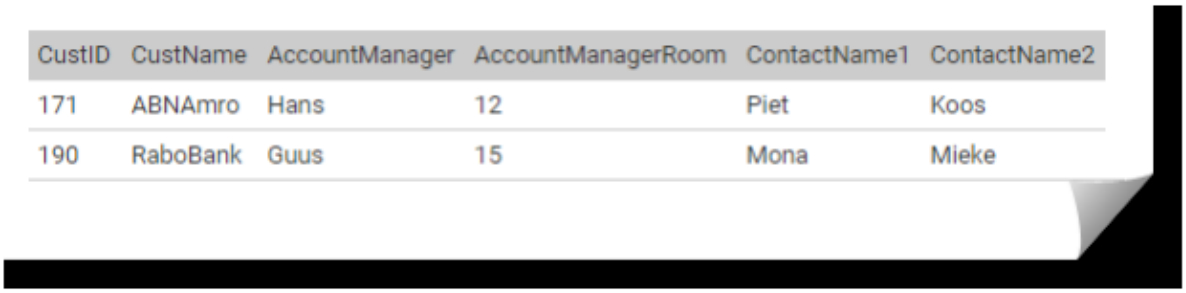
Assignment 2

RDBMS Concepts - Morning session

Ans-1



CustID	CustName	AccountManager	AccountManagerRoom	ContactName1	ContactName2
171	ABNAmro	Hans	12	Piet	Koos
190	RaboBank	Guus	15	Mona	Mieke

Since CustID is unique for the entire table we can take CustID as primary key

$(CustID)^+$ = (CustName, AccountManager, AccountManagerRoom, ContactName1, CotactName2)

Since primary key has only 1 attribute , there is no partial dependency.(Table is in 2NF)

There is a Transitive dependency (AccountManager —> AccountManagerRoom)

we split above table into 2 tables

T1 = (CustID, CustName, AccountManager, ContactName1, ContactName2)

T2 = (AccountManager, AccountManagerRoom)

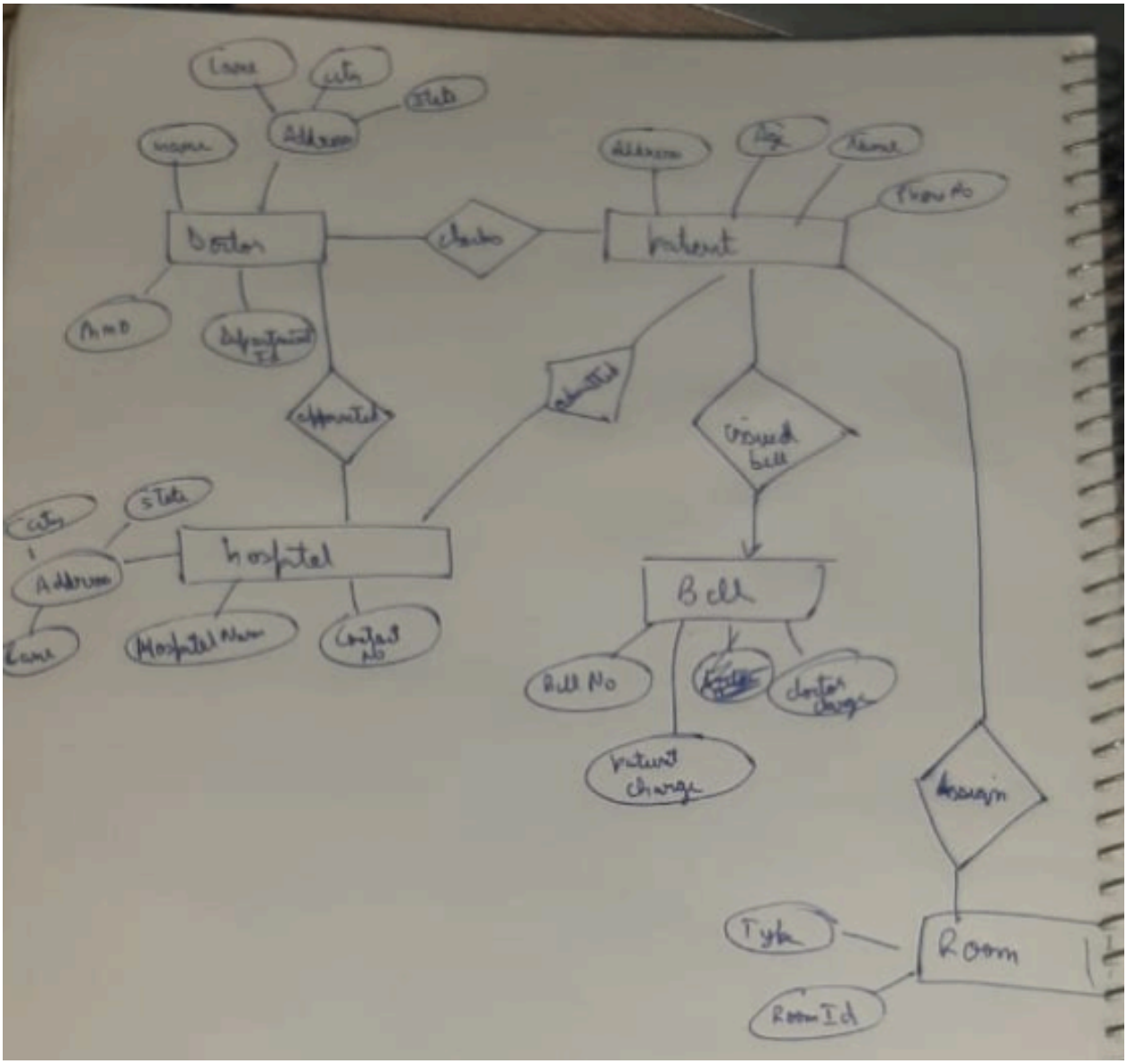
Since there is no dependency where non prime attribute is determining prime attribute

None of the non-prime attributes are unique

Hence Both table are in BCNF

Assignment 2

Ans -2



Assignment 2

Ans-3

Relation is given as Student (StudentID, ModuleID, ModuleName, StudentName, StudentAddress, TutorId, TutorName)

Functional dependencies are as follows:-

StudentID —> ModuleID

ModuleID —> StudentID

StudentID —> TutorId

TutorId —> TutorName

StudentID —> StudentName

StudentID —> StudentAddress

ModuleID —> ModuleName

Normalizing table into 3NF

T1 = (StudentID, ModuleId)
T2= (StudentID, TutorId)
T3= (TutorId, TutorName)
T4= (StudentID, StudentName, StudentAddress);
T5 = (ModuleID, ModuleName)