# Programming & Technology mock exam: REST web service, and PHP

In this mock exam, you must work with REST service and PHP.

The subject of this exam is second hand cars.

Second hand cars must have properties like “make”, “year”, and “price”.  
Examples {Ford Mustang, 1976, 120000} or {VW Golf, 1982, 28000}

## Assignment 1: REST service running in the Azure emulator

1. Design some appropriate URI's to manipulate used cars.
   1. Get all second hand cars.
   2. Get a second hand car with a specified id
   3. Add another second hand car
   4. Update a second hand car with a specified id
   5. Delete a second hand car with a specified id.
2. Implement a simple REST service to manipulate second hand cars.  
   Information about second hand cars can be kept in a static list in the service (no database needed for now)
3. Run the service locally using the Azure emulator
4. Use Postman or Fiddle to try the service
5. Make a unit test for your service. Test the class *implementing* the service, not the service itself.

## Assignment 2: REST service running in Microsoft Azure

1. Publish your service to Microsoft Azure.
2. Use Postman or Fiddle to try the service
3. Use Wireshark or Fiddler to show request and response
4. Explain the basic structure of the HTTP request and responses send by the service.

## Assignment 3: PHP to consume the REST service, GET only

Make a simple PHP application to consume the REST service (the GET part only).

The PHP application must be able to

1. Show all second hand cars
2. Show a second hand car with a specified id (HTML form needed)
3. Show a second hand car with a specified mark (another HTML form needed)  
   The user might even input a part of the make (even a single letter). This may result in zero or mores second hand cars to be displayer.  
   You may have to add extra URI’s to the REST service.

Run the PHP application locally, and try the application from a browser.

Publish your PHP application to Microsoft Azure, and try the application from a browser.

Check if the HTML is valid. Use the validator <https://validator.w3.org/>

## Assignment 4: PHP to consume the REST service, POST

Make an HTML form to add information about another second hand car.

Use the REST method POST to create the second hand car object.

## Assignment 5: Database behind the REST service

Create a database in Microsoft Azure. The database must have a table to hold information about second hand cars.

Refactor the REST service to use the database (not a *static list*).

You can use SQL, LINQ, *or* the entity framework as you like.