

There are 4 java starter files in Mid2HouseQuestion folder: Room.java, Bedroom.java, Kitchen.java, and House.java.

The **House.java** is the tester program and you **should not** modify it.

Please read the comments provided for each method in the Room.java, Bedroom.java and Kitchen.java.

Do the following:

- a. [7] Complete the abstract class **Room** in the file Room.java as follows:
 - [2] Create a constructor to set the width, length of the Room object to the values passed to the constructor and set color to ROOM_COLOR.
 - [3] Override the equals method
 - [2] Create an **abstract** method getArea.
The getArea method should be overridden in all the subclasses of Room. The method should return the area of a room and produce an exception when the area of the room \leq MIN_ROOM_AREA
 - You may create other methods/constructors as required.
- b. [9] Complete the Bedroom.java file as follows:
 - [1] Modify the **Bedroom** class so it is a subclass of **Room** (inherits from Room)
 - Each Bedroom object has
 - width, length, color
 - may or may not have a balcony
 - [2] complete the Bedroom constructor
 - [3] override the getArea method
 - [3] override the equals method
- c. [4] Complete the Kitchen.java file as follows:
 - Modify the **Kitchen** class so it is a subclass of **Room (inherits from Room)**
 - Each Kitchen object has
 - width, length, color
 - pantryWidth and pantryLength
 - [2] Complete the Kitchen constructor
 - [2] Override the getArea method