

## **IPD-24 Database II**

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### **Assignment I – Aragon Pharmacy (Steps 1 – 6)**

#### **Step 1 - Purpose of database:**

Create a database to track customers, prescriptions, drugs, employees, training classes, health insurance companies, doctors, and clinics.

#### **Step 2 - Determine the entities (tables and chemas):**

1. Schema Customers (tables Customer, HouseHold, HealthPlan)
2. Schema Prescriptions (tables Rx, Drug, Reffill)
3. Schema Employees (tables Employee, JobTitle)
4. Schema Doctors (tables Clinic, Doctor)
5. Schema Classes (tables EmployeeTraining, Class)

#### **Step 3 - Determine the attribute (fields):**

1. HealthPlan (Plan ID, Plan Name, Address, City, Province, Postal Code, Phone, Days, Website)
2. HouseHold (House ID, Address, City, Province, Postal Code)
3. Customer (Customer ID, Customer First Name, Customer Last Name, Phone, DOB, Gender, Balance, Childproof Cap, Plan ID(FK), House ID (FK), HeadHH (FK), Allergies)
4. Clinic (Clinic ID, Clinic Name, Address1, Address2, City, Province, Postal Code, Phone)
5. Doctor (Doctor ID, Doctor First Name, Doctor Last Name, Phone, Cell, Clinic ID (FK))
6. Drug (DIN, Name, Generic, Description, Unit, Dosage, Dosage Form, Cost, Price, Interactions, Supplier)
7. Rx – Prescription (Prescription ID, DIN, Quantity, Unit, Date, Expire Date, Refills, Auto Refill, Refills Used, Instructions, Cust ID (FK), Doctor ID (FK))
8. JobTitle (Job ID, Title)
9. Employee (Emp ID, EmpFirst, EmpMI, EmpLast, SIN, DOB, StartDate, EndDate, Address, City, Province, Postal Code, Job ID (FK), Memo, Phone, Cell, Salary, Hourly Rate, Review)
10. Refill (Prescription ID (FK), Refill Date, Emp ID (FK))

11. Class (Class ID, Description, Cost, Renewal, Required, Provider)

12. EmployeeTraining (Emp ID (FK), Date, Class ID ((FK))

#### Step 4 – Create the Data Dictionary

(Please see Table1 or ff-databaseII-assignment-I-data-dictionary.xlsx file attached)

Table Name	Attribute name	Constraints	Data Type	Rules	Required	Key	Referenced Table
HealthPlan	PlanID		int	identity(1,1)	not null	PK	
	PlanName		nvarchar(30)		not null		
	Address		nvarchar(40)		not null		
	City		nvarchar(40)		not null		
	Province		nchar(2)	convert to uppercase   not digit/char, just letters	not null		
	PostalCode		nchar(7)	convert to uppercase   use pattern	not null		
	Phone		nchar(15)	input mask to format (###) ###-####	not null		
	Days		int		null		
	Website		nvarchar(60)	health plan website	null		
Customer	CustID		int	identity(1,1)	not null	PK	
	CustFirst		nvarchar(30)		not null		
	CustLast	add index	nvarchar(30)	add index	not null		
	Phone		nchar(15)	input mask to format (###) ###-####	not null		
	DOB		datetime	format MM/DD/YYYY	not null		
	Gender		bit	F or M	not null		
	Balance	set default	money	set default 0,00	not null		
	Childproof Cap		bit	yes or no	not null		
	PlanID	add FK	int	lookup table   PlanID and PlanName	not null	FK	HealthPlan
	HouseID	add FK	int		not null	FK	HouseHold
	HeadHH		bit	yes or no	not null		
	Allergies		nvarchar(40)		null		
Household	HouseID		int	identity (1,1)	not null	PK	
	Address		nvarchar(40)		not null		
	City		nvarchar(40)		not null		
	Province		nchar(2)	convert to uppercase   not digit/char, just letters	not null		
	PostalCode		nchar(7)	convert to uppercase   use pattern	not null		
Rx	PrescriptionID		int	identity (1,1)	not null	PK	
	DIN	add FK	nchar(8)		not null	FK	Drug

	Quantity		decimal(8,3)		not null		
	Unit		nvarchar(10)		not null		
	Date		datetime	format MM/DD/YYYY	not null		
	ExpireDate		datetime	format MM/DD/YYYY	not null		
	Refills		smallint		null		
	AutoRefill		bit	yes or no	not null		
	RefillsUsed		smallint		null		
	Instructions		nvarchar(50)		null		
	CustID	add FK	int		not null	FK	Customer
	DoctorID	add FK	int		not null	FK	Doctor
Doctor	DoctorID		int	identity (1,1)	not null	PK	
	DoctorFirst		nvarchar(30)		not null		
	DoctorLast		nvarchar(30)		not null		
	Phone		nchar(15)	input mask to format (###) ###-####	not null		
	Cell		nchar(15)	input mask to format (###) ###-####	not null		
	ClinicID	add FK	int		not null	FK	Clinic
Clinic	ClinicID		int	identity (1,1)	not null	PK	
	ClinicName		nvarchar(50)		not null		
	Address1		nvarchar(40)		not null		
	Address2		nvarchar(40)		not null		
	City		nvarchar(40)		not null		
	Province	set default QC	nchar(2)	convert to uppercase   not digit/char, just letters   <b>default quebec</b>	not null		
	PostalCode		nchar(7)	convert to uppercase   use pattern	not null		
	Phone		nchar(15)	input mask to format (###) ###-####   <b>area code required</b>	not null		
Drug	DIN		nchar(8)		not null	PK	
	Name	add index	nvarchar(30)	add index	not null		
	Generic		bit	yes or no	not null		
	Description		nvarchar(250)		not null		
	Unit		nvarchar(10)		not null		
	Dosage		nvarchar(10)		not null		
	DosageForm		nvarchar(20)		not null		
	Cost		money		not null		
	Price		money		not null		
	Interactions		nvarchar(60)		not null		
	PregCategory			eliminate this field			
	Supplier		nvarchar(20)		not null		
Refill	PrescriptionID	add FK	int	identity (1,1)	not null	FK - PK	Rx
	RefillDate		datetime	format MM/DD/YYYY	not null		
	EmpID	add FK	int		not null	FK - PK	Employee

Employee	EmpID	add unique	int	add unique constraint	not null	PK	
	EmpFirst		nvarchar(30)		not null		
	EmpMI		nvarchar(2)		not null		
	EmpLast		nvarchar(30)		not null		
	SIN		nchar(9)	input mask to format ###-###-###	not null		
	DOB		datetime	format MM/DD/YYYY	not null		
	StartDate		datetime	format MM/DD/YYYY	not null		
	EndDate		datetime	format MM/DD/YYYY	not null		
	Address		nvarchar(40)		not null		
	City		nvarchar(40)		not null		
	Province		nchar(2)	convert to uppercase   not digit/char, just letters	not null		
	PostalCode		nchar(7)	convert to uppercase   use pattern	not null		
	JobID	add FK	int		not null	FK	JobTitle
	Memo		nvarchar(250)		null		
	Phone		nchar(15)	input mask to format (###) ###-####	not null		
	Cell		nchar(15)	input mask to format (###) ###-####	not null		
	Salary		money		null		
	HourlyRate		money		null		
	Review		datetime	based on hire date	not null		
JobTitle	JobID		int	see tabl3 assignDoc to data options	not null	PK	
	Title		nvarchar(30)		not null		
EmployeeTraining	EmpID	add FK	int		not null	FK - PK	Employee
	Date		datetime	format MM/DD/YYYY	not null		
	ClassID	add FK	int		not null	FK - PK	Class
Class	ClassID		int	identity(1,1)	not null	PK	
	Description		nvarchar(60)		not null		
	Cost		money		not null		
	Renewal		years		not null		
	Required		bit	yes or no	not null		
	Provider		nvarchar(40)		not null		

Table 1 – Aragon Pharmacy Data Dictionary

## Step 5 and 6 – Create the ERD

(Please see Figure 1 or ff-databasell-assignment-I-ERD.pdf file attached)

# Aragon Pharmacy ERD

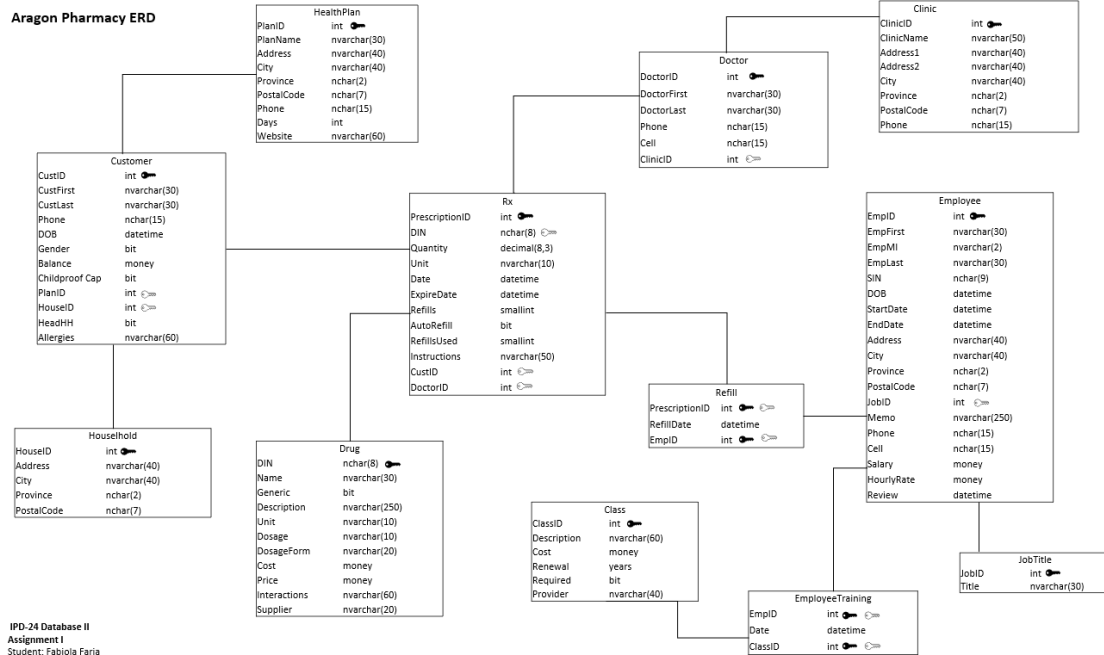


Figure 2 – ERD relationship Aragon Pharmacy