Directed Work N° 04

Exercise 1

Either the following invoice : la facture suivante :

Entreprise AU BON BEURRE

7, rue de la vache joyeuse
34200 SÈTE

FACTURE

N° facture : 1258
Date facture : 14/08/1999

N° client : 152

Nom client : Casino
7 montée St Clair
34200 SÈTE

Référence	Désignation	Prix unitaire	Quantité	Montant brut
X25	Plaquette beurre 250 g	4,50	500	2 250,00
X32	Crème UHT 125 g	3	400	1 200,00
			Total HT	3 450,00
			Total TVA	189,75
			TTC	3 639,75

- Develop the raw data dictionary.

- Develop the refined(clean) data dictionary.

Exercise 2

A professional training establishment wishes to computerize its information system.

The establishment offers training to its trainees. Each training is identified by a code, a training title, start date and end date. The training courses are organized under different specialties (Business, IT, Renewable Energy ...). The identifier and the name of each specialty are recorded.

The establishment offers several types of training (Continuing training, Evening classes, Distance learning ...). Each type is registered by its Id and name. The price of each training differs according to the type of training but remains the same for all courses. The cost to be paid concerns the entire duration of the training. A trainee who wishes to follow a training course must fill out a form containing his last name, first name, date of birth, phone and email to generate a registration number. A diploma is issued at the end of each training course with a serial number, a date of completion and a mention.

- Develop the raw data dictionary.

- Develop the refined(clean) data dictionary.

Exercise 3

A bank wishes to have an information system to track its customers. She thus wishes to store the contact details of each customer (last name, first name, address..etc.) and the accounts it has as well as their balance (Knowing that some accounts have several beneficiaries). We will also store the operations relating to these accounts: withdrawal and deposit with their date and the amount.

Establish :

1. The data dictionary (DD) ;
2. The functional dependency graph (FDG) ;

Additional Exercise

A lending library uses the following documents :

Liste de collections		
Code Collection	Nom Collection	Numéro Editeur
001	PLEIADE	01
002	FOLIO	01
003	AILLEURS	02

Liste de éditeurs	
Numéro	Nom
01	Gallimard
02	Laffont

Liste des auteurs	
Numéro	Nom
0001	MOLIERE
....	....
0428	HUGO

Fiche Livre

Code livre: 00123
Titre: Les misérables
Code auteur: 0448
Auteur: HUGO

Exemplaires Possédés

Code Collection	nombre d'exemplaires
002	10
003	2

Emprunts en Cours

N° adhérent	date d'emprunt	Code collection de l'exemplaire emprunté
001	15/01/2008	002
002	15/01/2018	002
007	20/01/2016	001

Fiche Adhérent

N° Adhérant: 002
Nom: DURANT
Adresse: 3 Rue du regard 75006 Paris

Demande d'emprunt

Date d'emprunt: 15/01/2018
Code Livre: 00123
Titres: les Héros
N° Collection: 002
Collection: FOLIO
N° Adhérant: 002
Nom: DURANT

Signature

The following management rules are noted :

✓ A book exists in 1 or more copies in one or more collections at 1 or more publishers.
✓ A book is borrowed or not by 1 or more members within the limit of the number of copies available.
✓ A member can borrow one or more books but he cannot borrow several copies of the same book in the same collection.

Establish :

1. The raw data dictionary.
2. The uncluttered data dictionary.
3. The functional dependency graph (FDG) ;