University of Canberra

Faculty of Science and Technology Semester 2, 2023

**Database Systems PG 6681**

Tutorial Exercises for Week 5

**This week your tutor will allocate you to a group of 4 to 5 students (maximum 5 students) for your assignment 2.**

**Please let your tutor know if you are not allocated to a group**

1. **Tutors are required to allocate students to a group of 4 to 5 students (maximum 5 students) for your assignment 2.**

2. For the scenario below:

2.1 Identify and list all entities, attributes, and primary and foreign keys of the following scenario

2.2 draw an E-R diagram of the below system.

The Manager of a real estate agency called YourHome Realty requires you to create a database system to automate the matching of rental properties and properties for sale to the customer needs of the agency. The requirements collection and analysis phase has provided the following data requirements for the database.

The customers first register with the real estate agency. The details of registered customers are recorded in YourHome Realty database. These details are: first name, last name, customer number, telephone number, and address (that is, Street Number, Street Name, Suburb, Postcode, City, and State).

The details of customer housing preferences are also recorded. These details are: Type of property (i.e. house, unit, flat) and suburbs that interest the customer as well as the maximum amount of money a customer is willing to pay for rent or to buy a property.

The details of all properties for sale and properties for rent of YourHome Realty are also stored in their database system. The details of properties for sale are: street number, street name, suburb, postcode, city, state, sale price, type of property, number of bedrooms, number of bathrooms, number of garages, and staff number of staff selling the property.

The details of properties for rent are: street number, street name, suburb, postcode, city, state, rental price per week, type of property, number of bedrooms, number of bathrooms, number of garages, and the date from which the property is available for rent and staff number of staff renting the property.

The details of staff are also recorded in the database. These details are: first name, last name, telephone number, branch address (that is, Street Number, Street Name, Suburb, Postcode, City, State), date of birth, and salary.

The database system should support browsing, where a staff member or a customer can check the current properties available.

The system also supports an online inspection system, where a customer can check the date and time that a property will be available for inspection.

Property inspection details are stored in Your Home Realty. Property inspection details are: Property number, inspection date and inspection time, and property address. The details of the staff that will be present at the open inspection are also stored in the database.

YourHome Realty’s system has a notification facility where the computer system issues notifications to the customers when certain properties are available. The system reads the details of every property available and if it matches any customer's preferences then a notification is sent to the customer.

The notification contains the customer details: First name, Last name, Customer number, telephone number, address (that is, Street Number, Street Name, Suburb, Postcode, City, State), and property details (that is, Type of property, house, unit or flat), and address of the property and the price of the property (rental price or sale price).