LAB 1 SOLUTIONS

EXERCISE

Q1	Add a primary key constraint (without any constraint name) on column category_id of category_details. table.
	`ALTER TABLE CATEGORY_DETAILS ALTER COLUMN CATEGORY_ID NUMERIC(2) NOT NULL ;` `ALTER TABLE CATEGORY_DETAILS ADD PRIMARY KEY (CATEGORY_ID);`
Q2	Add a primary key constraint with a constraint name on column sub_category_id of sub_category_details table.
	`ALTER TABLE SUB_CATEGORY_DETAILS ADD CONSTRAINT PK1 PRIMARY KEY(SUB_CATEGORY_ID) ;`
Q3	Add a foreign key constraint with constraint name on column category_id of sub_category_details table referencing category_id of category_details table.
	`ALTER TABLE SUB_CATEGORY_DETAILS ADD CONSTRAINT FK11 FOREIGN KEY(CATEGORY_ID) REFERENCES CATEGORY_DETAILS(CATEGORY_ID);`
Q4	For product_details table add primary key constraint on product_id. Also add foreign key constraint on category_id and sub_category_id columns referencing category_details(category_id) and sub_category_details (sub_category_id). Give appropriate names for all constraints.

	`ALTER TABLE PRODUCT_DETAILS ADD CONSTRAINT (`
	`PK11 PRIMARY KEY(PRODUCT_ID),`
	`FK12 FOREIGN KEY(CATEGORY_ID) REFERENCES CATEGORY_DETAILS(CATEGORY_ID),`
	`FK13 FOREIGN KEY(SUB_CATEGORY_ID) REFERENCES`
	`SUB_CATEGORY_DETAILS(SUB_CATEGORY_ID)) ;`

Q5	Add a new column (price numeric(2)) to product_details table.
	`ALTER TABLE PRODUCT_DETAILS ADD PRICE NUMERIC(2);`
Q6	Modify the data type of price to numeric(6,2).
	`ALTER TABLE PRODUCT_DETAILS ALTER COLUMN PRICE NUMERIC(6,2) ;`
Q7	Insert four tuples in the table. (With valid data).

	`INSERT INTO PRODUCT_DETAILS (PRODUCT_ID, CATEGORY_ID, SUB_CATEGORY_ID, PRODUCT_NAME, PRICE)VALUES (111111,11,12,'WATER',32);`
	`INSERT INTO PRODUCT_DETAILS (PRODUCT_ID, CATEGORY_ID, SUB_CATEGORY_ID, PRODUCT_NAME, PRICE)VALUES (111112,12,13,'CRISPS',23);`
	`INSERT INTO PRODUCT_DETAILS (PRODUCT_ID, CATEGORY_ID, SUB_CATEGORY_ID, PRODUCT_NAME, PRICE)VALUES (111113,13,14,'SOAP',20);`
	`INSERT INTO PRODUCT_DETAILS (PRODUCT_ID, CATEGORY_ID, SUB_CATEGORY_ID, PRODUCT_NAME, PRICE)VALUES (111114,14,15,'MAGGI',10);`

Q8	Drop the price column.
| | ```
ALTER TABLE PRODUCT_DETAILS DROP COLUMN PRICE ;
``` |
| **Q9** | Using the rules defined in the beginning, add a new column BRANDNAME varchar(20) NOT NULL. |
| | ```
ALTER TABLE PRODUCT_DETAILS ADD BRANDNAME VARCHAR(20) NOT NULL ;
``` |
| **Q10** | Rename Category_details table to Cat_dt. |
| | ```
EXEC SP_RENAME 'CATEGORY_DETAILS','CAT_DT';
``` |

Case Study

Q1	Create Departments table.
| | ```
CREATE TABLE DEPARTMENTS(
CODE CHAR(5) PRIMARY KEY,
NAME VARCHAR(30),
MANAGERID NUMERIC (9),
SUBDEPTOF CHAR (5)
);
``` |
| **Q2** | Create Employees table. |
| | ```
CREATE TABLE EMPLOYEES(
EMPLYOEEID NUMERIC(9) PRIMARY KEY,
FIRSTNAME VARCHAR(10),
LASTNAME VARCHAR(20),
DEPTCODE CHAR (5),
SALARY NUMERIC (9,2)
);
``` |
| **Q3** | Create foreign keys between employees and department. |
| | ```
ALTER TABLE DEPARTMENTS ADD CONSTRAINT FK_DEPARTMENTS_EMPLOYEES
FOREIGN KEY (MANAGERID) REFERENCES EMPLOYEES;

ALTER TABLE DEPARTMENTS ADD CONSTRAINT FK_DEPARTMENTS_SUBDEPT
FOREIGN KEY (SUBDEPTOF) REFERENCES DEPARTMENTS;

ALTER TABLE EMPLOYEES ADD CONSTRAINT FK1
FOREIGN KEY(DEPTCODE) REFERENCES DEPARTMENTS;
``` |
| **Q4** | Create workson table. |
| | ```
CREATE TABLE WORKSON(
EMPLOYEEID NUMERIC(9),
PROJECTID CHAR(8),
ASSIGNEDTIME NUMERIC(3,2));
``` |
| **Q5** | Create foreign keys between workson and employees. |

| | ```
ALTER TABLE WORKSON ADD CONSTRAINT
FK1 FOREIGN KEY(EMPLOYEEID) REFERENCES EMPLOYEES ;
``` |
| **Q6** | Create Projects Table. |
| | ```
CREATE TABLE PROJECTS(
PROJECTID CHAR(8) PRIMARY KEY,
DEPTCODE CHAR (5),
DESCRIPTION VARCHAR(200),
STARTDATE DATE ,
ENDDATE DATE ,
REVENUE NUMERIC (12,2)
);
``` |
| **Q7** | Create foreign keys between projects and departments. |
| | ```
ALTER TABLE PROJECTS ADD CONSTRAINT
FK1 FOREIGN KEY(DEPTCODE) REFERENCES DEPARTMENTS;
``` |

Note: Solutions provided are for your own reference and may have other possible variations or interpretations. In case of any query, kindly contact your lab instructors.