

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');
```