

Example of **GROUP BY & HAVING**

```
SELECT DEP, JOB, AVG(SAL)  
FROM EMPL  
WHERE JOB <> 'M'  
GROUP BY DEP, JOB  
HAVING AVG(SAL) > 28000  
ORDER BY AVG(SAL) DESC
```

BASE TABLE

| JOB | SAL | DEP |
|-----|-------|-----|
| S | 31000 | BLU |
| M | 32000 | RED |
| S | 30000 | BLU |
| C | 27000 | GRE |
| S | 33000 | GRE |
| M | 31000 | BLU |
| S | 32000 | RED |
| C | 28000 | GRE |
| S | 30000 | RED |
| M | 33000 | GRE |
| S | 31000 | RED |
| S | 35000 | GRE |
| C | 27000 | BLU |
| S | 29000 | RED |
| S | 29000 | BLU |

GROUP BY DEP, JOB

| JOB | SAL | DEP | JOB | SAL | DEP |
|-----|-------|-----|-----|-------|-----|
| S | 31000 | BLU | C | 27000 | BLU |
| S | 30000 | BLU | S | 31000 | BLU |
| C | 27000 | GRE | S | 29000 | BLU |
| S | 33000 | GRE | S | 30000 | BLU |
| S | 32000 | RED | C | 27000 | GRE |
| C | 28000 | GRE | C | 28000 | GRE |
| S | 30000 | RED | S | 33000 | GRE |
| S | 31000 | RED | S | 35000 | GRE |
| S | 35000 | GRE | S | 32000 | RED |
| C | 27000 | BLU | S | 30000 | RED |
| S | 29000 | RED | S | 31000 | RED |
| S | 29000 | BLU | S | 29000 | RED |

GROUP BY

SELECT DEP,JOB,AVG(SAL)

| JOB | SAL | DEP | JOB | SAL | DEP | DEP | JOB | AVG(SAL) |
|-----|-------|-----|-----|-------|-----|-----|-----|----------|
| C | 27000 | BLU | | | | | | |
| S | 31000 | BLU | S | 31000 | BLU | BLU | S | 30000 |
| S | 29000 | BLU | S | 29000 | BLU | | | |
| S | 30000 | BLU | S | 30000 | BLU | | | |
| C | 27000 | GRE | | | | | | |
| C | 28000 | GRE | | | | | | |
| S | 33000 | GRE | S | 33000 | GRE | GRE | S | 34000 |
| S | 35000 | GRE | S | 35000 | GRE | | | |
| S | 32000 | RED | S | 32000 | RED | RED | S | 30500 |
| S | 30000 | RED | S | 30000 | RED | | | |
| S | 31000 | RED | S | 31000 | RED | | | |
| S | 29000 | RED | S | 29000 | RED | | | |

SELECT

| DEP | JOB | AVG(SAL) |
|-----|-----|----------|
|-----|-----|----------|

| | | |
|-----|---|-------|
| BLU | S | 30000 |
|-----|---|-------|

| | | |
|-----|---|-------|
| GRE | S | 34000 |
|-----|---|-------|

| | | |
|-----|---|-------|
| RED | S | 30500 |
|-----|---|-------|

ORDER BY

| DEP | JOB | AVG(SAL) |
|-----|-----|----------|
|-----|-----|----------|

| | | |
|-----|---|-------|
| GRE | S | 34000 |
|-----|---|-------|

| | | |
|-----|---|-------|
| RED | S | 30500 |
|-----|---|-------|

| | | |
|-----|---|-------|
| BLU | S | 30000 |
|-----|---|-------|

ORDER BY AVG(SAL) DESC