SESSIONS 1

Date and Time Built-in Functions

Data Science Program

Purwadhika
Startup and Coding School

Date & Time Functions

Most databases contain special data types for date and times. This is format for date and time:

DATE: YYYYMMDD

TIME: HHMMSS

TIMESTAMP: YYYYXXDDHHMMSSZZZZZZ

Date and Time Functions

YEAR(), MONTH(), DAY(), DAYOFMONTH(), DAYOFWEEK(), DAYOFYEAR(), WEEK(), HOUR(), MINUTE(), SECOND()

Purwadhika
Startup and Coding School

DAY

- Show **customer_id and day of payment date** from Payment table where amount above US$ 11.

```
SELECT Customer_id, DAY(payment_date)
FROM PAYMENT
WHERE amount > 11;
```

Customer_id	DAY(payment_date)
13	29
116	21
195	23
196	25
204	22
237	2
305	17
362	21
591	7
592	6

Purwadhika
Startup and Coding School

DAYNAME

- Show **average amount based on day** from Payment table and ordered by average amount.

```
SELECT AVG(amount) AS Average_Amount,
DAYNAME(payment_date) AS Day
FROM PAYMENT
GROUP BY DAYNAME(payment_date)
ORDER BY Average_Amount;
```

Average_Amount	Day
4.146187	Tuesday
4.153156	Wednesday
4.159114	Monday
4.200776	Sunday
4.208654	Friday
4.243636	Thursday
4.296096	Saturday

Purwadhika
Startup and Coding School

MONTH

- Show **total amount** from Payment table only on August.

```
SELECT SUM(amount) AS Total_Amount_August
FROM PAYMENT
WHERE MONTH(payment_date) = 8;
```

Total_Amount_August
24072.13

Purwadhika
Startup and Coding School

MONTHNAME

- Show **average amount based on month** from Payment table and ordered by average amount.

```
SELECT AVG(amount) AS Average_Amount,
MONTHNAME(payment_date) AS Month_Name
FROM PAYMENT
GROUP BY Month_Name
ORDER BY Average_Amount;
```

Average_Amount	Month_Name
2.825165	February
4.166038	June
4.169775	May
4.227968	July
4.232835	August

Purwadhika
Startup and Coding School

DATE ARITHMETIC

- Show **day name after one day payment** from Payment table where staff_id is 1 and amount greater than US$ 11

```
SELECT Customer_id, Amount,
DAYNAME(payment_date + 1) AS One_Day_After_Payment
FROM PAYMENT
WHERE staff_id = 1 AND
amount > 11;
```

Customer_id	Amount	One_Day_After_Payment
305	11.99	Friday
362	11.99	Sunday
592	11.99	Wednesday

Purwadhika
Startup and Coding School

YEAR

- Show **average amount every year** from Payment table.

```
SELECT YEAR(payment_date) AS Year_Sales,
AVG(amount) AS Total_Amount_Yearly
FROM PAYMENT
GROUP BY Year_sales;
```

Year_Sales	Average_Amount_Yearly
2005	4.216445
2006	2.825165

Purwadhika
Startup and Coding School

Reference

- https://www.w3schools.com/sql/func_mysql_day.asp
- https://www.w3schools.com/sql/func_mysql_dayname.asp
- https://www.w3schools.com/sql/func_mysql_month.asp
- https://www.w3schools.com/sql/func_sqlserver_year.asp