NANYANG TECHNOLOGICAL UNIVERSITY SINGAPORE

CZ2007 - Introduction to Databases Lab Report 1

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Design Considerations / Assumptions Made

1. Why <Clinic> is subclass of <Company>
Clinic is a subclass of company, as it is a company registered under Accounting and Corporate Regulatory Authority (ACRA), and the location of the clinic will be uniquely identified by the company's own locations.

2. Why <Company> and <Location> is many to many relationships.
Company to location is many to many relations as there may have shared offices, so that one location may have multiple companies and one company may own multiple offices in different locations.

3. Why is <SubCategories> a weak entity?
Subcategories is a weak entity set associated with the entity set categories. There is a many-to-one relationship between categories and subcategories entity sets, with a degree constraint such that each category entity has to be linked to at least one subcategory entity.

4. How is a high risk group identified in <Persons>? What is isTrackingTemp?
Person has an attribute,isHighRisk, for the flagging. Attribute, isTrackingTemp, is needed for an assumption that same household members of a contact traced person does not need to have their temperature recorded periodically and the system will not prompt them to do so.

5. Why does <Persons> have a self-relationship with M-M cardinality with itself?
Person is associated with another person in close contact by **<lives-withs>**,in many to many relationships as they are related in many ways.

6. Why does <Persons> have a Many-to-one cardinality with <Company>?
An assumption is made whereby a company has more than one contact person for a company. This may be due to the contact person taking leaves or has left the company.

7. Assumption: System does not keep all of the periodic user's locations.
The system only keeps the records of the last hour' coordinates in <UserLocation> to avoid keeping a large number of records over a long period of time. We assume that the 5 minute coordinates are used to check the coordinates for the 15 minute tracker.

8. Why is <Comments> is a subclass of <ForumMessages>?
<Comments> are a subclass of <ForumMessage> because a <Comment> contains the similar attributes as a <ForumMessage> however, a comment needs to be identified and belong to a <ForumMessage>.

9. <SwabTests>
Many-to-one relationship between <SwabTests> and <Persons> as a person can have several swab tests scheduled but a single swab test can only belong to one person. Referential integrity exists here as all swab tests have to belong to a person.
Many-to-one relationship between <SwabTest> and and <Clinics> as a clinic can have several swab tests being scheduled but a single swab test can only belong to a singular clinic.

10. Why are <Reviews> and <ForumMessages> Weak Entities?
In the event that the location closed down or ceased operations. <Reviews> And <ForumMessages> can no longer exists without the supporting <Locations> entity.