

## Hello World Assessment - Web Service Backend

*Write a program that returns the message “Hello, {UserName}”. {UserName} should be an argument supplied by the client. If the userName starts with the letter “A”, the message should be “Hello, {UserName}, welcome back!”*

- In C# - ServiceStack
- Write as a **RESTful Service**
- Not Windows forms
- Using object oriented principles, structure your code so that it is easy to **read**, **understand** what it does, **maintain**, and **reuse**, apply **DRY** principles. Your code should be readable without the use of comments.  
(e.g. `bool IsColourBlue(Colour colour)`)
- Using your favourite **ORM**, (we like micro ORM's)
  - Write the resulting data to a database table recording a primary key, the value, and a date stamp for each submitted value.
  - Use the database table you populated in the previous step and retrieve the entries from it.
- Using object oriented principles, structure your code so that it is easy to **read**, **understand** what it does, **maintain**, and **reuse**, apply **DRY** principles. (Use comments, explain your process)
- For bonus:
  - Using **TDD**, create the spec to define the required functionality and tests your program.
  - Show off, show your knowledge of the language and its features (e.g. extension methods) and apply theory you have learned in the past (patterns, algorithms, programming structures, etc)
  - Use ServiceStack (checkout <http://www.servicestack.net>)
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### Want to secure a position with us?

- Combine the two assessments into one project
  - either manually
  - Or use ServiceStack's AngularJs starter template
- A further guarantee:
  - make your code available on your favorite online git repo and send me the link.
- Drive the nail in:
  - use a free account at AppHarbour

**TDD** - Test driven development, part of the agile approach, used together with a CI (continuous integration) server. Here the spec/tests need to be written and runnable in the IDE used.

**ORM** - Object-relational mapping (ORM, O/RM, and O/R mapping) in computer science is a programming technique for converting data between incompatible type systems in object-oriented programming languages. This creates, in effect, a "virtual object database" that can be used from within the programming language. Our preference is a micro orm called ORMLite, supplied by ServiceStack.

**DRY** - Don't repeat yourself. self explanatory. No code should be repeated, algorithms structures and concepts should be encapsulated into class objects that can be easily reused, tested and maintained.