Business Layer:

I preferred to work on “How” than “What” in this solution. Therefore, this solution will not cover the entire scenarios expected. However, the coding standard is considered the integral part of this assignment:

How:

Considering S.O.L.I.D principle, I have avoided DRY principle in order to achieve S.O.L.I.D.

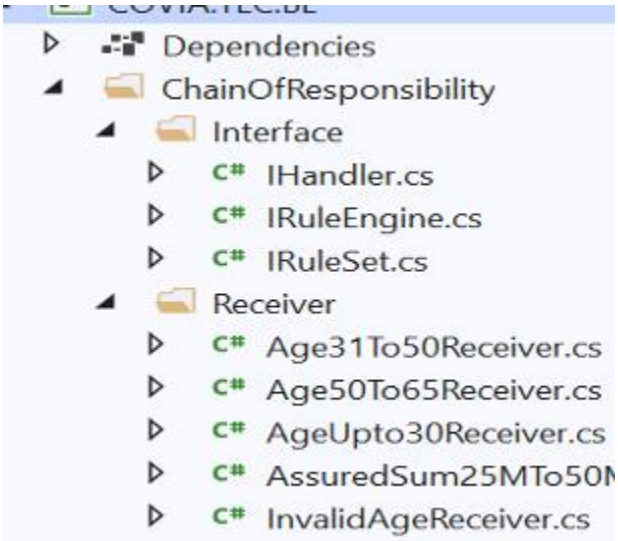
I have used two design patterns:

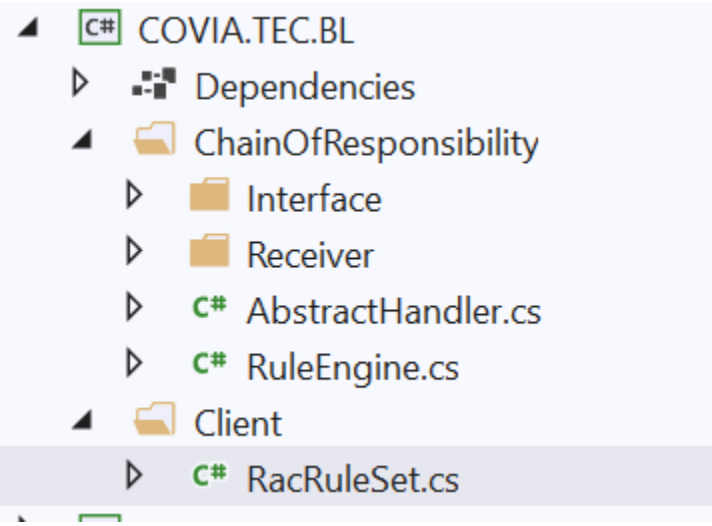
1. Chain of Responsibility Pattern
2. Semi Rule Pattern

There are different receivers for representing different scenarios in Receiver folder which are handled by handler. Any request comes to the “RuleEngine” is passed to Handler which will pass the request to subsequent handler unless it can be processed in the existing one. The “RuleSet” class is a set of define receivers which is passed to the “RuleEngine”. The “RuleEngine” class deals with each receiver which represents a single responsibility and can be easily extended and is closed for modification. Here I spoke about S and O of S.O.L.I.D principle, though, I have created some concrete classes in the ruleset which can be move in a IoC container to cover D of S.O.L.I.D.

We can add as much as new Receiver in the Chain which opens the door for extension of the feature without interrupting the existing functionality and break the tested feature.

In order to introduce a new client or new set of receiver all we need is to create another RuleSet as we did for RAC(RacRuleSet), which will contain different set of rules as form of Receiver object which is going into the Chain and process the request.





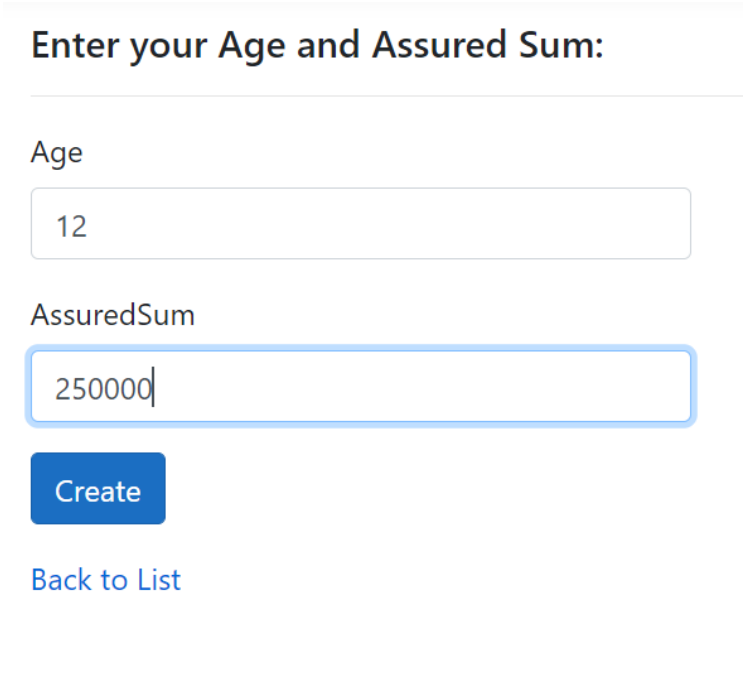
What can be improved?

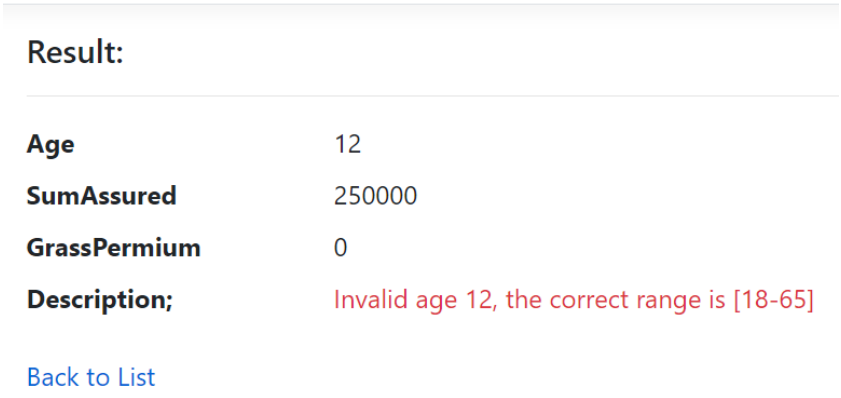
This depends on what architecture we want to implement, however, I have left some code smell as a concrete class. The Testing can be done in BDD/TDD which I have not consider any of that in order to make it simple.

How to Run:

1. Build and Run the application.
2. Enter Age and Assured Sum
3. Click On Submit
4. Your will see the Premium result if the input is valid
5. If the input is invalid you will get a red colored description

Scenario 1:





Scenario 2:

Enter your Age and Assured Sum:

Age

30

AssuredSum

30000

Create

Back to List

Result:

Age	30
SumAssured	30000
GrassPermium	31.572057642182088
Description;	Gross Premium for (30) and AssuredSum(30000) is 31.572057642182088

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