Mars Rover Problem Application   
Document

#### Environment:

The **software development kit** (**SDK**) for this application is .net core 3.1.  
  
Application Structure:

# **MarsRover.Business:**

This layer contains the logic that solve the problem.  
  
methods:

string StartMovement(MovementModel input);

**job**:

Find The final coordinates and heading Direction.

MovementModel:

CoordinatesBoundaries: is the upper-right coordinates of the plateau

MovesSet: series of instructions telling the rover how to explore the plateau.

CurrnetPosition: series of instructions telling the rover how to explore the plateau.

Bool SetCurrentPosition(string currentPostion):  
**job**:

Check and promoted currentpostion string validation and Set the Current Positions For rover as starter Coordinates.

void Rotate90Left():

**job:**

Rotate To the left by 90 degree without movement

void Rotate90Right():

**job:**

Make Forward Movement According to the current Head Direction.

void MoveForward():

**job:**  
Make Forward Movement According to the current Head Direction.

## **MarsRover.APP:**

In this layer we have the excuting method that promote user to enter input value and show the output of rover orinetations result.

methods:  
IServiceProvider ServicesRegisteration():

register Interfaces And thier Implemetations for Dependency injection .

## **MarsRover.TestLab:**

In this layer we have Unit test method To test business layer logic (StartMovement)  
according to provided TestCases .