



***Database System Concepts for Non-Computer Scientist - WiSe 23/24***

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<http://db.in.tum.de/teaching/ws2324/DBSandere/?lang=en>

**Sheet 03**

**Exercise 1**

Consider the following description of a hospital and create an entity relationship diagram. Use generalization when appropriate.

- Hospitals consist of departments. Each hospital has an address (which can be used to identify it) and a number of beds. Departments have a name, which is unique only within a hospital.
- Departments in turn consist of rooms which are numbered. Such a number is unique within a department.
- Every hospital has employees who receive a salary. Each member of the staff can be employed in various hospitals.
- Employees are identified by a personnel number and can be divided into doctors and nurses. A doctor can supervise several nurses, but a nurse is supervised by only one doctor. A nurse can not be a doctor and vice versa.
- A department can be run by several doctors. A doctor can also run several departments. It is also known whether a doctor has a room and if she does, the room number is known. No doctor has to share her office with another doctor.
- Shifts are used to organize work. A shift can be uniquely identified by date and time period. Employees can work in shifts at a department. An employee can only work in one department in a given shift.

Solution: