**CZ2007 Example Class 1**

**Subclasses**

* We first establish the entity set Person, and from there we derived the 4 subclasses, Stakeholder, Professor, Staff and Student – since these four entity sets inherit the attributes of Person. We also note that a Person can be part of one or more of the subclasses.
* We also established subclasses for Staff, namely Admin\_Staff and Technical\_Staff, since they also inherit the attributes of staff.
* Technical\_Staff are assigned to Laboratory, and Laboratory can be further classified into the subclasses Teaching\_Laboratory and Research\_Laboratory.
* Student can be classified into the subclasses Undergraduate and Graduate.

**Weak entity sets**

* The Laboratory contain Equipment which can only be identified if provided the name and school of the Laboratory. As such, Equipment is a weak entity set which depends on the attribute name and school of the entity Laboratory.
* We created an entity set called Experiment, which is done by Undergraduate. Experiment can be linked to the Course associated with it as well as the Teaching\_Laboratory. Experiment is considered a weak entity set because we cannot uniquely identify it just based on its date – this entity set depends on the Undergraduate and the Teaching\_Laboratory.
* The entity set Comment is to keep record of the comments and suggestions made by Stakeholder. As it cannot be uniquely identified just based on its topic and date. Thus, this is also a weak entity set and it depends on the identity of the Stakeholder who made the comment.
* We also have the entity set Teaching\_Record which takes note of the teaching activities of Professor. It is also a weak entity set as identifying the Teaching\_Record requires knowledge of the Professor teaching, the relevant Course and the Timetable of the course.

**Relationships**

* Most of the relationships are many-to-many relationship such as