

Day 6 Notes

-- SQL Constraints

EMPLOYEE TABLE

- AGE (INT)

specify the rules for data in a table
ensures the accuracy and reliability of data

when to specify these constraints

- table creation time (create table)
- later alter the table definition and add a constraint

--CHECK CONSTRAINT

=====

```
CREATE TABLE orders (
    order_id int,
    order_item_id int,
    order_date date,
    customer_id int,
    order_status varchar(20),
    product_id int,
    quantity int,
    product_price float,
    total_price float
);
```

valid order status

=====

```
CLOSED
PENDING_PAYMENT
COMPLETE
PROCESSING
ON_HOLD
SUSPECTED_FRAUD
PENDING
```

```
INSERT INTO orders VALUES (1, 1, '2013-07-25', 11599, 'CLOSE', 957, 1,
299.98, 299.98);
```

ALTER TABLE orders

```
ADD CHECK (order_status in ('CLOSED',
'PENDING_PAYMENT',
'COMPLETE',
'PROCESSING',
'ON_HOLD',
```

```
'SUSPECTED_FRAUD',
'PENDING'));
```

```
show create table orders;
```

```
'CREATE TABLE `orders` (
`order_id` int DEFAULT NULL,
`order_item_id` int DEFAULT NULL,
`order_date` date DEFAULT NULL,
`customer_id` int DEFAULT NULL,
`order_status` varchar(20) DEFAULT NULL,
`product_id` int DEFAULT NULL,
`quantity` int DEFAULT NULL,
`product_price` float DEFAULT NULL,
`total_price` float DEFAULT NULL,
CONSTRAINT `orders_chk_1` CHECK ((`order_status` in
(_utf8mb4"CLOSED",_utf8mb4"PENDING_PAYMENT",_utf8mb4"COMPLETE
",_utf8mb4"PROCESSING",_utf8mb4"ON_HOLD",_utf8mb4"SUSPECTED_F
RAUD",_utf8mb4"PENDING")))
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4
COLLATE=utf8mb4_0900_ai_ci'
```

```
ALTER TABLE order_status
DROP CHECK orders_chk_1;
```

```
ALTER TABLE orders
ADD CONSTRAINT CHK_OrderStatus CHECK (order_status in ('CLOSED',
'PENDING_PAYMENT',
'COMPLETE',
'PROCESSING',
'ON_HOLD',
'SUSPECTED_FRAUD',
'PENDING'));
```

```
'CREATE TABLE `orders` (
`order_id` int DEFAULT NULL,
`order_item_id` int DEFAULT NULL,
`order_date` date DEFAULT NULL,
`customer_id` int DEFAULT NULL,
`order_status` varchar(20) DEFAULT NULL,
`product_id` int DEFAULT NULL,
`quantity` int DEFAULT NULL,
`product_price` float DEFAULT NULL,
`total_price` float DEFAULT NULL,
CONSTRAINT `CHK_OrderStatus` CHECK ((`order_status` in
(_utf8mb4"CLOSED",_utf8mb4"PENDING_PAYMENT",_utf8mb4"COMPLETE
",_utf8mb4"PROCESSING",_utf8mb4"ON_HOLD",_utf8mb4"SUSPECTED_F
```

```
RAUD",_utf8mb4" PENDING" )))  
) ENGINE=InnoDB DEFAULT CHARSET=utf8mb4  
COLLATE=utf8mb4_0900_ai_ci'
```

```
CREATE TABLE orders (  
order_id int,  
order_item_id int,  
order_date date,  
customer_id int,  
order_status varchar(20) CHECK (order_status in  
('CLOSED','PENDING_PAYMENT','COMPLETE','PROCESSING','ON_HOLD',  
'SUSPECTED_FRAUD','PENDING')) ,  
product_id int,  
quantity int,  
product_price float,  
total_price float  
);
```

```
drop table orders;
```

```
CREATE TABLE orders (  
order_id int,  
order_item_id int,  
order_date date,  
customer_id int,  
order_status varchar(20) CHECK (order_status in  
('CLOSED','PENDING_PAYMENT','COMPLETE','PROCESSING','ON_HOLD',  
'SUSPECTED_FRAUD','PENDING')) ,  
product_id int,  
quantity int CHECK (quantity <= 50),  
product_price float,  
total_price float  
);
```

```
INSERT INTO orders VALUES (1, 1, '2013-07-25', 11599, 'CLOSE', 957, 52,  
299.98, null);
```

```
CREATE TABLE persons (  
person_id INT,  
first_name VARCHAR(50),  
last_name VARCHAR(50),  
age INT CHECK (age > 0)  
);
```

```
INSERT INTO persons (person_id, first_name, last_name, age)  
VALUES (1, 'Raj', 'Sharma', -5);
```

```
CREATE TABLE users (
    user_id INT,
    username VARCHAR(50),
    email VARCHAR(100),
    CHECK (email LIKE '%@%.%')
);
```

sumittrendytechin
%@%.%

```
INSERT INTO users (user_id, username, email)
VALUES (1, 'sumitm', 'sumit@trendytech.in');
```

```
CREATE TABLE projects (
    project_id INT,
    project_name VARCHAR(100),
    start_date DATE,
    end_date DATE,
    CHECK (end_date > start_date)
);
```

```
INSERT INTO projects (project_id, project_name, start_date, end_date)
VALUES (1, 'Project Alpha', '2023-01-01', '2023-12-31');
```

```
INSERT INTO projects (project_id, project_name, start_date, end_date)
VALUES (1, 'Project Beta', '2023-01-01', '2022-12-31');
```