

**Task 1.1)** You are designing an inventory system for a library. The library has a number of books each of which has a title, author, publisher, date of publication, and ISBN. The library also has users who can borrow books. Each user has a name, address and contact phone number. A user can borrow several books, but each book can only be borrowed by a single user at a time. Books that are borrowed have a due date for returning.

Draw a schema diagram for this system in the box below:

**Task 1.2)** You are designing an attendance record system for students, that tracks whenever a student attends a class. Each student can attend a number of different classes and each class can be attended by a number of students. Students have a name and a unique student number. Each class has a name and a unique class code. Every time a student attends a class, the date and time that they attend needs to be recorded.

Draw a schema diagram for this system in the box below:

**Task 1.3)** You are designing a database for a staff management system for an organisation. The organisation has a number of departments. Each department manages a number of projects and has a number of staff members. Each staff member has a name, a unique staff ID, a date of birth, and a contact phone number. Staff work for a department and are assigned to work on projects. Each project has a name which does not have to be unique, and a single staff member who acts as project leader. Multiple staff can work on a single project, and each staff member can be working on any number of projects.

Draw a schema diagram for this system in the box below: