## Hotel Rooms

In a folder called **project** create two files: **hotel.py** and **room.py**

In the **room.py** file create a class called **Room**. Upon **initialization** it should receive a **number** (**int**) and a **capacity** (**int**). It should also have an **attribute** called **guests** (**0** upon initialization) and **is\_taken** (**False** upon initialization). The class should have **2 methods**:

* **take\_room(people)** - if the room is **not taken**, and there is **enough space**, the guests take the room. Otherwise, the method should return **"Room number {number} cannot be taken"**
* **free\_room()** - if the room **is taken**, free it. Otherwise, return **"Room number {number} is not taken"**

In the **hotel.py** file create a class called **Hotel**. Upon initialization it should receive a **name** (**str**). It should also have 2 **more attributes**: **rooms** (empty **list** of rooms) and **guests** (**0** upon initialization). The class should have **5 more methods**:

* **from\_stars(stars\_count: int)** - creates a new instance with name **"{stars\_count} stars Hotel"**
* **add\_room(room: Room)** - add the room to the list of rooms
* **take\_room(room\_number, people)** - find the room with that **number** and try to **accommodate** the **guests** in the room
* **free\_room(room\_number)** - find the room with that **number** and **free it**
* **status()** - **returns** information about the hotel in the following format:

**"Hotel {name} has {guests} total guests  
Free rooms: {numbers of all free rooms separated by comma and space}**

**Taken rooms: {numbers of all taken rooms separated by comma and space}"**

### Examples

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| **Test Code** |
| from project.hotel import Hotel  from project.room import Room  hotel = Hotel.from\_stars(5)  first\_room = Room(1, 3)  second\_room = Room(2, 2)  third\_room = Room(3, 1)  hotel.add\_room(first\_room)  hotel.add\_room(second\_room)  hotel.add\_room(third\_room)  hotel.take\_room(1, 4)  hotel.take\_room(1, 2)  hotel.take\_room(3, 1)  hotel.take\_room(3, 1)  print(hotel.status()) |
| **Output** |
| Hotel 5 stars Hotel has 3 total guests  Free rooms: 2  Taken rooms: 1, 3 |