

Tutorial Week 7 – Simple Relational Algebra and SQL

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1. The following is the schema of the bank account database:

customer(ID, forename, surname, sex, address, occupation)
account(accountno, type, balance, dateOpened, *inBranch*)
owner(accno, custID)
branch(branchNo, braddress, *manager*)
employee(staffNo, forename, surname, *empbranch*, *supervisor*)

Give relational algebra programs and SQL queries to retrieve the following:

- a) All the types of account currently in existence.
- b) The account number, type and balance of all accounts at branch number 6.
- c) The ID and surname of the owner(s) of account number 23509.
- d) The account number and balance of any accounts owned by customers with the surname, 'Getty'.
- e) The full details of any accounts owned by customers giving their occupation as "turf accountant".
- f) The surname of each employee and his or her supervisor.
- g) The full details of any customers having accounts with balances over £1,000,000, where the account is at a branch employing someone with the same surname as the customer.