front wheels propel the vehicle.
colour	The colour of the paintjob on the vehicle
engine_name	The name of the engine eg. RB26
displacement	The displacement of the engine, measured in litres
engine_type	The type of the engine. Eg. Inline-4 (I4), V6, rotatry, etc.

ER diagram for proposed database:

