**KINDER GARDEN FOUNDATION**

Sintef runs the kinder garden foundation 'Aurora' to offer nursery school services for their employees. To support the administration of these kindergartens, a database system that keeps track of them, their employees and the children at the kindergartens will be developed. Your task is to make a conceptual data model for this database, using the requirements outlined below. Use the ER-model notation from the book.

A preliminary analysis of the requirements has yielded these: (Make your own interpretations and indicate them if you find it necessary.

1. • For each child, the following information must be recorded: Date of birth, social security number, name, address, postcode, sex, age, and date of start at the kinder garden, comments (i.e. allergies) and a more thorough description of the child's stay at the kindergarten. If the child has any brothers or sisters within one of the foundation's kindergartens this should be recordable. All children belong to a certain department in one of the kindergartens.
2. • For all children, next of kins shall be recorded. For each next of kin the role of he or she should be recorded (i.e. mother, father, other...) If there is more than one next of kin, an ordering (priority) must be recorded. For each next of kin this should be recordable: Name, address, home phone number, work phone and mobile phone. It is not possible to record social security number for next of kins. A person might be next of kin for more than one child (with same or different role and priority).
3. • The foundation has multiple kindergartens. For each of them the names, address, post code, phone number and fax number should be recorded. All kindergartens have a leader which is a kindergarten-teacher at the kindergarten. Records of when the leader became the leader is kept.
4. • A kindergarten is organized into departments. A department has a name that is unique inside the kindergarten, a phone number, a type («small kids», «older kids», «admin»), and a head of department which is a kindergarten-teacher affiliated with the department.
5. • All employees are assigned to a department (the leader is the head of the administration department). For an employee birth date, social security number, name, address, post code, title («head», «kindergarten-teacher», «assistant», «substitute»), % of full position, hiring date and home phone number. For the kindergarten teacher the graduating year is also registered. Subs are associated with the kindergartens administration-department and mobile phone and a short description of suitable working hours is recorded.
6. • If an employee also have a child or more in one of the kindergartens this is recorded to avoid assigning them to the same department

**Tasks:**

1) Draw an ER diagram for the above specification

2) Map the ER diagram to relations