

## TASK 4: AGGREGATE FUNCTIONS AND GROUPING

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### 1. APPLY AGGREGATE FUNCTION ON NUMERIC COLUMNS

```
mysql> select sum(order_amount) AS total_sales From Orders;
```

```
+-----+  
| total_sales |  
+-----+  
| 20997.00 |  
+-----+
```

1 row in set (0.01 sec)

```
mysql> select avg(price) AS avg_price From Product;
```

```
+-----+  
| avg_price |  
+-----+  
| 21832.333333 |  
+-----+
```

1 row in set (0.00 sec)

```
mysql> select count(*) AS total_users From User;
```

```
+-----+  
| total_users |  
+-----+  
| 3 |  
+-----+
```

1 row in set (0.00 sec)

```
mysql> select min(price) AS min_price From Product;
```

```
+-----+  
| min_price |  
+-----+  
| 499.00 |  
+-----+
```

1 row in set (0.01 sec)

```
mysql> select max(price) AS max_price From Product;
```

```
+-----+  
| max_price |  
+-----+  
| 45999.00 |  
+-----+
```

1 row in set (0.00 sec)

### 2. USE GROUP BY TO CATEGORIZE

```
mysql> select user_id, SUM(order_amount) AS user_total
```

```
-> From Orders
```

```
-> GROUP BY user_id;
```

```
+-----+-----+
```

```
| user_id | user_total |
+-----+-----+
|    1   | 20498.00   |
|    2   |   499.00   |
+-----+-----+
2 rows in set (0.00 sec)
```

```
mysql> select cat_id, COUNT(*) AS total_products
-> From Product
-> GROUP BY cat_id;
```

```
+-----+-----+
| cat_id | total_products |
+-----+-----+
|    1   |          2     |
|    2   |          1     |
+-----+-----+
2 rows in set (0.00 sec)
```

### **3. FILTER GROUPS USING HAVING**

```
mysql> select user_id, SUM(order_amount) AS total_spent
-> FROM Orders
-> GROUP BY user_id
-> HAVING total_spent > 5000;
```

```
+-----+-----+
| user_id | total_spent |
+-----+-----+
|    1   | 20498.00   |
+-----+-----+
1 row in set (0.01 sec)
```

```
mysql> select cat_id, COUNT(*) AS product_count
-> FROM Product
-> GROUP BY cat_id
-> HAVING product_count > 1;
```

```
+-----+-----+
| cat_id | product_count |
+-----+-----+
|    1   |          2     |
+-----+-----+
1 row in set (0.00 sec)
```