

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.

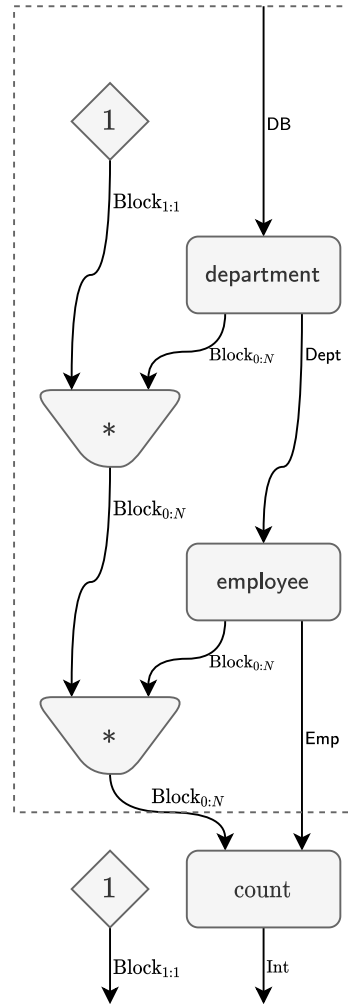
```
department.count(employee)
```



```

graph TD
    1{1} -- Block_{1:1} --> J1{*}
    J1 -- Block_{0:N} --> J2{*}
    J1 -- Block_{0:N} --> J3{*}
    DB[DB] --> D[department]
    D -- Dept --> J2
    D -- Block_{0:N} --> J1
    E[employee] -- Emp --> J3
    E -- Block_{0:N} --> J1
    J2 --> B0N1[Block_{0:N}]
    J3 --> B0N2[Block_{0:N}]

```



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

Counting Challenge 3



Counting Challenge 4



Counting Challenge 5



Show the number of employees in each department.

`department.count(employee)`