

# Queries



Queries extend monadic transformations.

## Queries: Example

*List all departments.*

department



# Query Composition

$Q_1 \cdot Q_2$



# Query Composition: Example

List the names of all departments.

department.name



# Counting Example

Show the number of departments.

`count(department)`



department



count(\_)



# Counting Challenge 1

Show the number of employees  
in each department.

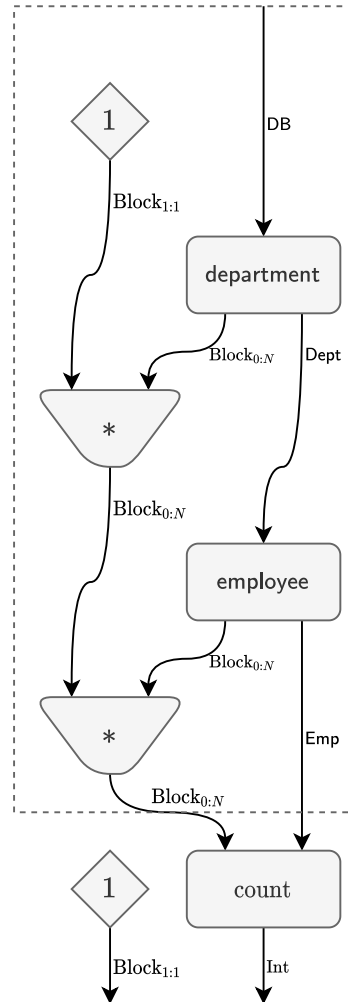
`department.count(employee)`



```

graph TD
    1{1} -- Block_{1:1} --> J1{*}
    J1 -- Block_{0:N} --> O1[Block_{0:N}]
    DB[DB] --> D[department]
    D -- Block_{0:N} --> J2{*}
    J2 --> E[employee]
    E -- Block_{0:N} --> J3{*}
    J3 -- Block_{0:N} --> O2[Block_{0:N}]
    E -- Emp --> O3[Emp]

```



```
count(department.employee)
```

# Counting Challenge 3





## Counting Challenge 4



# Counting Challenge 5



Show the number of employees in each department.

`department.count(employee)`