Data Management Coursework Year 1

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1 Relational Model

1.1 ex4

1.1.1 Faculties

R(faculty,building,room,capacity,lecturer_email,lecturer_firstname,lecturer_surname)

1.1.2 Students

R(student firstname,student surname,student id,student email,year,address,contact number,module id,module name,leader, lecturer1,lecturer2,exam mark,coursework1,coursework2,coursework3)

1.2 ex5

1.2.1 Faculties

lecturer_email -¿ lecturer_firstname
lecturer_email -¿ lecturer_surname
lecturer_email -¿ faculty

building, room -¿ capacity

1.2.2 Students

student id -¿ student firstname
student id -¿ student surname
student id -¿ student email
student id -¿ year
student id -¿ contact number
student id -¿ module id

module id -¿ module name
module id -¿ leader
module id -¿ lecturer1
module id -¿ lecturer2
module id -¿ coursework1
module id -¿ coursework2
module id -¿ coursework3

student id, module -¿ exam mark

1.3 ex6

1.3.1 Faculties candidate keys

lecturer_email and building_room lecturer_email is the primary key because it is used for only one lecturer within the faculty, although they may teach in multiple rooms.

1.3.2 Faculties candidate keys

student id and module id student id is the primary key because it corresponds to only one student, although they may be enrolled on multiple modules.

2 Normalisation

3 Modelling

4 Querying