

## Instructions for the Candidate

- All details provided in the assignment are sufficient. The candidate is free to make logical decisions independently.
  - We expect the candidate to deliver **production-ready software code**.
  - The software code should **build successfully** (maven or gradle).
  - The code can be shared via **GitHub**.
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## Assignment

Marvel hospitality management corporation has a microservice based IT and one of the microservice **room-reservation-service** is to manage the reservations.

Your task is to develop following two functionalities in a **Spring Boot application**:

1. Rest end point to confirm a room reservation.
    - a. If mode of payment is cash, room must be confirmed immediately
    - b. If mode of payment is credit card, call rest api **credit-card-payment-service** to retrieve the status of the payment. If credit payment is confirmed, then confirm the room else throw an error
    - c. If mode of payment is bank transfer, room must be booked with pending payment status.
  2. Consume **bank-transfer-payment-update** topic to listen to payment updates and confirm the booking if payment is confirmed.
  3. Automatically cancel the reservation, If the payment is done using a bank transfer and total amount is not received 2 day before the reservation start date.
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## Rest Endpoint Details

### 1. Confirm room reservation

Request Data:

- Name of Customer
- Room Number
- Reservation start and end date
- Room segment

- Small
- Medium
- Large
- Extra Large
- Mode of Payment
  - Cash
  - Bank Transfer
  - Credit Card
- Payment Reference

### Response:

- Reservation Id
- Reservation status
  - PENDING\_PAYMENT
  - CONFIRMED
  - CANCELLED

### Validations:

- A room cannot be reserved for more than **30 days**.
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## Extra information

### Event driven architecture

Marvel hospitality uses an event broker for implementing event driven architecture. A topic **bank-transfer-payment-update** provides the events related to the payments received on hotels account. Following is data present in the event

| Attribute              | description  |
|------------------------|--|
| paymentId              | Unique id of the payment   |
| debtorAccountnumber    | Account number from which payment was done   |
| amountReceived         | Payment amount   |
| transactionDescription | Transaction Description.<br><br><b>Format</b><br>< E2E unique id(10 character)> <reservationId (8 characters)> |

|  |                                |
|--|--------------------------------|
|  | Example<br>1401541457 P4145478 |
|--|--------------------------------|

## **credit-card-payment-service specs**

open api specs *credit-card-payment-service.yaml* is provided along with the assignment.