Comprehensive Database Project

Laura Chipman
C0590808
Term 01
01CSD-2206-02

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BRIGHT LTD

Product - Lamps

Company Overview

At Bright, we aim to light up any space with our diverse selection of product, knowledgeable staff and competitive pricing.

Our selection of lamps ranges from space-saving styles to floor lamps to hanging lamps. Whatever the customer is looking for, Bright is sure to deliver, literally, as we provide prompt and professional delivery to get any and all lamps to our customers ASAP. Our well-trained staff have an eye for style and the technical expertise to advise customers on the best-suited lamp(s) for their needs.

Product Attributes

ATTRIBUTES	SAMPLE DATA
Product ID	2744
Model	33-1547
Brand	Edison
Type	Tripod
Price ($)	59.99
Size (in inches)	10"x10"x21"
Colour	Black
Finish	Satin
With/Without Shade	Without
Maximum Wattage	60
Switch Mechanism	Toggle Button
Number of Bulbs	1
Base Material	Steel

CUSTOMER INVOICE

Order ID: 1000
Invoice Date: 2023-10-01

BRIGHT LTD

123 Light Street
Sunnydale, ON N3J 4H2
123-456-7890

Customer ID: 5330
Customer Name: Jordan Doe
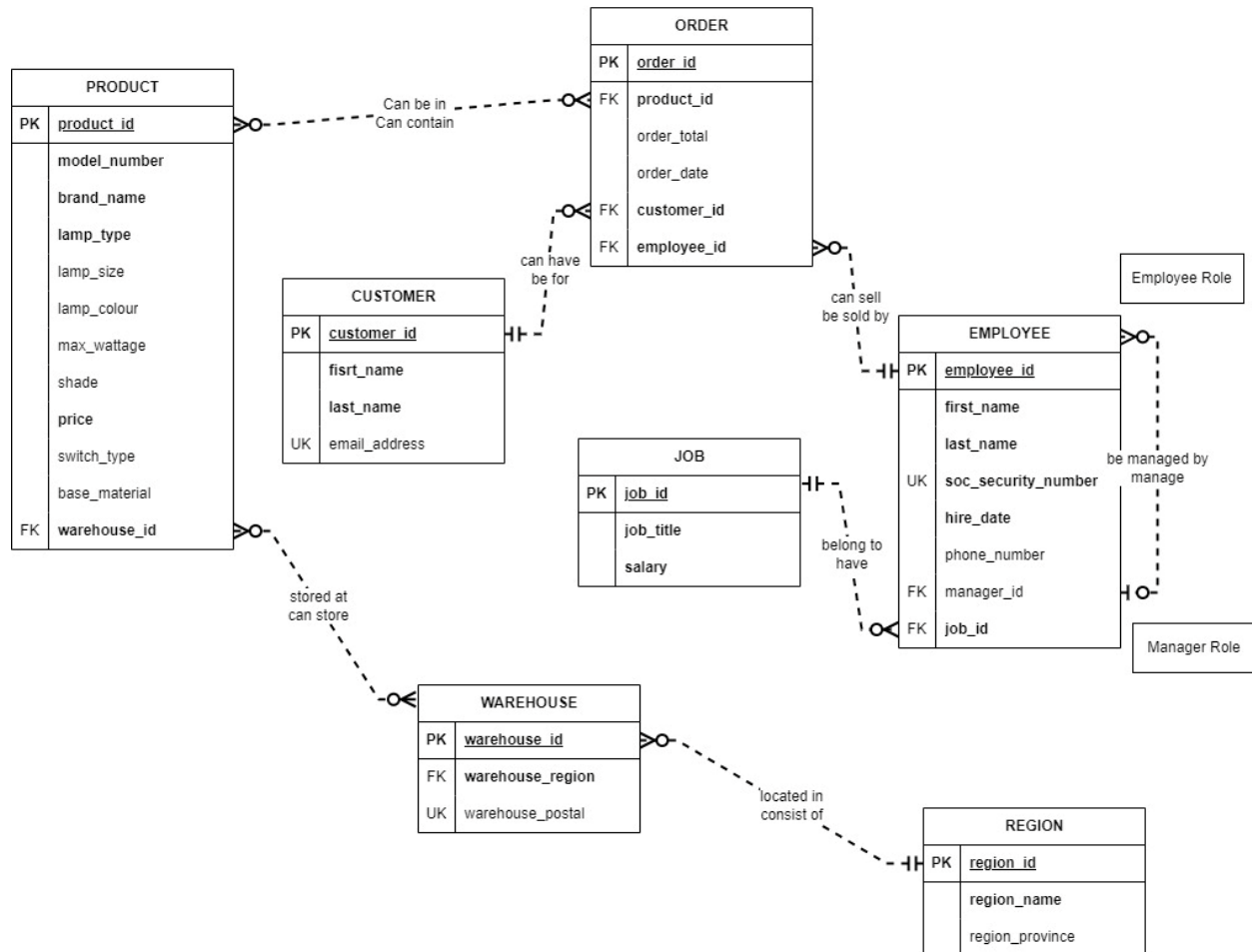**Customer Phone Number:** N/A
Customer Email: jordan.doe@example.com

Associate ID: 200101
Associate Name: Frank Aboot

PRODUCT ID	MODEL	BRAND	DESCRIPTION	QTY	RETAIL PRICE	FINAL PRICE
K374	WL4001	ShineBright	Elegant Wall Lamp	2	49.99	99.98
Q25S	HL5001	GlowWave	Modern Hanging Lamp	1	69.99	69.99
G7P1	TL3006	LumiSphere	Retro Table Lamp	3	43.99	131.97
R4L6	TL3007	LumiSphere	Classic Table Lamp	3	47.99	143.97
K4F6	HL5005	GlowWave	Contemporary Pendant	2	99.99	199.98
					Sub-Total	645.89
					Taxes	83.97
					Delivery Fee	
					Total	**$729.86**

Thankyou for choosing Bright!

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Entity Relationship Diagrams

Many-to-many relationships unresolved

PRODUCT

PK	product_id
	model_number
	brand_name
	lamp_type
	lamp_size
	lamp_colour
	max_wattage
	shade
	price
	switch_type
	base_material
FK	warehouse_id

ORDER

PK	order_id
FK	product_id
	order_total
	order_date
FK	customer_id
FK	employee_id

CUSTOMER

PK	customer_id
	fisrt_name
	last_name
UK	email_address

JOB

PK	job_id
	job_title
	salary

EMPLOYEE

PK	employee_id
	first_name
	last_name
UK	soc_security_number
	hire_date
	phone_number
FK	manager_id
FK	job_id

Employee Role

Manager Role

be managed by
manage

can sell
be sold by

belong to
have

WAREHOUSE

PK	warehouse_id
FK	warehouse_region
UK	warehouse_postal

stored at
can store

located in
consist of

REGION

PK	region_id
	region_name
	region_province

Can be in
Can contain

can have
be for

A Customer **MAY** have *zero, one or more* Orders
An Order **MUST** be for *one and only one* Customer

A Product **MAY** be in *zero, one or more* Orders
An Order **MAY** contain *zero, one or more* Products

An Employee **MAY** sell *zero, one or more* Orders
An Order **MAY** only be sold by *one and only one* Employee

An Employee **MUST** belong to *one and only one* Job
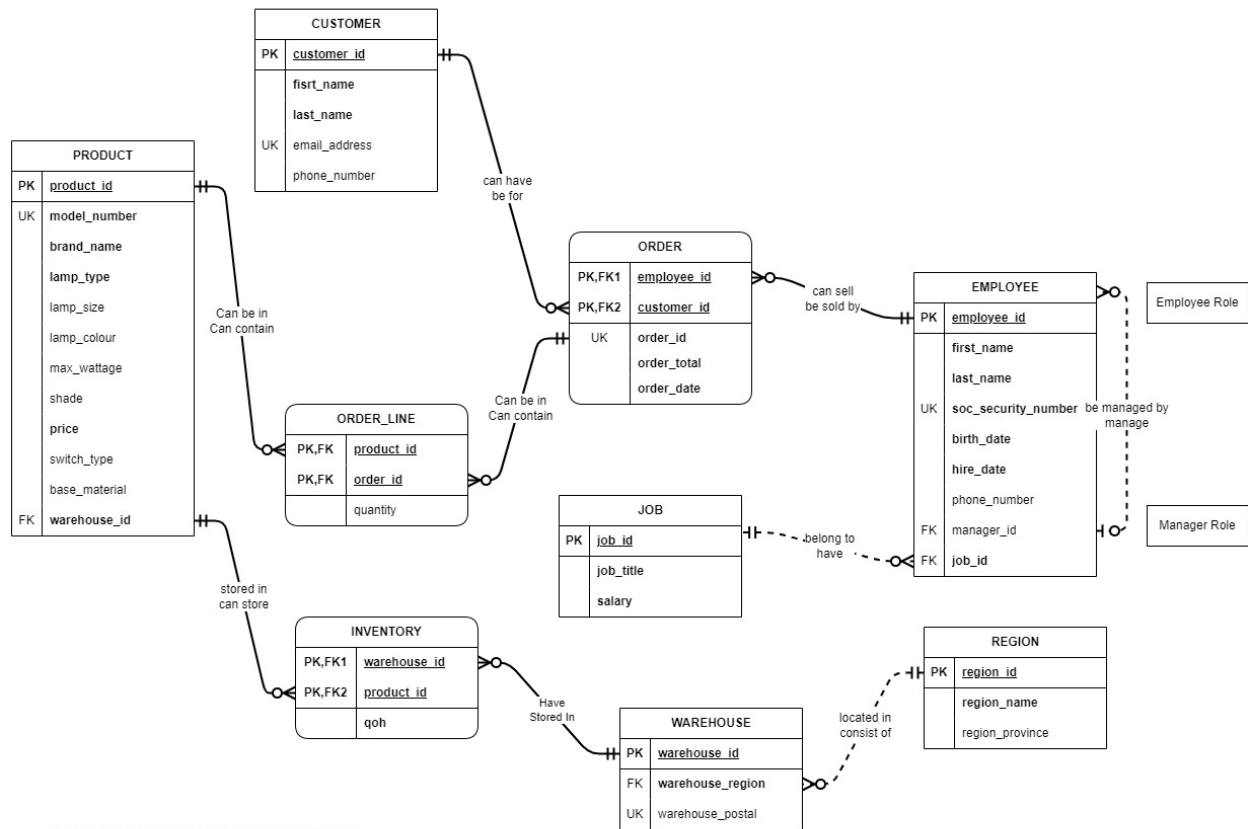A Job **MAY** have *zero, one or more* Employees

A Manager **MAY** manage *zero, one or more* Employees
An Employee **MAY** be managed by *zero, one or more* Managers

A Product **MAY** be stored at *zero, one or more* Warehouses
A Warehouse **MAY** store *zero, one or more* Products

A Warehouse **MUST** be located in *one and only one* Region
A Region **MAY** contain *zero, one or more* Warehouses

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Many-to-many relationships resolved

CUSTOMER

PK	customer_id
	fisrt_name
	last_name
UK	email_address
	phone_number

PRODUCT

PK	product_id
UK	model_number
	brand_name
	lamp_type
	lamp_size
	lamp_colour
	max_wattage
	shade
	price
	switch_type
	base_material
FK	warehouse_id

ORDER

PK,FK1	employee_id
PK,FK2	customer_id
UK	order_id
	order_total
	order_date

ORDER_LINE

PK,FK	product_id
PK,FK	order_id
	quantity

EMPLOYEE

PK	employee_id
	first_name
	last_name
UK	soc_security_number
	birth_date
	hire_date
	phone_number
FK	manager_id
FK	job_id

Employee Role

Manager Role

JOB

PK	job_id
	job_title
	salary

INVENTORY

PK,FK1	warehouse_id
PK,FK2	product_id
	qoh

WAREHOUSE

PK	warehouse_id
FK	warehouse_region
UK	warehouse_postal

REGION

PK	region_id
	region_name
	region_province

can have
be for

Can be in
Can contain

Can be in
Can contain

can sell
be sold by

be managed by
manage

stored in
can store

belong to
have

Have
Stored In

located in
consist of

A Customer **MAY** have *zero, one or more* Orders
An Order **MUST** be for *one and only one* Customer

A Product **MAY** be in *zero, one or more* Order Lines
An Order Line **MUST** contain *one and only one* Product

An Order **MAY** contain *zero, one or more* Order Lines
An Order Line **MUST** be in *one and only one* Order

An Employee **MAY** sell *zero, one or more* Orders
An Order **MAY** only be sold by *one and only one* Employee

An Employee **MUST** belong to *one and only one* Job
A Job **MAY** have *zero, one or more* Employees

A Manager **MAY** manage *zero, one or more* Employees
An Employee **MAY** be managed by *zero, one or more* Managers

A Product **MAY** be stored in *zero, one or more* Inventories
A Inventory **MUST** store *one and only one* Product

A Warehouse **MAY** have *zero, one or more* Inventories
An Inventory **MUST** be stored at *one and only one* Warehouse

A Warehouse **MUST** be located in *one and only one* Region
A Region **MAY** contain *zero, one or more* Warehouses

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Relational Data Models

PRODUCTS				
Key	Optionality	Column Name	Data Type	Length
PK	*	product_id	VARCHAR	5
UK	*	model_number	DECIMAL	10
	*	brand_name	VARCHAR	100
		lamp_type	VARCHAR	100
		lamp_size	DECIMAL	100
		lamp_colour	VARCHAR	100
		max_wattage	DECIMAL	2
		shade	VARCHAR	100
	*	price	DECIMAL	6,2
		switch_type	VARCHAR	1
		base_material	VARCHAR	100
FK	*	warehouse_id	INTEGER	

EMPLOYEES				
Key	Optionality	Column Name	Data Type	Length
PK	*	employee_id	INTEGER	
	*	first_name	VARCHAR	50
	*	last_name	VARCHAR	50
UK	*	soc_security_number	DECIMAL	9,0
	*	hire_date	DATE	
	*	job_status	VARCHAR	1
		phone_number	DECIMAL	10,0
	*	salary	DECIMAL	6,2
FK		manager_id	INTEGER	
	*	job_title	INTEGER	

CUSTOMERS				
Key	Optionality	Column Name	Data Type	Length
PK	*	customer_id	INTEGER	
	*	first_name	VARCHAR	50
	*	last_name	VARCHAR	50

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| | | UK | | email_address | VARCHAR | 125 |

ORDERS				
Key	**Optionality**	**Column Name**	**Data Type**	**Length**
PK	*	order_id	INTEGER	
	*	order_total	DECIMAL	6,2
	*	order_date	DATE	
FK	*	customer_id	INTEGER	
FK	*	employee_id	INTEGER	

ORDER_ITEMS				
Key	**Optionality**	**Column Name**	**Data Type**	**Length**
PK,FK	*	product_id	INTEGER	
PK,FK	*	order_id	INTEGER	
	*	quantity	DECIMAL	2

WAREHOUSES				
Key	**Optionality**	**Column Name**	**Data Type**	**Length**
PK	*	warehouse_id	INTEGER	
FK	*	warehouse_region	VARCHAR	100
		warehouse_postal	VARCHAR	10

INVENTORY				
Key	**Optionality**	**Column Name**	**Data Type**	**Length**
PK,FK	*	warehouse_id	INTEGER	
FK,FK	*	product_id	VARCHAR	30
	*	qoh	DECIMAL	3

REGIONS				
Key	**Optionality**	**Column Name**	**Data Type**	**Length**
PK	*	region_id	INTEGER	
UK	*	region_name	VARCHAR	100
	*	region_province	VARCHAR	10

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Business Rules

LAMPS(**product_id**, model_number, brand_name, lamp_type,
    lamp_size,,lamp_colour, max_wattage, shade,
    price, switch_type, base_material,
    warehouse_id)

EMPLOYEES(**employee_id**,first_name, last_name,
soc_security_number, hire_date, phone_number, *manager_id,*
department_id)

    FK manager_id ⟹ MANAGERS

    FK department_id ⟹ DEPARTMENTS

CUSTOMERS (**customer_id**, first_name, last_name,
email_address)

ORDERS (**order_id**, order_total, order_date,

ORDER LINES (*order_id, product_id,*

WAREHOUSES (**warehouse_id**, *warehouse_region,*
warehouse_postal)

    FK warehouse_region ⟹ REGIONS

REGIONS (**region_id**, region_name, region_province)

INVENTORY (*product_id, warehouse_id*, qoh)

    FK warehouse_id ⟹ WAREHOUSES

    FK product_id ⟹ PRODUCTS

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CREATE Statements

```
-------------------------------------------------
----------CREATE TABLES-------------------
-------------------------------------------------
CREATE TABLE bright_regions (
    region_id        INTEGER NOT NULL,
    region_name      VARCHAR(100) NOT NULL,
    region_province  VARCHAR(2) NOT NULL);

CREATE TABLE bright_warehouses (
    warehouse_id     INTEGER NOT NULL,
    warehouse_name   VARCHAR(100) NOT NULL,
    warehouse_region INTEGER NOT NULL,
    warehouse_postal VARCHAR (8) NOT NULL);

CREATE TABLE bright_products(
        product_id       VARCHAR (10) NOT NULL,
        model_number     VARCHAR(10) NOT NULL,
        brand_name       VARCHAR(100) NOT NULL,
        lamp_name        VARCHAR(100),
        lamp_type        VARCHAR(100),
        lamp_size        VARCHAR(100),
        lamp_color       VARCHAR(100),
        max_wattage      DECIMAL (10),
        shade_style      VARCHAR(100),
        price            DECIMAL(6,2) NOT NULL,
        switch_type      VARCHAR (100),
        base_material    VARCHAR (100),
        warehouse_id     INTEGER NOT NULL);
DROP TABLE b_inventory;
CREATE TABLE bright_inventory (
    product_id           VARCHAR (10) NOT NULL,
    warehouse_id         DECIMAL (10) NOT NULL,
    qoh                  DECIMAL (3)  NOT NULL
);

CREATE TABLE bright_employees (
    employee_id      INTEGER  NOT NULL,
```

```
    first_name          VARCHAR(100) NOT NULL,
    last_name           VARCHAR(100) NOT NULL,
    soc_sec_number      DECIMAL (12) NOT NULL,
    birth_date          DATE NOT NULL,
    hire_date           DATE NOT NULL,
    job_status          VARCHAR (1) NOT NULL,
    phone_number        VARCHAR (14),
    manager_id          INTEGER,
    job_code            INTEGER NOT NULL);

CREATE TABLE bright_jobs (
    job_id              INTEGER NOT NULL,
    job_name            VARCHAR(255) NOT NULL,
    salary              DECIMAL (10,2) NOT NULL
);

CREATE TABLE bright_customers (
    customer_id         INTEGER GENERATED ALWAYS AS IDENTITY
                                    START WITH 5010 INCREMENT BY
10
                                NOCACHE,
    first_name          VARCHAR(100) NOT NULL,
    last_name           VARCHAR(100) NOT NULL,
    email_address       VARCHAR(100),
    phone_number        VARCHAR (14)
    );


CREATE TABLE bright_orders (
    order_id            INTEGER NOT NULL,
    order_total         DECIMAL (6,2) NOT NULL,
    order_date          DATE NOT NULL,
    customer_id         INTEGER NOT NULL,
    employee_id         INTEGER NOT NULL);

CREATE TABLE bright_order_items (
    product_id          VARCHAR (5) NOT NULL,
    order_id            INTEGER NOT NULL,
    quantity            DECIMAL (2) NOT NULL);
```

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Database Constraints

```
--------------------------------------------------
-----------------PRIMARY KEYS-------------------
--------------------------------------------------

ALTER TABLE bright_products
    ADD CONSTRAINT bright_lamps_pk
    PRIMARY KEY (product_id);

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_pk
    PRIMARY KEY (employee_id);

ALTER TABLE bright_inventory
    ADD CONSTRAINT bright_inventory_pk
    PRIMARY KEY (product_id, warehouse_id);

ALTER TABLE bright_customers
    ADD CONSTRAINT bright_customers_pk
    PRIMARY KEY (customer_id);

ALTER TABLE bright_orders
    ADD CONSTRAINT bright_orders_pk
    PRIMARY KEY (customer_id, employee_id);

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_pk
    PRIMARY KEY (order_id, product_id);

ALTER TABLE bright_warehouses
    ADD CONSTRAINT bright_warehouses_pk
    PRIMARY KEY (warehouse_id);

ALTER TABLE bright_regions
    ADD CONSTRAINT bright_regions_pk
    PRIMARY KEY (region_id);
```

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```
ALTER TABLE bright_jobs
    ADD CONSTRAINT bright_jobs_pk
    PRIMARY KEY (job_id);



-------------------------------------------
--------------UNIQUE KEYS---------------
-------------------------------------------


ALTER TABLE bright_products
    ADD CONSTRAINT bright_lamps_uk1
    UNIQUE (model_number);

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_uk1
    UNIQUE (soc_sec_number);

ALTER TABLE bright_customers
    ADD CONSTRAINT bright_customers_uk1
    UNIQUE (email_address);

ALTER TABLE bright_regions
    ADD CONSTRAINT bright_regions_uk1
    UNIQUE (region_name);

ALTER TABLE bright_orders
    ADD CONSTRAINT bright_ordersuk1
    UNIQUE (order_id);



-----------------------------------------------
--------------FOREIGN KEYS-------------------
-----------------------------------------------

ALTER TABLE bright_products
    ADD CONSTRAINT bright_lamps_fk1
    FOREIGN KEY (warehouse_id)
    REFERENCES bright_warehouses (warehouse_id);
```

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```
ALTER TABLE bright_inventory
    ADD CONSTRAINT bright_inventory_fk1
    FOREIGN KEY (warehouse_id)
    REFERENCES bright_warehouses (warehouse_id);

ALTER TABLE bright_inventory
    ADD CONSTRAINT bright_inventory_fk2
    FOREIGN KEY (product_id)
    REFERENCES bright_products (product_id);

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_fk1
    FOREIGN KEY (manager_id)
    REFERENCES bright_employees (employee_id);

ALTER TABLE bright_orders
    ADD CONSTRAINT bright_orders_fk1
    FOREIGN KEY (customer_id)
    REFERENCES bright_customers (customer_id);

ALTER TABLE bright_orders
    ADD CONSTRAINT bright_orders_fk2
    FOREIGN KEY (employee_id)
    REFERENCES bright_employees (employee_id);

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_fk1
    FOREIGN KEY (order_id)
    REFERENCES bright_orders (order_id);

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_fk2
    FOREIGN KEY (product_id)
    REFERENCES bright_products (product_id);

ALTER TABLE bright_warehouses
    ADD CONSTRAINT bright_warehouses_fk1
    FOREIGN KEY (warehouse_region)
```

```
        REFERENCES bright_regions (region_id);

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_fk2
    FOREIGN KEY (job_code)
    REFERENCES bright_jobs (job_id);


-------------------------------------------------------
-----------BUSINESS CONSTRAINTS------------------
-------------------------------------------------------


------------EMPLOYEE CONSTRAINTS-----------------------

ALTER TABLE bright_employees
ADD CONSTRAINT bright_employees_hirebirthdateck
    CHECK (hire_date > birth_date);

ALTER TABLE bright_employees
MODIFY (hire_date DEFAULT CURRENT_DATE);

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_soc_nock
    CHECK (soc_sec_number BETWEEN 1 AND 999999999);

ALTER TABLE bright_employees
MODIFY (job_status DEFAULT 'I')

ALTER TABLE bright_employees
    ADD CONSTRAINT bright_employees_jobstatus
    CHECK (job_status IN ('A','I'));

--------------JOB CONSTRAINTS----------------------------
-
ALTER TABLE bright_jobs
    ADD CONSTRAINT bright_employees_salaryck
    CHECK (salary<100000.00);

----------PRODUCT CONSTRAINTS---------------------------
ALTER TABLE bright_products
```

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```
    ADD CONSTRAINT bright_products_switch_ck
    CHECK(switch_type IN ('T', 'R', 'S', 'P') );


---------------CUSTOMER RESTRAINTS-----------------------

ALTER TABLE bright_customers
    ADD CONSTRAINT bright_customers_ck1
    CHECK (email_address LIKE '%@%.%');

----------------ORDER RESTRAINTS -----------------------

ALTER TABLE bright_orders
    ADD CONSTRAINT bright_orders_totalck
    CHECK (order_total > 0);

ALTER TABLE bright_orders
MODIFY (order_date DEFAULT CURRENT_DATE);



--------------ORDER ITEM RESTRAINTS -----------------------

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_quantck
    CHECK (quantity > 0);

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_quantck2
    CHECK (quantity <= 10);

------------WAREHOUSE RESTRAINTS---------------------------

ALTER TABLE bright_warehouses
    ADD CONSTRAINT bright_warehouses_regionck
    CHECK (warehouse_region BETWEEN 100001 AND 100003);
```

INSERT Statements

```
-----------------------------------------------------------
----------------INSERT-------------------------------------
-----------------------------------------------------------

---------------REGIONS-------------------------------------
--bright_regions (region_ID, region_name, region_province)

INSERT ALL
    INTO bright_regions VALUES(100001, 'North', 'ON')
    INTO bright_regions VALUES(100002, 'East','NS')
    INTO bright_regions VALUES(100003, 'West', 'BC')
    SELECT * FROM DUAL;


------------WAREHOUSES ------------------------------------

--bright_warehouses (warehouse_ID, warehouse_name,
warehouse_region, warehouse_postal)

INSERT ALL
    INTO bright_warehouses VALUES(101, 'RadiantHub North',
100001, 'A1A 1A1')
    INTO bright_warehouses VALUES(102, 'GlowWorld East',
100002, 'B2B 2B2')
    INTO bright_warehouses VALUES(103, 'LuminousCentral',
100003, 'C3C 3C3')
    INTO bright_warehouses VALUES(104, 'ShineLuxe
Distributions', 100001, 'D4D 4D4')
    INTO bright_warehouses VALUES(105, 'GlowTech West',
100002, 'E5E 5E5')
    INTO bright_warehouses VALUES(106, 'BrightSource Hub',
100003, 'F6F 6F6')
    INTO bright_warehouses VALUES(107, 'LuxeGlow Express',
100001, 'G7G 7G7')
    INTO bright_warehouses VALUES(108, 'RadiantReach
Warehousing', 100002, 'H8H 8H8')
```

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```
    INTO bright_warehouses VALUES(109, 'GlowWave Logistics',
100003, 'I9I 9I9')
    SELECT * FROM DUAL;

    ---------------PRODUCTS-----------------------
--bright_products (product_code, model_number, brand_name,
lamp_name, lamp_type, lamp_size, lamp_color, max_wattage,
shade_style, price, switch_type, base_material,
warehouse_id)

INSERT ALL
    INTO bright_products VALUES('K374', 'WL4001',
'ShineBright', 'Elegant Wall Lamp', 'Wall Lamp', '12x24x8',
'Brass', 40, 'Sconce', 49.99, 'T', 'Metal', 101)
    INTO bright_products VALUES('Q25S', 'HL5001',
'GlowWave', 'Modern Hanging Lamp', 'Hanging Lamp',
'18x12x18', 'Bronze', 60, 'Globe', 69.99, 'P', 'Glass', 102)
    INTO bright_products VALUES('A9Z1', 'TL3003',
'LumiSphere', 'Tabletop Illumination', 'Table Lamp',
'10x20x10', 'Turquoise', 30, 'Cylinder', 34.99, 'T',
'Ceramic', 103)
    INTO bright_products VALUES('R482', 'HL5002',
'GlowWave', 'Artistic Pendant', 'Hanging Lamp', '15x30x15',
'Silver', 70, 'Draped', 79.99, 'R', 'Metal', 104)
    INTO bright_products VALUES('P3R7', 'DL1004',
'RadiantLite', 'Sleek Desk Lamp', 'Desk Lamp', '8x15x8',
'Black', 25, 'Oval', 29.99, 'T', 'Plastic', 105)
    INTO bright_products VALUES('L1M0', 'WL4002',
'ShineBright', 'Contemporary Wall Sconce', 'Wall Lamp',
'14x28x14', 'Gold', 45, 'Cone', 54.99, 'R', 'Metal', 106)
    INTO bright_products VALUES('B5W6', 'TL3004',
'LumiSphere', 'Minimalist Table Lamp', 'Table Lamp',
'12x24x12', 'Red', 55, 'Cone', 44.99, 'T', 'Metal', 107)
    INTO bright_products VALUES('N9P1', 'HL5003',
'GlowWave', 'Crystal Pendant', 'Hanging Lamp', '20x40x20',
'Chrome', 80, 'Wave', 89.99, 'P', 'Glass', 108)
    INTO bright_products VALUES('Y2X5', 'DL1005',
'RadiantLite', 'Green Reading Light', 'Desk Lamp', '9x18x9',
'Green', 30, 'Rectangular', 39.99, 'T', 'Plastic', 109)
```

```
    INTO bright_products VALUES('Z4K2', 'WL4003',
'ShineBright', 'Sculptural Wall Sconce', 'Wall Lamp',
'16x32x16', 'Purple', 50, 'Artistic', 64.99, 'T', 'Metal',
101)
    INTO bright_products VALUES('T8L3', 'TL3005',
'LumiSphere', 'Vintage Table Lamp', 'Table Lamp',
'14x28x14', 'Yellow', 50, 'Dome', 49.99, 'R', 'Ceramic',
102)
    INTO bright_products VALUES('W3Q2', 'HL5004',
'GlowWave', 'Crystal Chandelier', 'Hanging Lamp',
'24x40x24', 'Crystal', 100, 'Chandelier', 129.99, 'S',
'Metal', 103)
    INTO bright_products VALUES('M5N6', 'DL1006',
'RadiantLite', 'Simple Desk Light', 'Desk Lamp', '10x20x10',
'Silver', 35, 'Cone', 27.99, 'T', 'Plastic', 104)
    INTO bright_products VALUES('D1B3', 'WL4004',
'ShineBright', 'Artistic Wall Sconce', 'Wall Lamp',
'13x26x13', 'Black', 45, 'Artistic', 59.99, 'S', 'Metal',
105)
    INTO bright_products VALUES('G7P1', 'TL3006',
'LumiSphere', 'Retro Table Lamp', 'Table Lamp', '11x22x11',
'Teal', 40, 'Retro', 43.99, 'R', 'Ceramic', 106)
    INTO bright_products VALUES('K4F6', 'HL5005',
'GlowWave', 'Contemporary Pendant', 'Hanging Lamp',
'22x35x22', 'Gold', 75, 'Pendant', 99.99, 'P', 'Metal', 107)
    INTO bright_products VALUES('Q8R2', 'DL1007',
'RadiantLite', 'Elegant Desk Lamp', 'Desk Lamp', '10x20x10',
'White', 35, 'Elegant', 31.99, 'S', 'Plastic', 108)
    INTO bright_products VALUES('A1D3', 'WL4005',
'ShineBright', 'Luxury Wall Sconce', 'Wall Lamp',
'15x30x15', 'Bronze', 50, 'Shade', 54.99, 'S', 'Metal', 109)
    INTO bright_products VALUES('R4L6', 'TL3007',
'LumiSphere', 'Classic Table Lamp', 'Table Lamp',
'13x26x13', 'Silver', 45, 'Classic', 47.99, 'R', 'Ceramic',
101)
    INTO bright_products VALUES('H9K2', 'HL5006',
'GlowWave', 'Chic Pendant', 'Hanging Lamp', '25x40x25',
'Rose Gold', 90, 'Chic', 109.99, 'R', 'Metal', 102)
    SELECT * FROM DUAL;
```

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```
------------------INVENTORY----------------------------
--bright_inventory (product_id, warehouse_id, qoh)

INSERT ALL
    INTO bright_inventory VALUES ('K374', 101, 8)
    INTO bright_inventory VALUES ('Q25S', 101, 5)
    INTO bright_inventory VALUES ('A9Z1', 101, 6)
    INTO bright_inventory VALUES ('P3R7', 101, 4)
    INTO bright_inventory VALUES ('L1M0', 102, 2)
    INTO bright_inventory VALUES ('N9P1', 102, 9)
    INTO bright_inventory VALUES ('Y2X5', 102, 1)
    INTO bright_inventory VALUES ('Z4K2', 102, 1)
    INTO bright_inventory VALUES ('T8L3', 103, 5)
    INTO bright_inventory VALUES ('W3Q2', 103, 4)
    INTO bright_inventory VALUES ('M5N6', 103, 2)
    INTO bright_inventory VALUES ('G7P1', 103, 8)
    INTO bright_inventory VALUES ('K4F6', 104, 6)
    INTO bright_inventory VALUES ('A1D3', 104, 4)
    INTO bright_inventory VALUES ('R4L6', 104, 2)
    INTO bright_inventory VALUES ('H9K2', 104, 5)
    INTO bright_inventory VALUES ('K374', 105, 9)
    INTO bright_inventory VALUES ('Q25S', 105, 6)
    INTO bright_inventory VALUES ('A9Z1', 105, 5)
    INTO bright_inventory VALUES ('R482', 105, 4)
    INTO bright_inventory VALUES ('P3R7', 105, 2)
    INTO bright_inventory VALUES ('L1M0', 106, 5)
    INTO bright_inventory VALUES ('B5W6', 106, 8)
    INTO bright_inventory VALUES ('N9P1', 106, 3)
    INTO bright_inventory VALUES ('Y2X5', 106, 3)
    INTO bright_inventory VALUES ('Z4K2', 106, 3)
    INTO bright_inventory VALUES ('T8L3', 106, 5)
    INTO bright_inventory VALUES ('W3Q2', 106, 4)
    INTO bright_inventory VALUES ('M5N6', 107, 5)
    INTO bright_inventory VALUES ('D1B3', 107, 6)
    INTO bright_inventory VALUES ('G7P1', 107, 7)
    INTO bright_inventory VALUES ('K4F6', 107, 5)
    INTO bright_inventory VALUES ('Q8R2', 107, 2)
    INTO bright_inventory VALUES ('A1D3', 107, 5)
```

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```
    INTO bright_inventory VALUES ('R4L6', 107, 9)
    INTO bright_inventory VALUES ('H9K2', 107, 5)
    INTO bright_inventory VALUES ('K374', 108, 6)
    INTO bright_inventory VALUES ('Q25S', 108, 4)
    INTO bright_inventory VALUES ('A9Z1', 108, 2)
    INTO bright_inventory VALUES ('R482', 108, 2)
    INTO bright_inventory VALUES ('P3R7', 108, 8)
    INTO bright_inventory VALUES ('L1M0', 108, 5)
    INTO bright_inventory VALUES ('B5W6', 108, 2)
    INTO bright_inventory VALUES ('N9P1', 108, 5)
    INTO bright_inventory VALUES ('Y2X5', 108, 2)
    INTO bright_inventory VALUES ('Z4K2', 108, 6)
    INTO bright_inventory VALUES ('T8L3', 108, 9)
    INTO bright_inventory VALUES ('W3Q2', 109, 4)
    INTO bright_inventory VALUES ('M5N6', 109, 9)
    INTO bright_inventory VALUES ('D1B3', 109, 9)
    INTO bright_inventory VALUES ('G7P1', 109, 8)
    INTO bright_inventory VALUES ('K4F6', 109, 5)
    INTO bright_inventory VALUES ('Q8R2', 109, 2)
    INTO bright_inventory VALUES ('A1D3', 109, 9)
    INTO bright_inventory VALUES ('R4L6', 109, 3)
    INTO bright_inventory VALUES ('H9K2', 109, 5)
    INTO bright_inventory VALUES ('K374', 109, 8)
    INTO bright_inventory VALUES ('R482', 109, 9)
    INTO bright_inventory VALUES ('Q25S', 109, 5)
    INTO bright_inventory VALUES ('B5W6', 109, 7)
SELECT * FROM DUAL

-----------------CUSTOMERS----------------------------
--- bright_customers (customer_id, first_name, last_name,
email_address, phone_number)

INSERT INTO bright_customers VALUES(DEFAULT, 'John',
'Smith', 'john.smith@example.com', '548-965-2458')
INSERT INTO bright_customers VALUES(DEFAULT, 'Emily',
'Johnson', NULL, '519-685-9447')
INSERT INTO bright_customers VALUES(DEFAULT, 'Michael',
'Williams', 'michael.williams@example.com', '275-659-3665')
```

```
INSERT INTO bright_customers VALUES(DEFAULT, 'Sophia',
'Brown', 'sophia.brown@example.com', '515-545-5455')
INSERT INTO bright_customers VALUES(DEFAULT, 'William',
'Jones', 'william.jones@example.com', NULL)
INSERT INTO bright_customers VALUES(DEFAULT, 'Olivia',
'Davis', 'olivia.davis@example.com', '556-965-3215')
INSERT INTO bright_customers VALUES(DEFAULT, 'James',
'Miller', 'james.miller@example.com', '165-355-8547')
INSERT INTO bright_customers VALUES(DEFAULT, 'Emma',
'Wilson', 'emma.wilson@example.com', '874-578-9954')
INSERT INTO bright_customers VALUES(DEFAULT, 'Benjamin',
'Moore', NULL, '588-321-6544')
INSERT INTO bright_customers VALUES(DEFAULT, 'Ava',
'Taylor', 'ava.taylor@example.com', '333-666-9999')
INSERT INTO bright_customers VALUES(DEFAULT, 'Daniel',
'Anderson', 'daniel.anderson@example.com', '885-951-9548')
INSERT INTO bright_customers VALUES(DEFAULT, 'Mia',
'Jackson', 'mia.jackson@example.com', NULL)
INSERT INTO bright_customers VALUES(DEFAULT, 'Matthew',
'Harris', 'matthew.harris@example.com', NULL)
INSERT INTO bright_customers VALUES(DEFAULT, 'Ella',
'Martin', 'ella.martin@example.com', '963-963-9633')
INSERT INTO bright_customers VALUES(DEFAULT, 'David',
'Clark', 'david.clark@example.com', '522-589-5984')
INSERT INTO bright_customers VALUES(DEFAULT, 'John',
'David', 'John.david@example.com', '548-988-9657')
INSERT INTO bright_customers VALUES(DEFAULT, 'Kim',
'Possible', 'kim.possible@example.com', '547-854-4452')
INSERT INTO bright_customers VALUES(DEFAULT, 'Sally',
'Green', 'sally.green@example.com', '589-964-5321')
INSERT INTO bright_customers VALUES(DEFAULT, 'Joe', 'Dirt',
'Joe.dirt@example.com', '888-888-8888')
INSERT INTO bright_customers VALUES(DEFAULT, 'Garrett',
'Gandy', 'garret.gandy@example.com', '888-932-8888')
INSERT INTO bright_customers VALUES(DEFAULT, 'Betsy',
'Robinson', 'betsy.robinson@example.com', ' 514-965-6544')
INSERT INTO bright_customers VALUES(DEFAULT, 'Megan', 'Fox',
'megan.fox@example.com', '226-354-9877')
```

```
INSERT INTO bright_customers VALUES(DEFAULT, 'Jim',
'Cooper', 'jim.cooper@example.com', '874-965-6214')
INSERT INTO bright_customers VALUES(DEFAULT, 'Janice',
'Joplin', NULL, '847-666-8965')
INSERT INTO bright_customers VALUES(DEFAULT, 'Richard',
'Chip', 'richard.chip@example.com', '519-336-0545')
INSERT INTO bright_customers VALUES(DEFAULT, 'Martha',
'Erb', 'martha.erb@example.com', '651-887-9654')
INSERT INTO bright_customers VALUES(DEFAULT, 'Brent',
'Hills', 'brent.hills@example.com', NULL)
INSERT INTO bright_customers VALUES(DEFAULT, 'Freddy',
'Alfredo', 'freddy.alfredo@myexample.com', '548-588-8977')
INSERT INTO bright_customers VALUES(DEFAULT, 'Dallas',
'Tomato', 'dallas.tomato@example.com', '666-666-6666')
INSERT INTO bright_customers VALUES(DEFAULT, 'Beth', 'Cray',
'beth.cray@example.com', '845-998-4874')
INSERT INTO bright_customers VALUES(DEFAULT, 'Ezra', 'East',
'ezra.ezra@example.com', '663-954-8775')
INSERT INTO bright_customers VALUES(DEFAULT, 'Jessica',
'Jones', NULL, '874-965-3210')
INSERT INTO bright_customers VALUES(DEFAULT, 'Jordan',
'Doe', 'jordan.doe@example.com', NULL)
INSERT INTO bright_customers VALUES(DEFAULT, 'Brendan',
'Glee', 'brentan.glee@example.com', '458-966-0021')
INSERT INTO bright_customers VALUES(DEFAULT, 'Greg',
'Taylor', 'greg.taylor@example.com', '996-544-0215')
INSERT INTO bright_customers VALUES(DEFAULT, 'Luke',
'Chopp', 'luke.chopp@example.com', '845-666-4258')
INSERT INTO bright_customers VALUES(DEFAULT, 'Jesse',
'Saumers', NULL, '896-652-6545')
INSERT INTO bright_customers VALUES(DEFAULT, 'Mike',
'Moore', 'mike.moore@example.com', '547-899-6452')

------JOBS-------------------------------------------
--bright_jobs (job_id, job_name, salary)

INSERT ALL
    INTO bright_jobs VALUES (003, 'Sales Associate', 45000)
    INTO bright_jobs VALUES (002, 'Sales Manager', 55000)
```

```
    INTO bright_jobs VALUES (001, 'Supervisor', 60000)
    SELECT * FROM DUAL;


---------EMPLOYEES------------------------------
--bright_employees (employee_id, first_name, last_name,
soc_sec_number,  birth_date, hire_date, phone_number,
manager_id, job_code)

INSERT ALL
    INTO bright_employees VALUES(200103, 'Rory', 'Cash',
345678901, '1990-03-25', '2015-03-15', 'A', '555-345-6789',
NULL, 001)
    INTO bright_employees VALUES(200115, 'Martin', 'Sheen',
567890124, '1994-03-19', '2017-12-05', 'A', '555-567-8902',
NULL, 001)
    INTO bright_employees VALUES(200105, 'Brad', 'David',
567890123, '1988-07-05', '2007-10-25', 'A', '555-567-8901',
200103, 002)
    INTO bright_employees VALUES(200106, 'Bridget',
'Carson', 678901234, '1992-01-10', '2019-01-30', 'A', '555-
678-9012', 200115, 002)
    INTO bright_employees VALUES(200109, 'Harriet',
'Harrod', 901234567, '1984-02-28', '2003-09-15', 'A', '555-
901-2345', 200115, 002)
    INTO bright_employees VALUES(200110, 'Lewis', 'Seeyus',
012345678, '1987-06-14', '2009-11-05', 'A', '555-012-3456',
200103, 002)
    INTO bright_employees VALUES(200101, 'Frank', 'Aboot',
123456789, '1980-05-15', '2005-07-10', 'A', '555-123-4567',
200105, 003)
    INTO bright_employees VALUES(200102, 'Rita', 'Wright',
234567890, '1985-12-20', '2010-09-05', 'I', '555-234-5678',
200106, 003)
    INTO bright_employees VALUES(200104, 'Quentin', 'White',
456789012, '1995-08-30', '2018-06-20', 'A', '555-456-7890',
200110, 003)
```

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```
    INTO bright_employees VALUES(200107, 'Samantha', 'Lyft',
789012345, '1996-04-08', '2021-04-18', 'A', '555-789-0123',
200105, 003)
    INTO bright_employees VALUES(200108, 'Jennifer',
'Woolf', 890123456, '1999-10-22', '2022-02-20', 'A', '555-
890-1234', 200106, 003)
    INTO bright_employees VALUES(200111, 'Stephen', 'King',
123456780, '1993-11-12', '2014-04-10', 'A', '555-123-4568',
200106, 003)
    INTO bright_employees VALUES(200112, 'Jared',
'Padelecki', 234567891, '1998-08-18', '2020-07-22',
'A','555-234-5679', 200110, 003)
    INTO bright_employees VALUES(200113, 'Jason', 'Edison',
345678902, '1989-09-28', '2006-05-30', 'A', '555-345-6780',
200105, 003)
    INTO bright_employees VALUES(200114, 'Peter', 'Griffin',
456789013, '1991-12-04', '2012-08-15', 'A', '555-456-7891',
200106, 003)
    SELECT * FROM DUAL;
```

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Sequence Statements

```
----------------------------------------------------------------
------------SEQUENCE STATEMENTS------------------------
----------------------------------------------------------------

CREATE SEQUENCE bright_order_id_seq
START WITH 1000
INCREMENT BY 1
NOCACHE;

-----------------Order 1----------------------------------

--------------INVOICE BASED OFF THIS ORDER-----------------
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
194.97, DEFAULT, 5330, 200101)

INTO bright_order_items VALUES ('K374',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('Q25S',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('G7P1',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('R4L6',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('K4F6',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;

---------------------Order 2------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
134.98, DEFAULT, 5290, 200102)

INTO bright_order_items VALUES ('A9Z1',
bright_order_id_seq.CURRVAL, 1)
```

```
INTO bright_order_items VALUES ('R482',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;

------------------Order 3----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
164.97, DEFAULT, 5180, 200104)

INTO bright_order_items VALUES ('P3R7',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('L1M0',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;

------------------Order 4----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
249.97, DEFAULT, 5110, 200107)

INTO bright_order_items VALUES ('N9P1',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('Y2X5',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;

------------------Order 5----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
79.98, DEFAULT, 5360, 200108)

INTO bright_order_items VALUES ('Z4K2',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;

------------------Order 6----------------------------------
```

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```
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
119.98, DEFAULT, 5240, 200111)

INTO bright_order_items VALUES ('T8L3',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;
```

-------------------Order 7------------------------------------

```
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
194.97, DEFAULT, 5060, 200112)

INTO bright_order_items VALUES ('W3Q2',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('M5N6',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;
```

-------------------Order 8------------------------------------

```
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
119.99, DEFAULT, 5270, 200113)

INTO bright_order_items VALUES ('D1B3',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('G7P1',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;
```

-------------------Order 9------------------------------------

```
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
129.98, DEFAULT, 5150, 200114)
```

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```sql
INTO bright_order_items VALUES ('K4F6',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('Q8R2',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


-------------------Order 10-------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
174.96, DEFAULT, 5090, 200101)

INTO bright_order_items VALUES ('A1D3',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('R4L6',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


-------------------Order 11-------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
99.99, DEFAULT, 5210, 200102)

INTO bright_order_items VALUES ('K374',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('Q25S',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


-------------------Order 12-------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
69.99, DEFAULT, 5380, 200104)

INTO bright_order_items VALUES ('A9Z1',
bright_order_id_seq.CURRVAL, 1)
```

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```
INTO bright_order_items VALUES ('R482',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;


--------------------Order 13--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
124.97, DEFAULT, 5120, 200107)

INTO bright_order_items VALUES ('P3R7',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('L1M0',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


--------------------Order 14--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
89.99, DEFAULT, 5020, 200108)

INTO bright_order_items VALUES ('N9P1',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('Y2X5',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


--------------------Order 15--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
59.97, DEFAULT, 5040, 200111)

INTO bright_order_items VALUES ('Z4K2',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


--------------------Order 16--------------------------------
```

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
109.96, DEFAULT, 5250, 200112)

INTO bright_order_items VALUES ('T8L3',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;
```

------------------Order 17-------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
74.99, DEFAULT, 5130, 200113)

INTO bright_order_items VALUES ('W3Q2',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('M5N6',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;
```

------------------Order 18-------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
59.98, DEFAULT, 5310, 200114)

INTO bright_order_items VALUES ('D1B3',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('G7P1',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;
```

------------------Order 19-------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
49.97, DEFAULT, 5070, 200101)
```

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```sql
INTO bright_order_items VALUES ('K4F6',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('Q8R2',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


------------------Order 20--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
84.96, DEFAULT, 5050, 200102)

INTO bright_order_items VALUES ('A1D3',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('R4L6',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


------------------Order 21--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
79.99, DEFAULT, 5220, 200104)

INTO bright_order_items VALUES ('H9K2',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('K374',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


------------------Order 22--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
139.98, DEFAULT, 5100, 200107)

INTO bright_order_items VALUES ('Q25S',
bright_order_id_seq.CURRVAL, 2)
```

```sql
INTO bright_order_items VALUES ('A9Z1',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;
```

--------------------Order 23--------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
129.97, DEFAULT, 5340, 200108)

INTO bright_order_items VALUES ('R482',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('P3R7',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;
```

--------------------Order 24--------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
89.99, DEFAULT, 5190, 200111)

INTO bright_order_items VALUES ('L1M0',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('N9P1',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;
```

--------------------Order 25--------------------------------

```sql
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
69.98, DEFAULT, 5170, 200112)

INTO bright_order_items VALUES ('Y2X5',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('Z4K2',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;
```

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```
-------------------Order 26----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
119.98, DEFAULT, 5080, 200113)

INTO bright_order_items VALUES ('T8L3',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('W3Q2',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


-------------------Order 27----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
99.97, DEFAULT, 5260, 200114)

INTO bright_order_items VALUES ('M5N6',
bright_order_id_seq.CURRVAL, 3)
INTO bright_order_items VALUES ('D1B3',
bright_order_id_seq.CURRVAL, 1)
SELECT * FROM DUAL;


-------------------Order 28----------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
59.98, DEFAULT, 5140, 200101)

INTO bright_order_items VALUES ('G7P1',
bright_order_id_seq.CURRVAL, 2)
INTO bright_order_items VALUES ('K4F6',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;


-------------------Order 29----------------------------------
```

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```
INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
74.97, DEFAULT, 5030, 200102)

INTO bright_order_items VALUES ('Q8R2',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('A1D3',
bright_order_id_seq.CURRVAL, 3)
SELECT * FROM DUAL;


-------------------Order 30--------------------------------

INSERT ALL
INTO bright_orders VALUES (bright_order_id_seq.NEXTVAL,
124.96, DEFAULT, 5010, 200104)

INTO bright_order_items VALUES ('R4L6',
bright_order_id_seq.CURRVAL, 1)
INTO bright_order_items VALUES ('H9K2',
bright_order_id_seq.CURRVAL, 2)
SELECT * FROM DUAL;
```

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Constraint Testing

```
------------------------------------------------------
------------CONSTRAINT TESTING-------------------
------------------------------------------------------


----------- PK TESTING ------------------------------

-- Description: Confirm primary key constraint on product_id
column in bright_products table
-- Expected result: Insert fails with duplicate key error
-- Action:
INSERT
    INTO bright_products VALUES('K374', 'WL4001',
'ShineBright', 'Elegant Wall Lamp', 'Wall Lamp', '12x24x8',
'Brass', 40, 'Sconce', 49.99, 'T', 'Metal', 101);
-- Result:
-- ORA-00001: unique constraint
(WKSP_LC7350F23.BRIGHT_LAMPS_PK) violated

-------------FK TESTING----------------------------------
-- Description: Confirm foreign key constraint on manager_id
column in bright_employees table
-- Expected result: Insert fails, operation not allowed
-- Action:



-------------TEST BIRTHDATE < HIREDATE-------------------

-- Description: Confirm check constraint on birth_date
column in bright_employees table
-- Expected result: Operation not allowed for check
constraint
-- Action:

INSERT INTO bright_employees VALUES
    (210115, 'Brad', 'David', '567890122', '2024-07-05',
'2007-10-25', 'A', '555-567-8901', 200103, 002)
```

```
 -- Result:
 -- ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_EMPLOYEES_HIREBIRTHDATECK) violated


-------------TEST SALARY < 100 000.00--------------------

-- Description: Confirm check constraint on salary column in
bright_jobs table
-- Expected result: Operation not allowed for check
constraint
-- Action:

DROP TABLE bright_jobs CASCADE CONSTRAINTS;
CREATE TABLE bright_jobs (
    job_id          INTEGER NOT NULL,
    job_name        VARCHAR(255) NOT NULL,
    salary          DECIMAL (10,2) NOT NULL
);

ALTER TABLE bright_jobs
    ADD CONSTRAINT bright_employees_salaryck
    CHECK (salary<100000.00);

INSERT INTO bright_jobs VALUES
(001, 'Supervisor', 1200000);

--Result:
--ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_EMPLOYEES_SALARYCK) violated

-------------TEST SOC BETWEEN 1 AND 999999999-------------

-- Description: Confirm check constraint on soc_sec_no
column in bright_employees table
-- Expected result: Operation not allowed for check
constraint
-- Action:
```

```
INSERT INTO bright_employees VALUES
     (210115, 'Brad', 'David', 5567890122, '2024-07-05',
'2007-10-25', 'A', '555-567-8901', 200103, 002);

-- RESULT:
-- [ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_EMPLOYEES_SOC_NOCK) violated


-------------TEST QUANTITY > 0 ----------------------------

-- Description: Confirm check constraint on quantity column
in bright_order_items table
-- Expected result: Operation not allowed for check
constraint
-- Action:
DROP TABLE bright_order_items CASCADE CONSTRAINTS;
CREATE TABLE bright_order_items (
     product_id      VARCHAR (5) NOT NULL,
     order_id        INTEGER NOT NULL,
     quantity        DECIMAL (2) NOT NULL);

ALTER TABLE bright_order_items
     ADD CONSTRAINT bright_order_items_quantck
     CHECK (quantity > 0);

INSERT INTO bright_order_items VALUES
     ('G7P1', 1111,  0);

 --RESULT:
 --ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_ORDER_ITEMS_QUANTCK) violated


-------------TEST QUANTITY < 10 ----------------------------

-- Description: Confirm check constraint on quantity column
in bright_order_items table
```

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```
-- Expected result: Operation not allowed for check
constraint
-- Action:

DROP TABLE bright_order_items CASCADE CONSTRAINTS;
CREATE TABLE bright_order_items (
    product_id      VARCHAR (5) NOT NULL,
    order_id        INTEGER NOT NULL,
    quantity        DECIMAL (2) NOT NULL);

ALTER TABLE bright_order_items
    ADD CONSTRAINT bright_order_items_quantck
    CHECK (quantity < 10);

INSERT INTO bright_order_items VALUES
    ('G7P1', 1111,  20);

--RESULT:
-- ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_ORDER_ITEMS_QUANTCK2) violated


-----------TEST SWITCH TYPE CONSTRAINT--------------------

-- Description: Confirm check constraint on switch_type
column in bright_products table
-- Expected result: Operation not allowed for check
constraint
-- Action:

INSERT INTO bright_products VALUES
    ('L1M0', 'WL4002', 'ShineBright', 'Contemporary Wall
Sconce', 'Wall Lamp', '14x28x14', 'Gold', 45, 'Cone', 54.99,
'Z', 'Metal', 106);

--RESULT:
--ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_PRODUCTS_SWITCH_CK) violated
```

------------TEST BOOLEAN CONSTRAINT------------------------

-- Description: Confirm check constraint on job_status
column in bright_employees table
-- Expected result: Operation not allowed for check
constraint
-- Action:

```sql
INSERT INTO bright_employees VALUES
    (200117, 'Samantha', 'Lyft', '789012344', '1996-04-08',
'2021-04-18', 'Z', '555-789-0123', 200105, 003);
```

--RESULT:
--ORA-02290: check constraint
(WKSP_LC7350F23.BRIGHT_EMPLOYEES_JOBSTATUS) violated