





Assumptions

- We keep record of tickets after it was purchased by a customer.
- Audio guide is issued at one wing and visitors can carry around the device to the different wing.
- First and last 4 digit of the card number is stored.
- The cost of tickets, app, audio guide will not change.
- Business is not interested in storing cost of tickets, App, and audio guides as they are not concerned with discounts or refunds.
- There is no expiry date for a purchased ticket. It is valid from when it was first scanned at the entrance till the end of that day.
- Ticket may be scanned at many entrances and wings over time.
- Visitor can book one 15-minutes slot per ticket.
- "Valid" attribute stores "unused","valid","invalid" which is derived from the first time scanned at the entrance.
- There might be a visitor who scanned the ticket at the entrance but didn't enter any of the wings.
- We only keep the record of the activated audio guide. The audio guide used in the museum is not retired from use.
- Time used for the audio guide is derived from the time issued and received at a wing.
- Audio guide may not be issued at the wing if its new, spare, or under repair.
- First name, city, country are stored for the cash payment for audio guide.
- Number {attended the timed entrance/booked the timed entrance} is derived from the number of ticket barcode {scanned for the timed entrance/booked for the timed entrance}.
- Remaining number for the 15 minutes slot is derived by subtracting number booked from number admitted for the slot.
- Total number attended the exhibition is derived from the number attended each slot of the exhibition.
- Specialist exhibitions with exactly the same name may exist.
- Audio guide is issued per one ticket at a time. It cannot be shared with 2 or more people.
- Software will be tracking the first entry so that transportation option will be asked only once (confirmed by the lecturer).