

Waffle Makers Term Project

Hunter Small

C0852659

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F23 CSD 2206 Section 02

Jim Cooper

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Company Overview and Product:

We manufacture waffle irons. The company is managed by a CEO, management teams for the following sectors; marketing, factory workers, information technology support, product design, sales, and finances. The customers who buy our products expect high tech, convenient, and reliable appliances for their daily use.

Company Name:

Waffle-Boi inc.

Company Overview/Description:

Waffle-Boi inc. Manufactures and produces high tech waffle irons for your convenience. The company uses cutting edge waffle iron technology in each and every product that is manufactured.

Product:

Waffle-1.0

Product Attributes:

Attributes	Sample Data
<u>Model ID</u>	505
<u>Serial Number</u>	00505
<u>Description</u>	Deluxe waffle iron
Brand	Waffle-Boi inc.
Type	Industrial grade waffle iron
Item Weight	3kg
Colour	Brushed metal
Height	10cm
Width	30cm
Price	\$52.75

Primary Keys:

- **Model_id**

Customer Sales Invoice

Waffle-Boi inc.

Rue de Ruysbroeck, 1000

Brussels, Belgium

###-###-####

Customer Sales Invoice:

Customer ID:

Customer Name:

Customer Address:

Order ID:

Order Date:

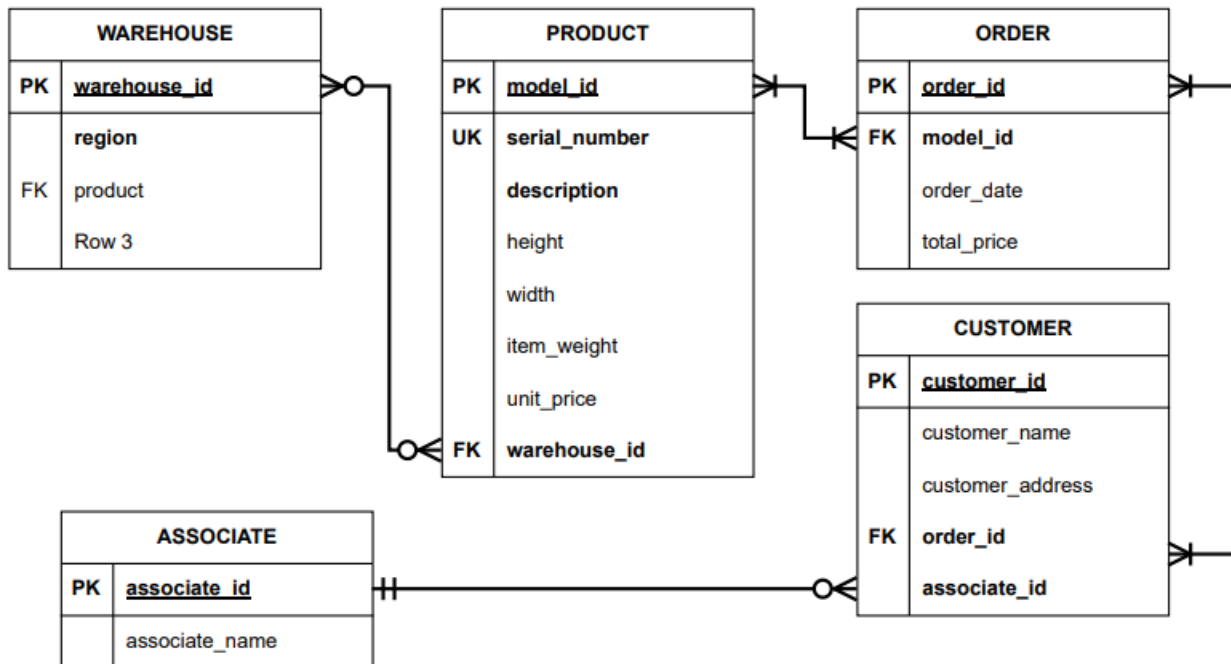
Associate ID:

Associate Name:

Model_id	Serial_number	descriptoin	Height	Width	Item Weight	Qty	Unit-price	Total-Price
505	00505	Deluxe	15.0cm	30.0cm	2kg	10	\$55.00	\$550.00
404	00404	Belgian	15.0cm	35.0cm	3kg	10	\$60.00	\$600.00
302	00302	Crepe	10.0cm	25.0cm	1kg	10	\$35.00	\$350.00
604	00604	Pancake	12.0cm	20.0cm	1.5k	10	\$40.00	\$400.00
101	00101	Waffle	14.0cm	20.0cm	2.0k	10	40.00	\$400.00
							Sub-total	\$2300.00
							Tax	\$299.00
							Invoice Total	\$2599.00

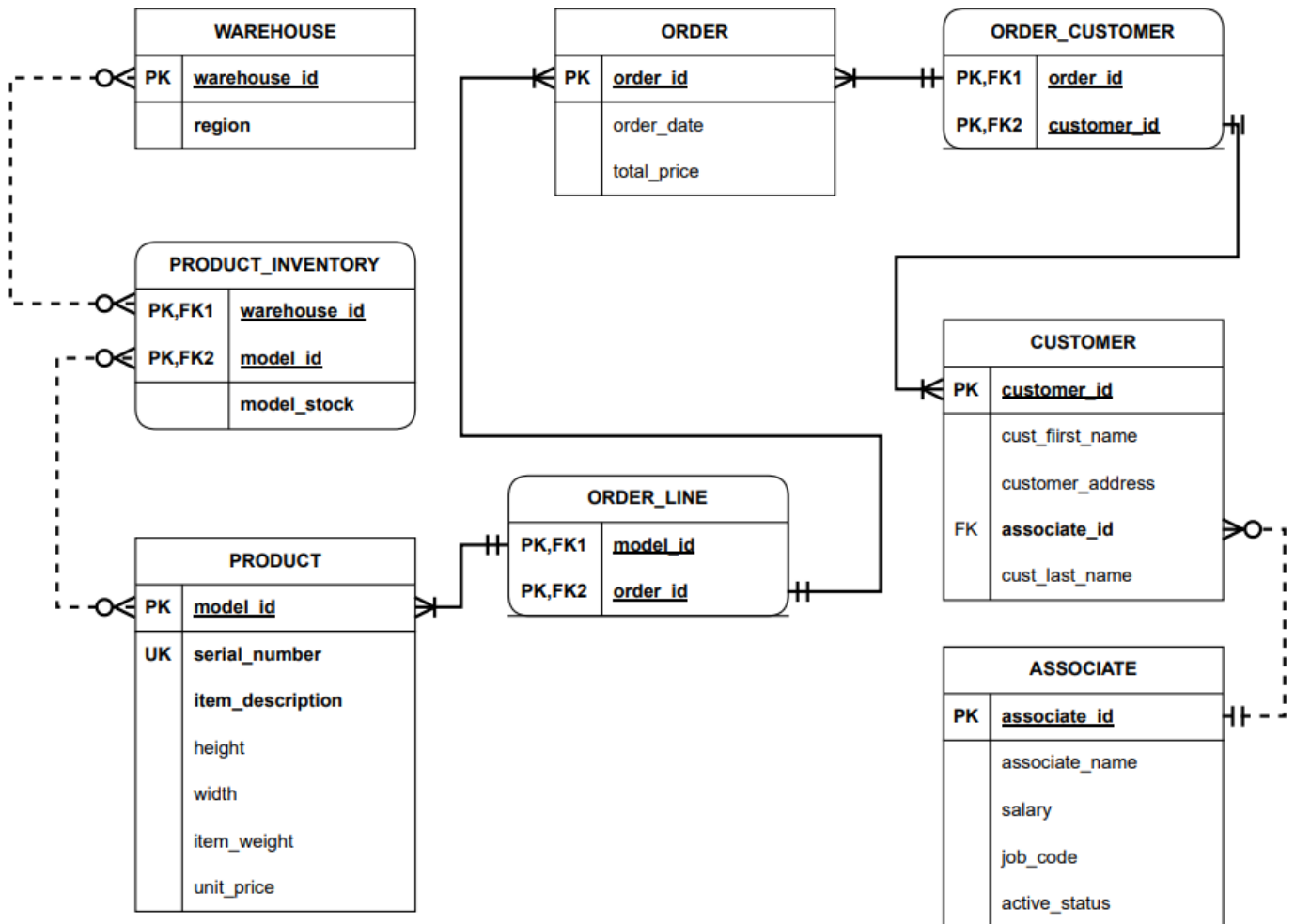
ER Diagram Including M:M Relationships

each WAREHOUSE stores zero, one, or more PRODUCT
 each PRODUCT is stored at zero, one, or more WAREHOUSE
 each PRODUCT is included in one or many ORDER
 each ORDER contains one or many PRODUCT
 each CUSTOMER purchases one or more ORDER
 each ORDER is purchased by one and only one CUSTOMER
 each ASSOCIATE has zero, one, or more CUSTOMER
 each CUSTOMER has one and only one ASSOCIATE



ER Diagram Including M:M Relationships Resolved

each WAREHOUSE stores zero, one, or more PRODUCT
 each PRODUCT is stored at zero, one, or more WAREHOUSE
 each PRODUCT is included in one and only one PRODUCT_ORDER
 each PRODUCT_ORDER contains one or many PRODUCT
 each PRODUCT_ORDER has one or many ORDER
 each ORDER has one and only one ORDER_CUSTOMER
 each ORDER_CUSTOMER has one or many ORDER
 each CUSTOMER purchases one ORDER_CUSTOMER
 each ASSOCIATE has zero, one, or more CUSTOMER
 each CUSTOMER has one and only one ASSOCIATE



Relational Model & Business Rules

WAREHOUSES				
Key Types	Column Optionality	Column Name	Data Types	Length
PK	*	Warehouse_id	Integer	
	*	Region	Varchar	(40)

PRODUCT_INVENTORY				
Key Types	Column Optionality	Column Name	Data Types	Length
PK,FK	*	Warehouse_id	Integer	
PK,FK	*	Model_id	Integer	
	*	Model_stock	integer	

PRODUCTS				
Key Types	Column Optionality	Column Name	Data Types	Length
PK	*	Model_id	Integer	
UK	*	Serial_number	Integer	
	*	Item_Description	Varchar	(40)
	O	Height	Decimal	(5,2)
	O	Width	Decimal	(5,2)
	O	Item_weight	Decimal	(5,2)
	O	Unit_price	Decimal	(5,2)

ORDERS				
Key Types	Column Optionality	Column Name	Data Types	Length
PK	*	Order_id	Integer	
	O	Order_date	Date	YYYY-MM-DD
	O	Total_price	decimal	(7,2)

ORDER_LINES				
Key Types	Column Optionality	Column Name	Data Types	Length
PK,FK	*	Model_id	integer	
PK,FK	*	Order_id	Integer	

ORDER_CUSTOMERS				
Key Types	Column Optionality	Column Name	Data Types	Length
PK,FK	*	Order_id	Integer	
PK,FK	*	Customer_id	integer	

CUSTOMERS				
Key Types	Column Optionality	Column Name	Data Types	Length
PK	*	Customer_id	Integer	
	O	Cust_first_name	Varchar	(40)
	O	Cust_last_name	Varchar	(40)
FK	*	Associate_id	integer	
	O	Customer_address	varchar	(40)

ASSOCIATES				
Key Types	Column Optionality	Column Name	Data Types	Length
PK	*	Associate_id	Integer	
	O	Associate_first_name	Varchar	(40)
	O	Associate_last_name	varchar	(40)
	*	salary	Decimal	(7,2)
	o	Job_code	Varchar	(1)
	*	Active_status	Varchar	(1)

Business Rules

- Customer_id auto generated identity 1000
- Order_id auto generated sequence 2000
- Associate_id no less than 5000
- Warehouse_id is greater than 1 and less than 1000
- Model_id not less than 3000
- Default order date – current date
- Default active_status 'T' for active
- Salary less than 125,000
- Salary between 50,000 and 100,000
- List of values job_code: 'A', 'B', 'C', 'D'
- Boolean value: active status: 'T' for active or 'F' for inactive