ACCOUNTTYPE

P	* ACTYPE	CHAR (8 BYTE)
	ACCTYPEDESC	VARCHAR2 (20 BYTE)
	* DATEINTRODUCED	DATE
	EXPIRYDATE	DATE

ACCOUNTTYPE_PK (ACTYPE)

CLIENT

P	* CLIENTID	NUMBER (7)
	CTITLE	VARCHAR2 (4 BYTE)
	* CFNAME	VARCHAR2 (30 BYTE)
	* CLNAME	VARCHAR2 (40 BYTE)
	CADDR	VARCHAR2 (50 BYTE)
	CEMAIL	VARCHAR2 (30 BYTE)
	CPHONE	NUMBER (15)

CLIENT_PK (CLIENTID)

ACCOUNT

P	* ACCNO	NUMBER (8)
	DATEOPENED	DATE
	DATEMODIFIED	DATE
	BALANCE	NUMBER (10,2)
F	* ACTYPE	CHAR (8 BYTE)

ACCOUNT_PK (ACCNO)

SYS_C0014052 (ACTYPE)

HASACCOUNT

PF	* CLIENTID	NUMBER (7)
PF	* ACCNO	NUMBER (8)

HASACCOUNT_PK (CLIENTID, ACCNO)

SYS_C0014057 (ACCNO)
SYS_C0014139 (CLIENTID)

TRANSACTION

PF	* ACCNO	NUMBER (8)
P	* TXDATE	DATE
	TXTYPE	CHAR (1 BYTE)
	* TXAMOUNT	NUMBER (10,2)

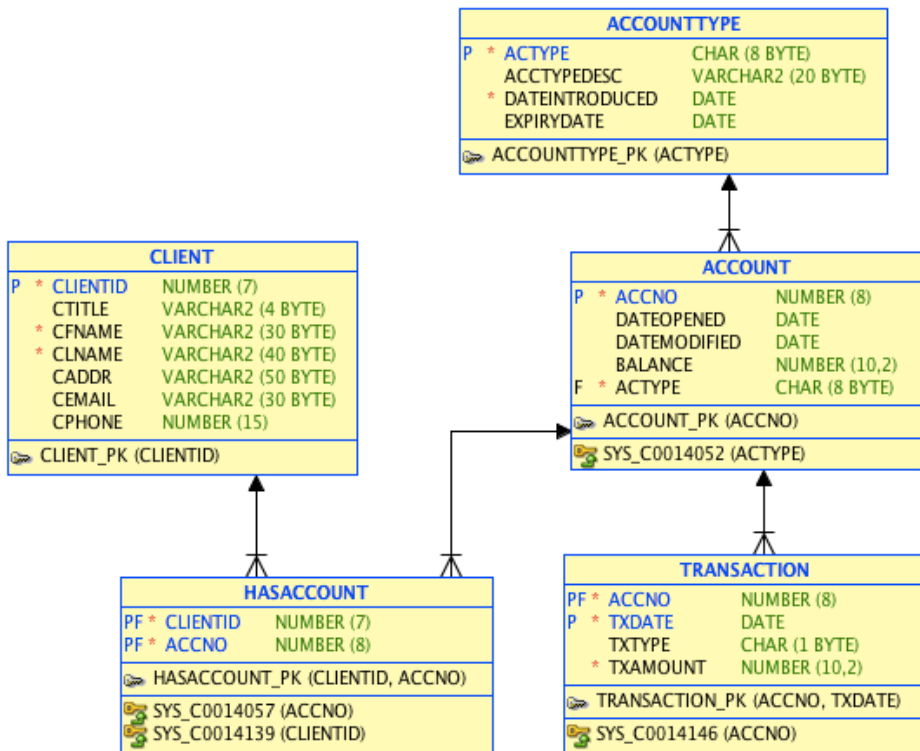TRANSACTION_PK (ACCNO, TXDATE)

SYS_C0014146 (ACCNO)

A bank offers different types of accounts to clients. Each account is usually, but not always given an account type. A client may hold many accounts and may also hold joint accounts. There are several types of accounts but ones that are deposit accounts have the word 'deposit' somewhere in the ACCTYPEDESC attribute, while current accounts have the word 'current ' there. Transactions must be associated with an account and must be of type (TXTYPE) D for deposit or W for withdrawal.

This schema can be created and populated using the script HALFFULLBANK.SQL. Answer the following queries:

1. Create a view called CLIENTHAS that will hold the clientid, clientname and accno for each client, regardless of whether or not they have an account. The clientname should be made up of the ctitle,' ', cfname, ' ' and clname concatenated together.
2. Write a query to return every client's name and number of accounts they hold.
3. Write a query to return the clientname of any client who has a joint account.
4. Using views to help you, write queries to return the names of clients who:
   a. have a deposit account or a current account
   b. have both a deposit account and a current account
   c. have a deposit account but not a current account
   d. have a current account but not a deposit account
   e. have either a current or a deposit account, but not both.
5. Return full details from the accounttype table for account types that are not in use in the account table.