ER diagram

Actually, I confuse about the field in DEPENDENT, DEP_NUM? Is it DEP_CODE.

DEPARTMENT	
PK	DEPT_CODE
	DEPT_NAME
	DEPT_MANAGER

—belongs to—

EMPLOYEE	
PK	EMP_NUM
	EMP_FIRSTNAME
	EMP_LASTNAME
	EMP_STREET
	EMP_STATE
	EMP_POSITION
	EMP_DOB
FK1	DEPT_CODE
FK2	JOB_CODE

—assigned to—

JOB	
PK	JOB_CODE
	JOB_TITLE
	JOB_DESCRIPTION

has

DEPENDENT	
PK,FK1	EMP_NUM
PK	DEP_NUM
	DEP_NAME
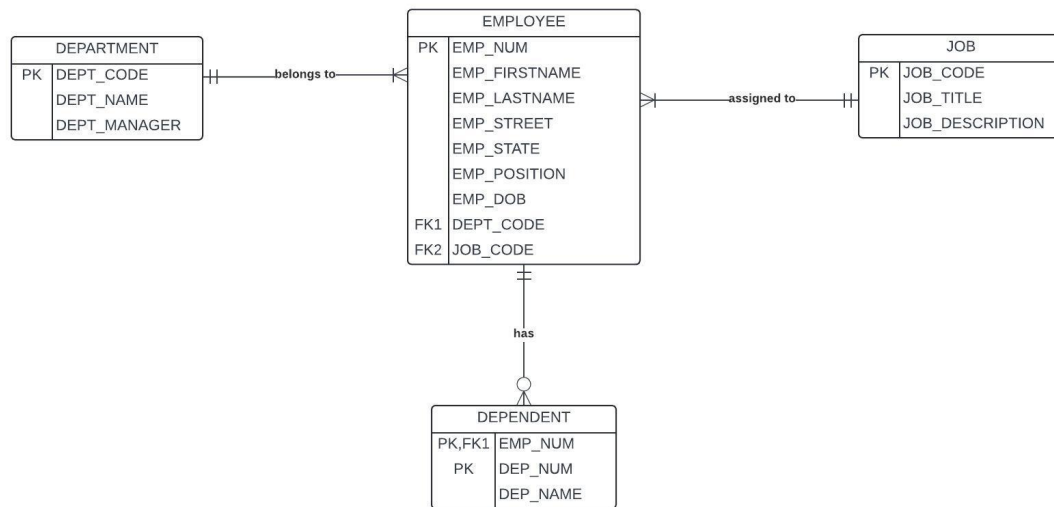
ANSWER

a.How many Entities are there and what are they?

3 entites;

DEPARTMENT; EMPLOYEE; JOB

b. For the EMPLOYEE Entity:

(i) List all attributes;

EMP_NUM

EMP_FIRSTNAME

EMP_LASTNAME

EMP_STREET

EMP_STATE

EMP_POSITION

EMP_DOB

DEPT_CODE

JOB_CODE

(ii) What is the Primary Key and how do you know that? and

PK: EMP_NUM

It is a unique object in global

(iii) Are there any Foreign Key(s)? If yes, what are they and what are they referring to?

YES;

FK1: DEPT_CODE , refer to DEPARTMENT entity's primary key;

FK2: JOB_CODE, refer to JOB entity's primary key;

c. Explain the relationship between EMPLOYEE and DEPENDENT. Your explanation should include how is EMPLOYEE related to DEPENDENT and vice-versa in terms of whether the relationship is Optional/Mandatory and their cardinalities. Also, discuss how is the relationship maintained in the ERD [Hint: Primary and Foreign Keys].

In this ER diagram, the relationship between EMPLOYEE and DEPENDENT is one to many; EMPLOYEE entity use primary key EMP_NUM as DEPENDENT entity's foreign key. However, DEPENDENT entity use EMP_NUM combine with DEP_NUM AS primary key, this represent that one employee can belongs to multiple department, but in one department does not allow two employees have the same EMP_NUM.

The relationship between these two is optional.

The relationship maintained in the ERD is linked by EMPLOYEE's primary key(EMP_NUM).

d. What is the Primary Key of DEPENDENT? What type of key is it?

Primary key: EMP_NUM, DEP_CODE

It is a composite primary key.

Context Diagram

Customer

Memvership details

Membership request

Video retal request

Payment details

Rental confirmation

Payment request

ABC Video Rental System

Store Assistant

Customer information verification request

Customer verification response

New video information

New video report

Overdue videos report

Store Manager