#### Department of Computing and Information Systems

# CMIS 2123 – Database Management Systems Practical Quiz

Time: 1 ½ (One and half) Hours

Answer all questions

#### The DreamHome Case Study

The first branch office of DreamHome was opened in a city called Glasgow in the UK. Since then, the Company has grown steadily and now has several offices in most of the main cities of the UK. However, the Company is now so large that more and more administrative staff is being employed to cope with the ever-increasing amount of paperwork. Furthermore, the communication and sharing of information between offices, even in the same city, is poor. The Director of the Company feels that too many mistakes are being made and that the success of the Company will be short-lived if she does not do something to remedy the situation. She knows that a database could help in part to solve the problem and requests that a database application be developed to support the running of DreamHome. The Director has provided the following brief description of how DreamHome currently operates.

DreamHome specialize in property management, by taking an intermediate role between owners who wish to rent out their furnished property and clients of DreamHome who require rent furnished property for a fixed period. DreamHome currently has about 2000 staff working in 100 branches. When a member of staff joins the Company, the DreamHome staff registration form is used.

Each branch has an appropriate number and type of staff including a Manager, Supervisors, and Assistants. The Manager is responsible for the day-to-day running of a branch and each Supervisor is responsible for supervising a group of staff called Assistants.

DreamHome consider high of their property owners and their information like their first and last names, address, phone and they are also given a unique ID. The information regarding the properties' advertised for sale are property number, the address: street, city, post code, the property type, rooms and the rent value.

Each property at DreamHome is handled by a staff member of the branch closest to the property. They keep the owners informed about their property status regularly.

DreamHome also has records of their potential customers. Clients' details like first and last names, telephone, the type of their referenced property and the maximum rent they can afford are recorded and each client is identified by a number provided by DreamHome.

Following tables carry sample data DreamHome is currently in possession.

#### Branch

branchNo	street	city	postcode	
B005	22 Deer Rd	London	SW1 4EH	
B007	16 Argyll St	Aberdeen	AB2 3SU	
B003	163 Main St	Glasgow	G11 9QX	
B004	32 Manse Rd	Bristol	BS99 1NZ	
B002	56 Clover Dr'	London	NW10 6EU	

## Staff

staffNo	fName	lName	Position	sex	DOB	salary	branchNo
SL21	John	White	Manager	M	1945-10-01	30000	B005
SG37	Ann	Beech	Assistant	F'	1960-10-11	12000	B003
SG14	David	Ford	Supervisor	M	1958-11-24	18000	B003
SA9	Mary	Howe	Assistant	F	1970-02-19	9000	B007
SG5	Susan	Brand	Manager	'F	1940-06-03	24000	B003
SL41	Julie	Lee	Assistant	F	1965-06-13	9000	B005

#### PrivateOwner

ownerNo	fName	1Name	address	telNo
CO46	Joe	Keogh	2 Fergus Dr, Aberdeen AB2 7SX	01224-861212
C087	Carol	Farrel	6 Achray St, Glasgow G32 9DX	0141-357-7419
CO40	Tina	Murphy	63 Well St, Glasgow G42'	0141-943-1728'
CO93	Tony	Shaw	12 Park Pl, Glasgow G4 OQR	0141-225-7025

## PropertyForRent

Property No	street	city	Post	Property Type	rooms	rent	Owner No	Staff No	Branch No
PA14	16 Holhead	Aberdeen	AB7 5SU	House	6	650	CO46	SA9	B007
PL94	6 Argyll St	London	NW2	Flat	4	400	CO87	SL41,	B005
PG4	6 Lawrence St	Glasgow	G11 9QX	Flat	3	350	CO40	NULL	B003
PG21	'18 Dale Rd',	Glasgow	G12	House	5	600	CO87	SG37	B003
PG16	5 Novar Dr	Glasgow	G12 9AX	Flat	4	450	CO93	SG14	B003

# Client

clientNo	fName	lName	telNo	prefType	maxRent
CR76	John	Kay	0207-774-5632	Flat	425
CR56	Aline	Stewart	0141-848-1825	Flat	350
CR74	Mike	Ritchie	'01475-392178'	House	750
CR62	Mary	Tregar	'01224-196720'	Flat	600

## Viewing

clientNo	propertyNo	viewDate	comments
CR56	PA14	2001-05-24	too small
CR76	PG4	2001-04-20	tooote
CR56	PG4	2001-05-26	NULL
CR62	PA14	2001-05-14	no dining room
CR56	PG36	2001-04-28	NULL

# Registration

clientNo	branchNo	staffNo	dateJoined
CR76	B005	SL41	2001-01-02
CR56	B003	SG37	'2000-04-11
CR74	B003	SG37	1999-11-16
B007	B007	SA9	2000-03-07

<sup>\*\*</sup>Create tables to store the above data.

 $<sup>\</sup>ensuremath{^{**}}\xspace$  Populate the created tables with the data given in Z drive.

- 1. Produce a list of salaries for all staff, showing only the staffNo, the first & last names, & the salary details.
- 2. List the property numbers of all properties that have been viewed.
- 3. List all managers & supervisors.
- 4. List all owners who are in "Glasgow" working.
- 5. List the addresses of all branch offices in London or Glasgow.
- 6. List all staff with a salary between 20000 and 30000.
- 7. List the details of all viewings on property PG4, where a comment has not been supplied.
- 8. How many different properties were viewed in May 2001?
- 9. List the name of all clients who have viewed a property along with any comment supplied.
- 10. For each branch office, with more than one member of staff, find the number of staff working in each branch and the sum of their salaries.
- 11. How many properties cost more than 350 per month to rent?
- 12. How many branches are located in London or Glasgow?
- 13. What is the average rent of all properties which is a house or flat?
- 14. How many branches are at each city?
- 15. Insert a new row into the staff table supplying data for all columns.
- 16. Insert a new row into the staff table supplying data for all mandatory columns: staffNo, fName, lName, position, salary, branchNo.
- 17. Give all staff a 3% pay increase as bonus.
- 18. Give all managers a 5% pay increase as "Salary increment".
- 19. Promote "SG14" to manager and change his salary to 18,000.
- 20. Delete all viewings that relate to property "PG4".