Lab 5. Logical Design: Normalization

Noah Zhou

Question 1:

a. MovieID → Title

MovieID → Rating

MovieID → Genre

Title → Genre

b. MovieID → Title

MovieID → Rating

MovieID → Genre

Title → Genre

Title → Rating

Question 2:

a. The candidate key is MovieID and Title

b. It is not in 2NF because there is a partial dependency between ratings and genre. It should be MovieID → Title and MovieID

→ Rating

c. It is in 3NF because there are no transitive dependencies

Question 3:

Client

CLIENTID	Phone	DOB
001	(765-443-1993)	04/17/1997
002	(212-587-2948)	09/02/2003
003	(812-385-3843)	12/11/1984

Attorney

ATTORNEYID	NAME	BAR
001	Jack Hansen	Indiana
002	Olivia Wharton	New York
003	Sam Rinner	Indiana

Case

CASEID	DESCRIPTION	TYPE
001	Traffic Violation	Traffic
002	Civil Dispute	Civil
003	Property Damage	Small Claims

Court

COURTID	NAME
001	Tippacanoe Small Claims Court
002	Queens County Traffic Court
004	Tippacanoe Civil Court

Manage

JUDGEID	COURTID
001	002
002	003
002	004
003	001

Assign To

CASEID	COURTID
001	002
002	
003	001

Judge

JUDGEID	NAME	YEARPRACTICE
001	John Johnson	9
002	Lucy Roberts	13
003	Carson Smith	6

Name

FIRSTNAME	LASTNAME	TITLE
John	Johnson	Judge
Lucy	Roberts	Justice
Carson	Smith	Judge

Worth With

ATTORNEYID	CLIENTID	CASEID
001	John Johnson	002
002	Lucy Roberts	003
003	Carson Smith	003

a.

b. Work With relationship: Satisfies 1NF

ATTORNEYID → CLIENTID

ATTORNEYID → CASEID

CLIENTID → CASEID

Assign To relationship: Satisfies 2NF

CASEID → COURTID

Manage relationship: Satisfies 3NF

JUDGEID → COURTID