# Architecture and Design Overview

This program solves the problem Martian robots which is given as a interview exercise.

This program is built in C# ASP.NET MVC with testing framework of Nunit. It has a very simple UI showing movements of Robot on Mars.

Solution has 3 projects. Firstly, a business class library which calculates the movements of the robot. Secondly, a MVC project with Models, Views and Controllers helping display data onto webpage. Thirdly, a test project which has test cases to check against the functions.

I have chosen command design pattern to build the solution to this program. As this pattern maintains requests as classes and objects it will in future also help in adding new functionalities easily.

Assumptions: Validations for text boxes are not implemented. Hence, it is assumed the inputs will match as specified in the documentation.

If I were to implement the whole program in real life, it would include more rigorous testing along with better user interface covering more edge case scenarios. Of the current requirement, I would estimate dedicated 80 hours for complete implementation.