



TECH CHALLENGE

.NET/WEB TEST

Applicant Name: Date:

Technology Stack: C#/.Net/Web/Full Stack

Time: 90 minutes

Total Tests: 2

1. **TEST 1:** Using object-oriented principles, design a factory that makes cars. All cars may have common features like price, color and safety rating but they may also have some specific features only applicable to certain cars e.g. Navigation system and Bluetooth support. Show with examples how to make some cars and how to check if they have a specific feature.

Note:

- Focus is on code and not UI.
- You may use a simple console app to demonstrate this design

If you'd like to add anything to clarify or support your approach, enter below -

2. **TEST 2:** Build a web app that shows your approach to both client-side validation and server-side validation before attempting to save a newly created Employee object to a data store. Apart from data integrity checks, there are two additional business rules that must be met -
- Only Employees in the state of California can be added.
 - If City is entered, it may not contain any special characters, spaces or the word "city" in it.

For **Employee** object, use data model as -

Table Employee

Id int NOT NULL
Name varchar(50) NOT NULL
Address varchar(100) NULL
City varchar(50) NULL
State varchar(50) NULL

Note:

- Focus on validation code only and not UI or actual data storage. You may mock up the load/save from a datastore with a mock object.
- You may use Visual Studio project templates to scaffold code as needed.
- You may leverage the use of third-party libraries/packages at your discretion.

If you'd like to add anything to clarify or support your approach, enter below -