

EER Assignment: Large Submission Report

Matthew D. Sherman

Department of Computer Science and Software Engineering, University of Canterbury

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Matthew Sherman - 16645573

Assumptions:

- Learning support plan has academic year as the partial key attribute because the attributes such as notes, reader/writer, and extra time are optional (not guaranteed for learning support plan), so it would not be appropriate for those to be the key. Hence why academic year is the partial key as if a student is issued a learning support plan, it can be identified (partially) by academic year.
- I added 'date' to the EXAM entity (not mentioned in assignment details) because it makes sense for an exam to have a date. EXAM is a weak entity as it can't be defined by itself (needs COURSE). I also made 'date' the partial key as EXAM can be partially defined by 'date' as date an exam date is unique (and then that date can have various exam on the same day from different start times from EXAM INSTANCE).
- ROOM is a subclass of the union of the two entities PHYSICAL_ROOM and VIRTUAL_ROOM. This is because ROOM represents the concept of a room – be it physical or virtual. ROOM is not a superclass as it does not possess any key or partial key attributes by itself.
- The 'Calculator_availability' attribute both functions as providing information as to if students can use calculators as well as what type. Example values for this attribute could be 'none', 'basic', 'scientific', etc.
- The ternary INVIGILATE relationship is provided so that, based on 'Room_use' (an attribute of the INVIGILATE relationship) being in use or not in use, an exam instance can be/not be invigilated by a casual staff member.
- EXAM INSTANCE is a subclass of EXAM as it needs to inherit the attributes of EXAM such as type, standard duration, etc.
- There is a key_contact attribute for EXAM because an academic staff member can be listed for being a key contact. There is a course coordinator attribute for COURSE_INSTANCE because an academic staff member can coordinate a course instance (be a course coordinator).
- I have made the assumption that an EXAM INSTANCE requires one ROOM (which can be either physical or virtual).
- There is a ternary relationship between EXAM_INSTANCE, COURSE, and STUDENT (ALLOCATED_TO). This is to allocate a student to an exam instance if they are enrolled in that course.