

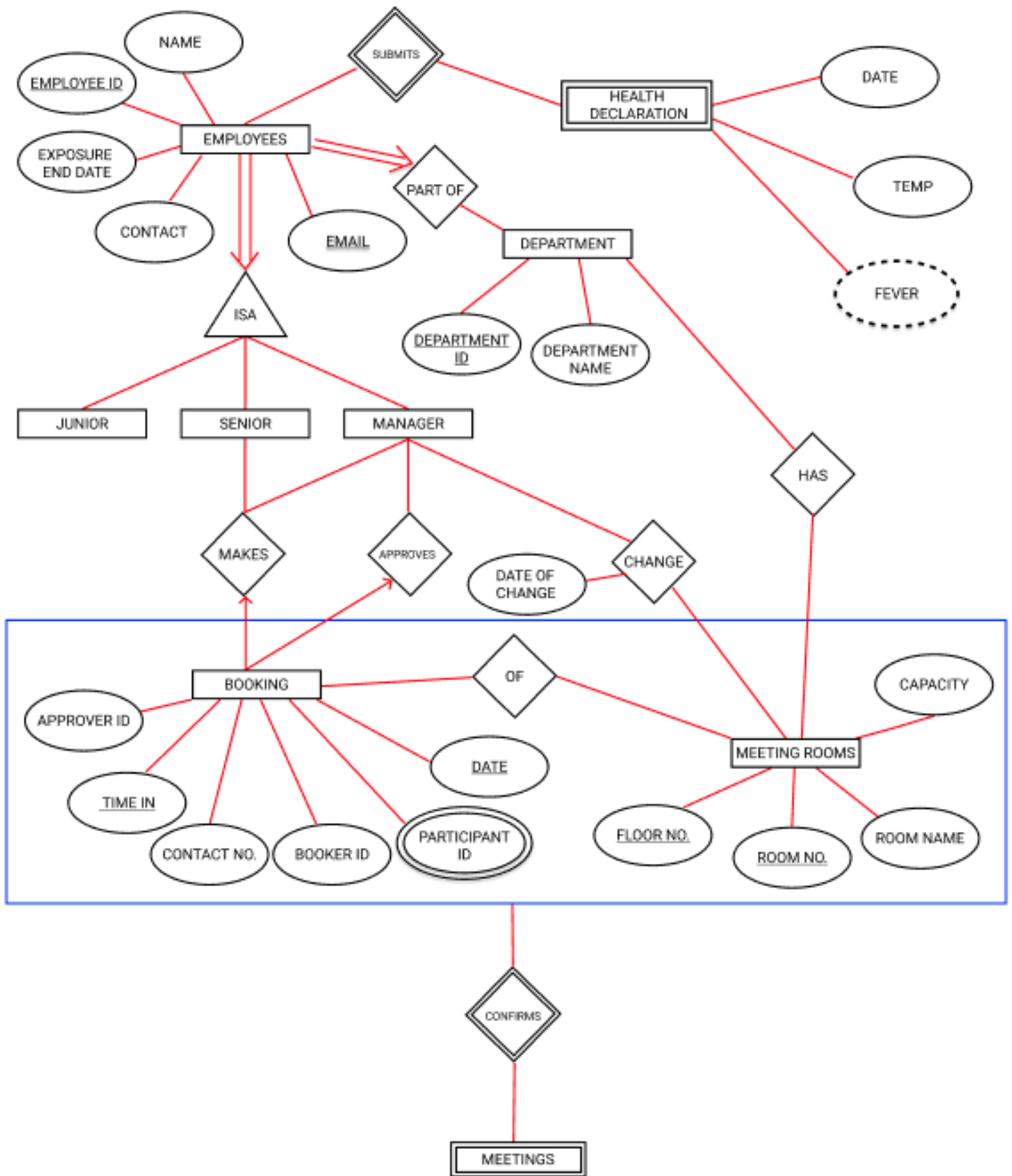


CS2102 Deliverable 1

Group 88

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ER DIAGRAM



Meetings and Bookings

Our group went with two separate entities for bookings and meetings. The 'Bookings' entity will contain all bookings requested. Each booking has the relevant attributes as well as an 'Approver ID' attribute, which is set to null by default.

After a booking is approved, the 'Approver ID' attribute will be updated to the approving manager's ID. The details of this booking will then be recorded into the 'Meetings' entity (i.e. 'Meetings' contains all the approved meetings).

Each entry in the 'Meetings' entity has the attributes Participant ID, Date, Time In, Floor No and Room No of each participant of the booking.

Eg. A booking on 29th Feb 1200 - 1300hr at Floor 1, Room 1 with 3 participants (Booker A, Participants B and C). Once approved, the following will be added to Meetings table:

Participant ID	Date	Time In	Floor No	Room No
A	29 FEB	1200	1	1
B	29 FEB	1200	1	1
C	29 FEB	1200	1	1

How Contract Tracing is done in the event of an employee having a Fever

If a participant in the meeting is down with fever, all entries in 'Meetings' entity with that participant's 'Employee ID' will be removed from the day he is diagnosed with fever up to meetings which are set to take place 7 days later.

The employee's 'Exposure End Date' attribute will be defaulted to null. It will be updated to the date that is 7 days after the date of where there is close contact.

Similarly, to identify close contacts, all the meetings attended by this employee from the past 3 days can be retrieved from the 'Meetings' entity by referring to the (Date, Time In, Floor No, Room No). From there, we can identify all the employees in these meetings using the 'Employee ID' attribute.

If the employee with fever is the one booking the room, we can reference the 'Booker ID' in the 'Bookings' entity to cancel the booking by setting the 'Approval ID' to null, and removing it from 'Meetings' as well if the booking was already approved.

Joining Multiple Meetings

Our group decided to allow employees to attend multiple meetings within a single timeslot. In a one-hour period, an employee is allowed to jump between multiple meetings.

For example, the employee's first meeting ends in 30 minutes, he still has time to attend a second meeting which spans 30 minutes long. In the case of contact tracing, it would be logical to classify all employees from both meetings to have been in close contact with this employee, should he have a fever.

No End Time Attribute

Since each session is fixed to one-hour time slots, our group has decided to only include the start time since the end time can simply be determined by adding one hour to the start time. Booking timings start at the beginning of every hour. (i.e no bookings for timings such as 0930).

Health Declaration

Our group decided to create a 'Health Declaration' entity so that Health Declarations across multiple dates can be stored within the 'Health Declaration' table, as opposed to an attribute for employees which could make storing and retrieving past declarations harder. Each entry is uniquely identified by a (Employee ID, Date) pair.

Constraints Not Captured:

1. Updating of meetings upon employee resignation
2. Meeting Room Dynamics
3. Checks for functions, such as participant capacity in a meeting, fever status when booking or joining a meeting, and approving manager being of the same department as the employee booking a meeting.
4. Changing of participants