

**CALIFORNIA STATE UNIVERSITY, SAN BERNARDINO  
SCHOOL OF COMPUTER SCIENCE & ENGINEERING  
CSE 572 F13 PROJECT OPTION III –  
COYOTE RESIDENCE OFFICE SYSTEM**

The Director of the COYOTE Residence System(CRO) requires you to design a database to assist with the administration of the office. The requirements collection and analysis phase of the db design process has provided the following data requirements specifications for CRO db.

The data stored for each full-time student includes: student number, name (first and last name), home address (street, city, state, zip), mobile phone number, email, date of birth,gender, class (freshman, sophomore, junior, senior, graduate, postgraduate), nationality, special needs, any additional comments, current status (placed/waiting), major, and minor.

The student information pertains to those currently renting a room and those on the waiting list. Students may rent a room in a hall of residence or student apartment. When a student registers in the university, s/he is assigned to member of staff who acts as his/her adviser. This adviser is responsible for monitoring the student's welfare and academic progress throughout his/her time at the university. The data for the adviser include full name, position, name of department, university phone number, email, and room number.

Each residence hall has a name, address, telephone number, and a hall manager, who supervises the operations of the hall. The halls provide only single rooms, which have a room number, place number, and monthly rent. The place number uniquely identifies each room in all halls controlled by the Residence Office and is used when renting a room to a student.

The Residence Office also offers student apartments. These are fully furnished and provide single-room accommodations for groups of three, four, or five students. The information for student apartments includes an apartment number, address, and the number of single bedrooms available in each apartment. The apartment number uniquely identifies each apartment.

Each bedroom in an apartment has a monthly rent, room number, and a place number. The place number uniquely identifies each room in all student apartments and is used when renting a room to a student.

A student may rent a room in a hall or student apartment for various periods of time.

New lease agreements are negotiated at the start of each academic year, with a minimum rental period of one quarter and a maximum rental period of one year, which includes quarters 1, 2, 3 and the summer quarter. Each individual agreement between a student and the Residence Office is uniquely identified using a lease number.

The data stored on each lease includes the lease number, duration of the lease (given as quarters), student's name and id, place number, room number, address details of the hall or student apartment, and the date the student wishes to occupy the room, and the date when the student wants to vacate the room (if known).

At the start of each quarter, each student is sent an invoice for the following rental period. Each invoice has a unique invoice number.

The data stored on each invoice includes the invoice number, lease number, quarter, payment due date, student's full name and id, place number, room number, and the address of the hall or apartment. Additional data is also held regarding the payment of the invoice and includes the date the invoice was paid, the method of payment (check, cash, credit card), the date the first and second reminder was sent (if necessary).

Student apartments 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 member of staff who carried out the inspection, the date of inspection, an indication of whether the property was found to be in a satisfactory condition (yes or no) and any additional comments.

Some information is also held on members of staff of the Residence Office and includes the staff number, name (first and last name), email, home address(street, city, state, zip), date of birth, gender, position (e.g. Hall Manager, Administrative Assistant, Cleaner) and location (e.g. Residence Office or Hall).

The Residence Office also stores a limited amount of information on the courses offered by the university, including the course number, course title (including year), course instructor, instructor's on-campus telephone number, email, room number, and department name. Each student is also associated with a single major.

Whenever possible, information on a student's next-of-kin is stored, which includes the name, relationship, address (street, city, state, zip) and contact telephone number.

**Query Transactions - Project Option: CRO**

Listed below are some examples of query transactions that should be supported by the CRO database system.

1. Present a report listing the Manager's name and telephone number for each hall of residence.
2. Present a report listing the names and student ids of students with the details of their lease agreements.
3. Display the details of lease agreements that include the summer quarter.
4. Display the details of the total rent paid by a given student.
5. Present a report on students who have not paid their invoices by a given date.
6. Display the details of apartment inspections where the property was found to be in an unsatisfactory condition.
7. Present a report of the names and student ids of students with their room number and place number in a particular hall of residence.
8. Present a report listing the details of all students currently on the waiting list for accommodation; that is, who were not placed.
9. Display the total number of students in each student category.
10. Present a report of the names and ids for all students who have not supplied details of their next-of-kin.
11. Display the name and internal telephone number of the Adviser for a particular student.
12. Display the minimum, maximum, and average monthly rent for rooms in residence halls.
13. Display the staff number, name, age, and current location of all members of the residence staff who are over 60 years of age today.