Case Study (EERD)

1. An employee will be working only in a single department. But in one department there can be more than one employee. There is no such department in which an employee is not working. There is no such employee who is not working in a department. For an employee: employee no. , employee name, employee address is required to be stored. For a department: department no, department name and department location is required to be stored.

An employee is either an Hourly employee, Salaried Employee or a consultant employee. For hourly employee: Hourly Rate is required. For Salaried employee: Monthly Salary is required. For a consultant: Billing Rate is required.

Each employee is assigned one or more than one projects only if he/she is working in a department. A project may be assigned to more than one employee. There is no such employee who is not working on a project. There is no such project which is not assigned to an employee. For a project: project no, title and duration of project is required. We are also required to store Project Assignment Date and Project Assignment Status.

A project may be a development project, research project and educational project. For a research project: research grant is required to be stored. For a development project: funding organization is required. For an educational project: Education institute name is required.

Organization has a Library. The library contains one or more than one books. Each book is only in single library. There is no such library in which there does not exist any book. There is no such book which does not exist in library. For library: location, start time and end time is required to be stored.

An employee may get one or more than one books issued. A book is issued to only one employee at a time. There may be some employees who do not get books to be issued. There are some books which are not issued to any employee. For a book: book no, title, authors, publisher and edition is required to be stored. We also need to store Issue Date, Due Date, and Fine Amount for books which are issued to employees.

A book is either an IT related book, Management related book or Humanities related book. For IT related books: Tools supported is required to be stored. For Management related books: Organizational Cased Studies is required to be stored. For Humanities related books: Art type is required to be stored.

1. The director of the University Accommodation Office requires you to analyze a database to assist with the administration of the office. The requirements collection phase of the database design process based on the Director’s view has provided the following requirements specification for the Accommodation Office database.

The data stored on each full-time student includes the matriculation number, name, home address(street, city/town, postcode), date of birth, gender, category of student(for example, first year undergraduate, postgraduate), nationality, smoker(yes or no), special needs, any additional comments, current status(placed/waiting), and what course the student is studying on. The student information stored relates to either those currently renting a room or those on the waiting list. No other category of student is required by system. There are only two categories of residence; residence hall or student flat. Each student is assigned only a single room from hall or flat. Each hall of residence has a name, address, telephone number, and a hall manager who supervises the operation of the hall. The halls provide only single rooms, which have room number, place number, and monthly rent rate. The place number uniquely identifies each room in all the halls controlled by accommodation office and is used when renting a room to a student. The Accommodation Office also offers student flats. These flats are fully furnished and provide single room accommodation for groups of 3, 4 or 5 students. The information held on student flats includes a flat number, address, and the number of single bedrooms available in each flat. The flat number uniquely identifies each flat. Each bedroom in a flat has a monthly rent rate, a room number, and place number. The place number uniquely identifies each room available in all student flats. New lease agreements are negotiated at the start of academic year with a minimum rental period of one semester and a maximum rental period of one year, which includes 1, 2 and the Summer semester. Each individual lease agreement between a student and the Accommodation Office is uniquely identified using a lease number. The data stored on each lease includes the lease number, duration of the lease, name, address details of the hall or student flat, the date the student wishes to enter the room, and the date student wishes to leave the room. Student flats are inspected by staff on a regular basis to ensure that the accommodation is well maintained. The information recorded for each inspection is the name of the member of staff who carried out the inspection, the date of inspection, an indication of whether the property was found to be in satisfactory condition and any additional comments. Some information is also held on members of staff of the accommodation office and includes the staff number, name, home address (street, city/town, postcode), date of birth, gender, position and location.