**02. Hotel Operations**

class Hotel {

    //TODO...

}

Write a class **Hotel**, which implements the following functionality:

**Functionality**

**Constructor**

The Hotel class should have **3** properties:

* **initialBudget –** number (for running hotel operations)
* **roomAvailability –** object (to track available rooms and amenities)
* **supplyStock –** object (to track the quantity of hotel supplies like cleaning materials or toiletries)

**At the initialization of the Hotel class,** the constructor accepts only the **initialBudget**! The rest of the properties must be empty or initialized accordingly.

**Hint:** You can add more properties to help you finish the task.

**restockSupplies(supplies)** -This method adds supplies to the stock (**supplyStock**). The method accepts **1 argument (an array of strings)** and **returns an appropriate message** (all actions joined by a new line) after trying to restock each of the supplies**:**

* Every element in this array is information about a particular supply in the following format:

**"{supplyName} {supplyQuantity} {supplyTotalPrice}"**

* + They are separated by a single space.

**Example: ["Soap 100 50", "Towels 20 100", "Shampoo 50 75", ...]**

* If the current supply's total price (**supplyTotalPrice**) is within the available budget (**initialBudget**), the supply is added to the **supplyStock** with its name (key) and quantity (value). The price of the supply is **deducted** from the hotel **budget**. If the supply already exists in **supplyStock**, just add the new quantity to the old one.
* If the supply was added successfully, add the following to the final message to be returned:

**"Successfully stocked {supplyQuantity} {supplyName}"**

* If the supply could not be added due to budget constraints, add the following to the final message to be returned:

**"There was not enough money to restock {supplyQuantity} {supplyName}"**

**addRoomType(roomType, neededSupplies, pricePerNight)** –This method adds room types to the **roomAvailability**. The method accepts **3 arguments (string, array of strings and number):**

* Each element in **neededSupplies** is in the format:

**"{supplyName} {supplyQuantity}"**

They are separated by a single space.

* If the room type is **not** already available, add it to the **roomAvailability** object with its **neededSupplies** and **pricePerNight**.
* If the room type already exists, **return**:

**"The {roomType} is already available in our hotel, try something different."**

* Else, **return**:

**"Great idea! Now with the {roomType}, we have {number of room types} types of rooms available, any other ideas?"**

**showAvailableRooms()** - This method simply returns all room types from **roomAvailability** separated by a new line in the format:

**{roomType} - $ {pricePerNight}**

**{roomType} - $ {pricePerNight}**

**{roomType} - $ {pricePerNight}**

**…**

* If no room types are available, **return** the message:

**"Our rooms are not ready yet, please come back later..."**

**bookRoom(roomType)** – This method accepts **1 argument (string).**

* This method checks if the given room type is available in **roomAvailability**:
  + If the room type does **not** exist, **return**:

**"There is no {roomType} available, would you like to book another room?"**

* + If the room type exists, the method checks whether the required supplies are available in **supplyStock**. If not, **return**:

**"We are currently unable to accommodate your request for {roomType}, sorry for the inconvenience."**

* + If the room type exists and all necessary supplies are available, you don’t need to change the quantity of the supplies, just **return**:

**"Your booking for {roomType} has been confirmed! The price is ${pricePerNight} per night."**

**Example**

|  |
| --- |
| **Input 1** |
| let hotel = new Hotel(500);  console.log(hotel.restockSupplies(["Soap 100 50", "Towels 20 100", "Shampoo 50 75"])); |

|  |
| --- |
| **Output 1** |
| Successfully stocked 100 Soap  Successfully stocked 20 Towels  Successfully stocked 50 Shampoo |

|  |
| --- |
| **Input 2** |
| let hotel = new Hotel(500);  console.log(hotel.restockSupplies(["Soap 100 50", "Towels 20 100", "Shampoo 50 75"]));  console.log(hotel.addRoomType("Deluxe Suite", ["Soap 5", "Towels 2"], 200));  console.log(hotel.addRoomType("Standard Room", ["Soap 2", "Towels 1"], 100));  console.log(hotel.addRoomType("Standard Room", ["Soap 2", "Towels 1"], 100)); |

|  |
| --- |
| **Output 2** |
| Successfully stocked 100 Soap  Successfully stocked 20 Towels  Successfully stocked 50 Shampoo  Great idea! Now with the Deluxe Suite, we have 1 types of rooms available, any other ideas?  Great idea! Now with the Standard Room, we have 2 types of rooms available, any other ideas?  The Standard Room is already available in our hotel, try something different. |

|  |
| --- |
| **Input 3** |
| let hotel = new Hotel(500);  console.log(hotel.restockSupplies(["Soap 100 50", "Towels 20 100", "Shampoo 50 75"]));  console.log(hotel.addRoomType("Deluxe Suite", ["Soap 5", "Towels 2"], 200));  console.log(hotel.addRoomType("Standard Room", ["Soap 2", "Towels 1"], 100));  console.log(hotel.showAvailableRooms()); |

|  |
| --- |
| **Output 3** |
| Successfully stocked 100 Soap  Successfully stocked 20 Towels  Successfully stocked 50 Shampoo  Great idea! Now with the Deluxe Suite, we have 1 types of rooms available, any other ideas?  Great idea! Now with the Standard Room, we have 2 types of rooms available, any other ideas?  Deluxe Suite - $ 200  Standard Room - $ 100 |

|  |
| --- |
| **Input 4** |
| let hotel = new Hotel(500);  console.log(hotel.restockSupplies(["Soap 100 50", "Towels 20 100", "Shampoo 50 75"]));  console.log(hotel.addRoomType("Deluxe Suite", ["Soap 5", "Towels 2"], 200));  console.log(hotel.addRoomType("Standard Room", ["Soap 2", "Towels 1"], 100));  console.log(hotel.showAvailableRooms());  console.log(hotel.bookRoom("Apartment"));  console.log(hotel.bookRoom("Deluxe Suite")); |

|  |
| --- |
| **Output 4** |
| Successfully stocked 100 Soap  Successfully stocked 20 Towels  Successfully stocked 50 Shampoo  Great idea! Now with the Deluxe Suite, we have 1 types of rooms available, any other ideas?  Great idea! Now with the Standard Room, we have 2 types of rooms available, any other ideas?  Deluxe Suite - $ 200  Standard Room - $ 100  There is no Apartment available, would you like to book another room?  Your booking for Deluxe Suite has been confirmed! The price is $200 per night. |