# 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: In the written program, I have assumed that we would not let a robot get lost, that is go out of specified boundary. Instead, when such instruction is given, it is simply ignored (“LOST” will appear in the end of the output), but the robot will continue to follow the rest of the instructions.

If I were to implement the whole program in real life, it would include more rigorous testing along with better user interface. Here, I was not able to fully test all the cases specified in the Test project due to time constraint. I would estimate dedicated 80 hours for complete implementation.