**Assignment 4 - Project outline**

We’re building an online shop API for a garden centre.

* The API should allow customers to view products available in stock, order products and book a delivery date.
* Each order should include the customer’s name, email address, delivery address, product names, quantity and price, plus their chosen delivery date/time.
* The API should keep track of stock and delivery slots available (maybe we limit this to 1 delivery per 30 minutes, max of 15 deliveries a day).

*Love the garden centre idea, suits our purposes very well for this brief. I added NOT NULL to columns we don’t want to be left blank - see highlighted.*

**Database requirements**

Customer table:

* Customer\_ID INT PRIMARY KEY NOT NULL
* Firstname VARCHAR (50)
* Surname VARCHAR (50)
* Email\_address VARCHAR (100) NOT NULL UNIQUE
* Address1 VARCHAR (200)
* Address2 VARCHAR (200)
* Postcode VARCHAR (8)

Stocklist table:

* Product\_ID INT PRIMARY KEY NOT NULL
* Product\_name VARCHAR (200)
* Stock\_quantity INT
* Price DECIMAL

Orders table:

* Order\_ID INT PRIMARY KEY NOT NULL
* Customer\_ID INT FOREIGN KEY
* Product\_name VARCHAR (200) **Duplication**
* Product\_ID INT FOREIGN KEY NOT NULL
* Order\_quantity INT
* Total\_cost DECIMAL
* Delivery\_date DATE
* Delivery\_time TIME

*One problem I suspect is if you want customers to be able to order more than one of the same product in the same order think we will need four tables to do this – don’t think we can do this with three tables above.*

*Have sketched out a potential solution below – four tables that link with no duplication and can run queries or views to capture customer orders using joins… constraints/primary/foreign keys listed at the end of the table.*

FOUR TABLES for garden Centre

CREATE TABLE products(

product\_id INTEGER NOT NULL,

product\_name VARCHAR(50) NOT NULL,

price FLOAT(2) NOT NULL,

stock\_quantity INTEGER NOT NULL

CONSTRAINT pk\_product\_id PRIMARY KEY (product\_id)

);

CREATE TABLE customers(

customer\_id INTEGER NOT NULL,

first\_name VARCHAR(30) NOT NULL,

last\_name VARCHAR(30) NOT NULL,

email\_address VARCHAR(50) NOT NULL UNIQUE,

address1 VARCHAR (200) NOT NULL,

address2 VARCHAR (200) NOT NULL,

postcode VARCHAR(10) NOT NULL,

mobile VARCHAR (15) NOT NULL UNIQUE,

CONSTRAINT pk\_customer\_id PRIMARY KEY (customer\_id)

);

CREATE TABLE orders (

customer\_id INTEGER ,

order\_id INTEGER,

order\_date DATE,

order\_time TIME,

CONSTRAINT pk\_order\_id PRIMARY KEY (order\_id),

CONSTRAINT fk\_customer\_id FOREIGN KEY (customer\_id) REFERENCES customers(customer\_id)

);

CREATE TABLE order\_contents (

order\_id INTEGER NOT NULL,

product\_id INTEGER NOT NULL,

quantity INTEGER NOT NULL,

CONSTRAINT fk\_product\_id FOREIGN KEY (product\_id) REFERENCES products(product\_id),

CONSTRAINT fk\_order\_id FOREIGN KEY (order\_id) REFERENCES orders(order\_id)

);