**Hotel Automation Controller Solution**

**Program Execution Instruction**

.NET runtime version **>= 4.5**

Developed in **Visual Studio 2015 with C# 6.0**

To run the program run build **Executables/ProgramDriver.exe**

**Executables/sampleoutput.txt** is the console dump of scenario mentioned in problem statement.

**Overview of the Project Structure/Design**

**(**Though most of the code is self-explanatory, but to ease code review I am including few comments**)**

**Program Driver**

* Creates Hotel
* Register Sensor (Publisher)
* Register Controller(Subscriber)
* Trigger Controller on input from console(sensor)

**HotelEntities**

* Classes for relevant entities according to program definition.
* **HotelFactory** Generates one static object for complete Program Execution which is used by both sensor and controller.
* Though not mentioned in problem definition that corridors can have multiple Lights and AC’s , but for extensibility I have made assumption here.

**Controller**

* Perform Action on input from sensor (NewMotion event triggers MotionHandler subscribed by controller)

**Action Contract**

Simple Contract between sensor and controller which contains two Args

* ActionType
* ActionLocation

**ControllerTest**

* The covered scenarios are directional not for complete test coverage
* Uses Nunitframework dll which is in packages folder
* Test names are self explanatory