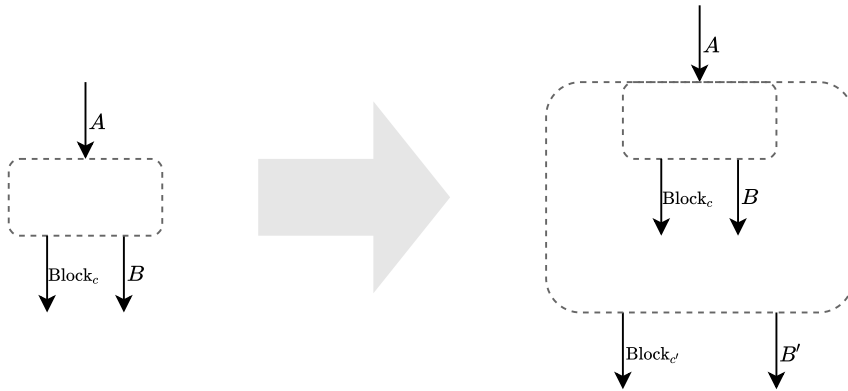


# Queries

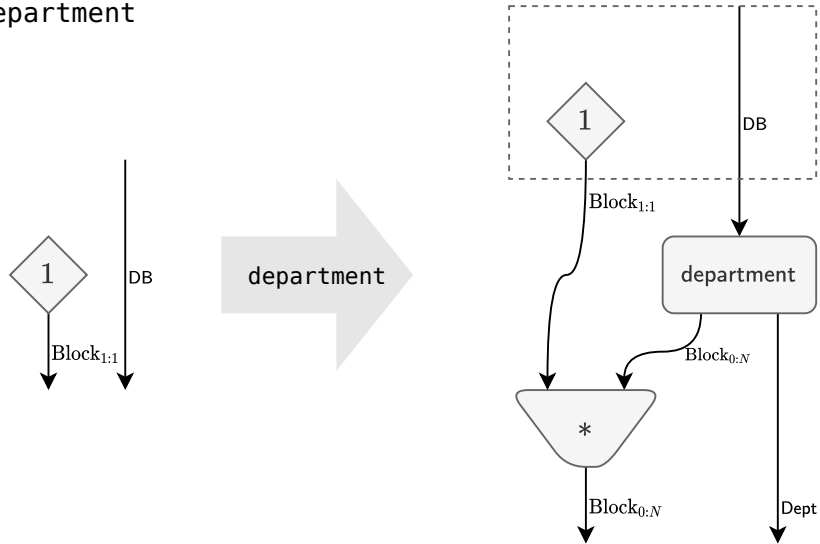


Queries extend monadic transformations.

# Queries: Example

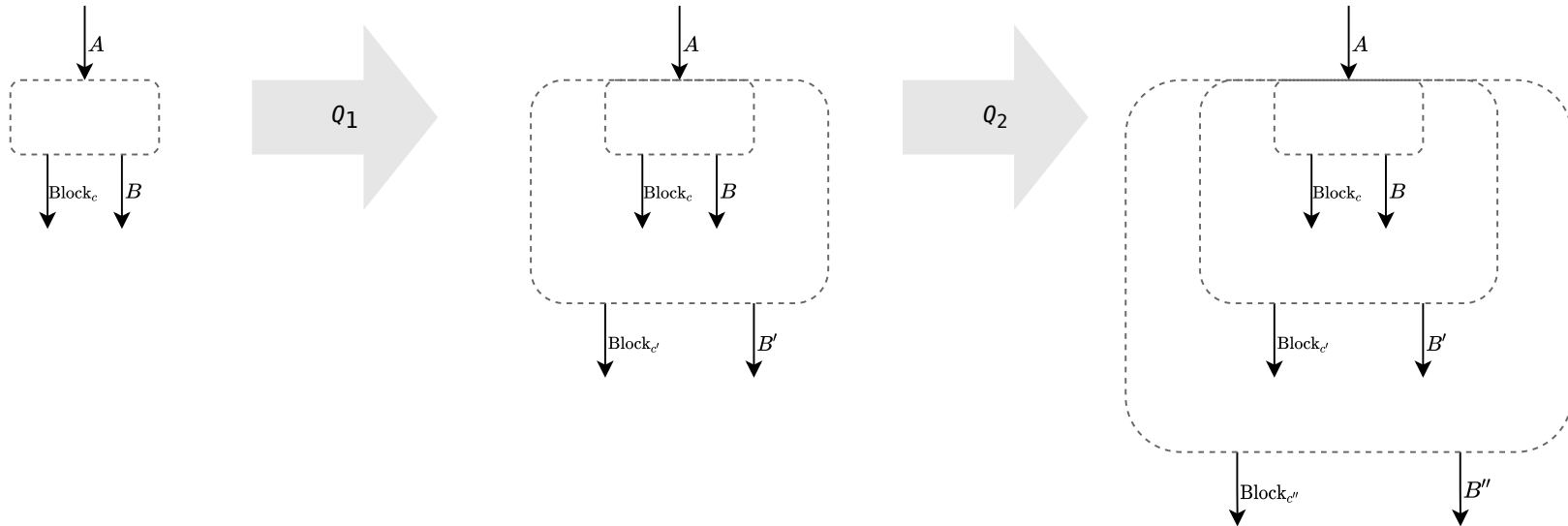
*List all departments.*

department



# Query Composition

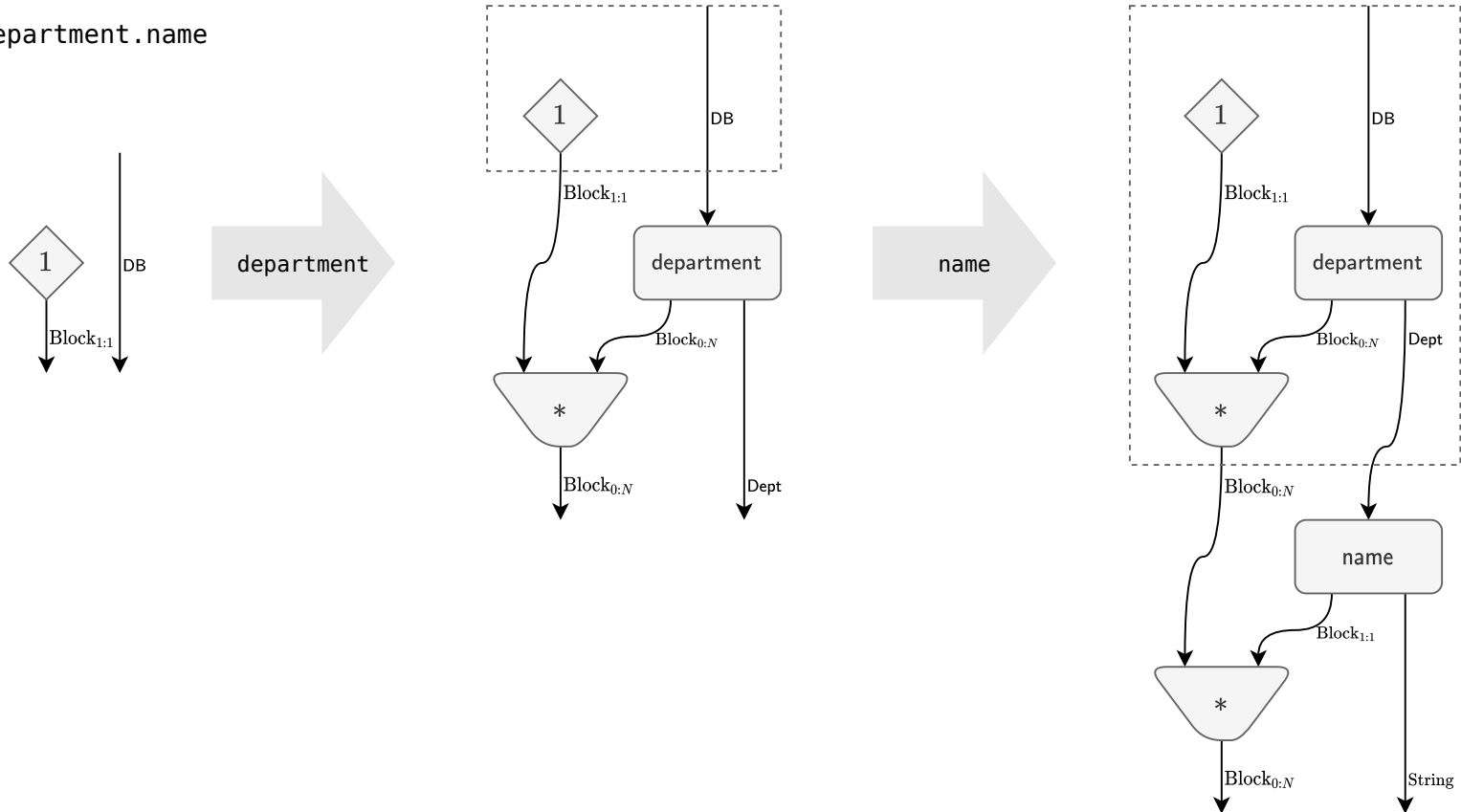
$Q_1 \cdot Q_2$



# Query Composition: Example

List the names of all departments.

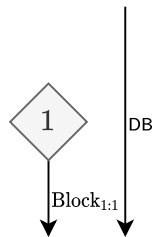
department.name



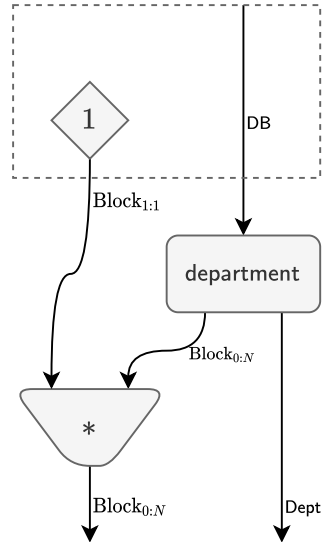
# Counting Example

Show the number of departments.

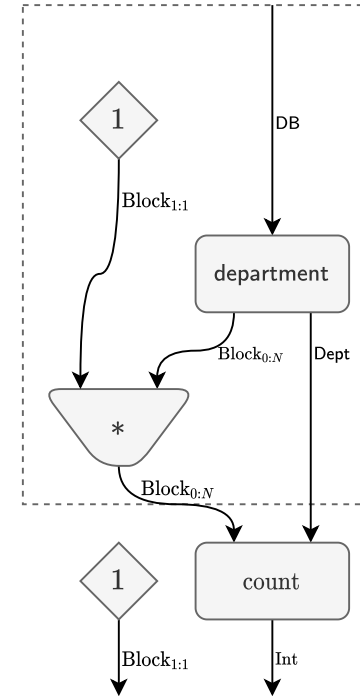
`count(department)`



department



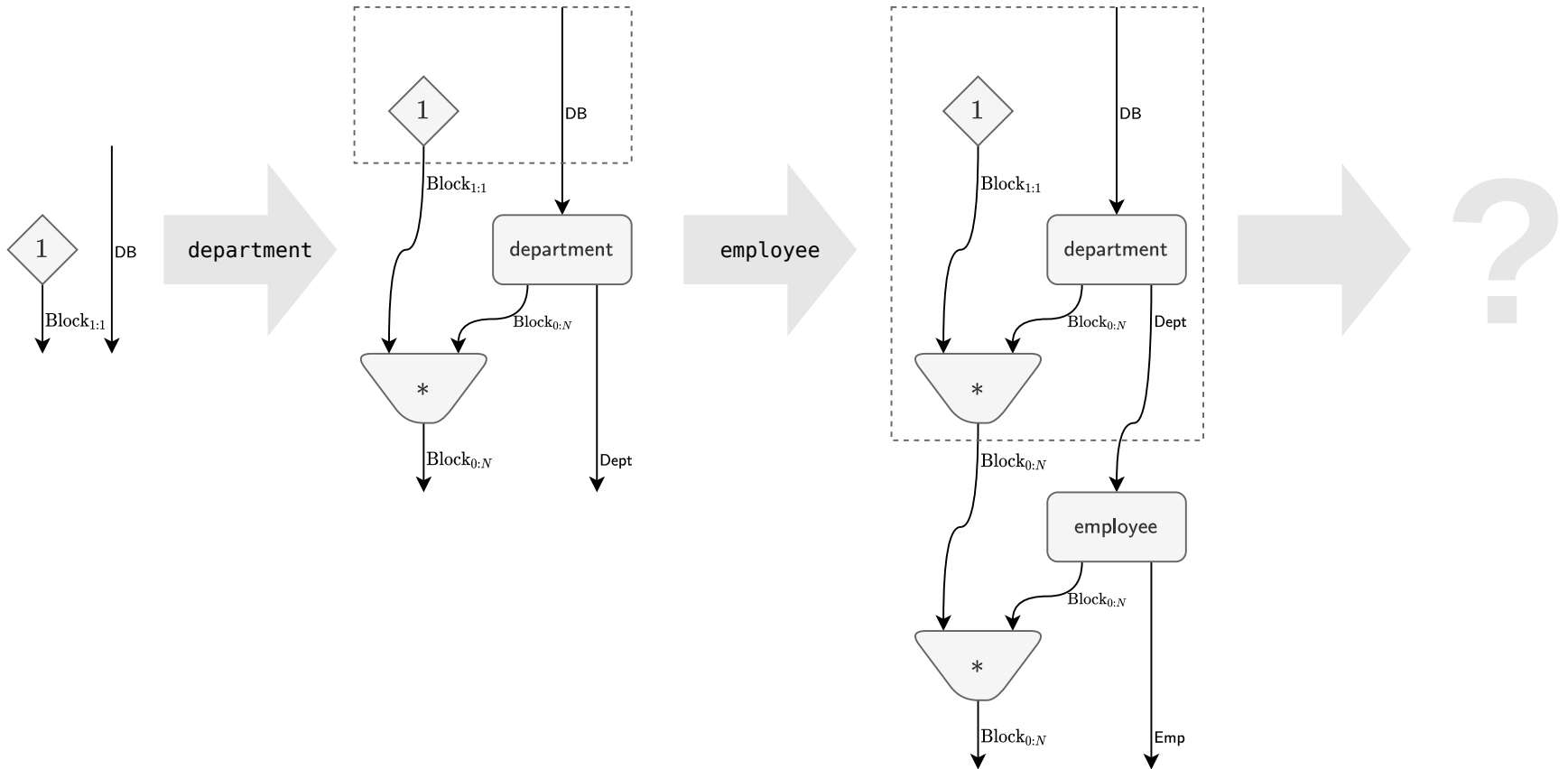
count(\_)

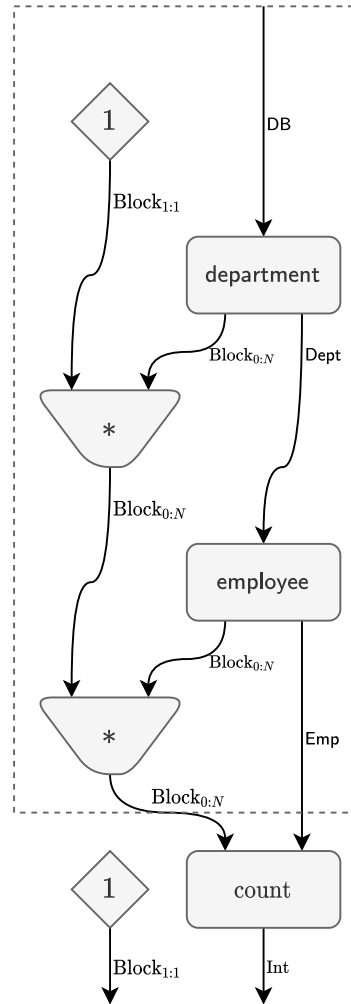


# Counting Challenge 1

Show the number of employees  
in each department.

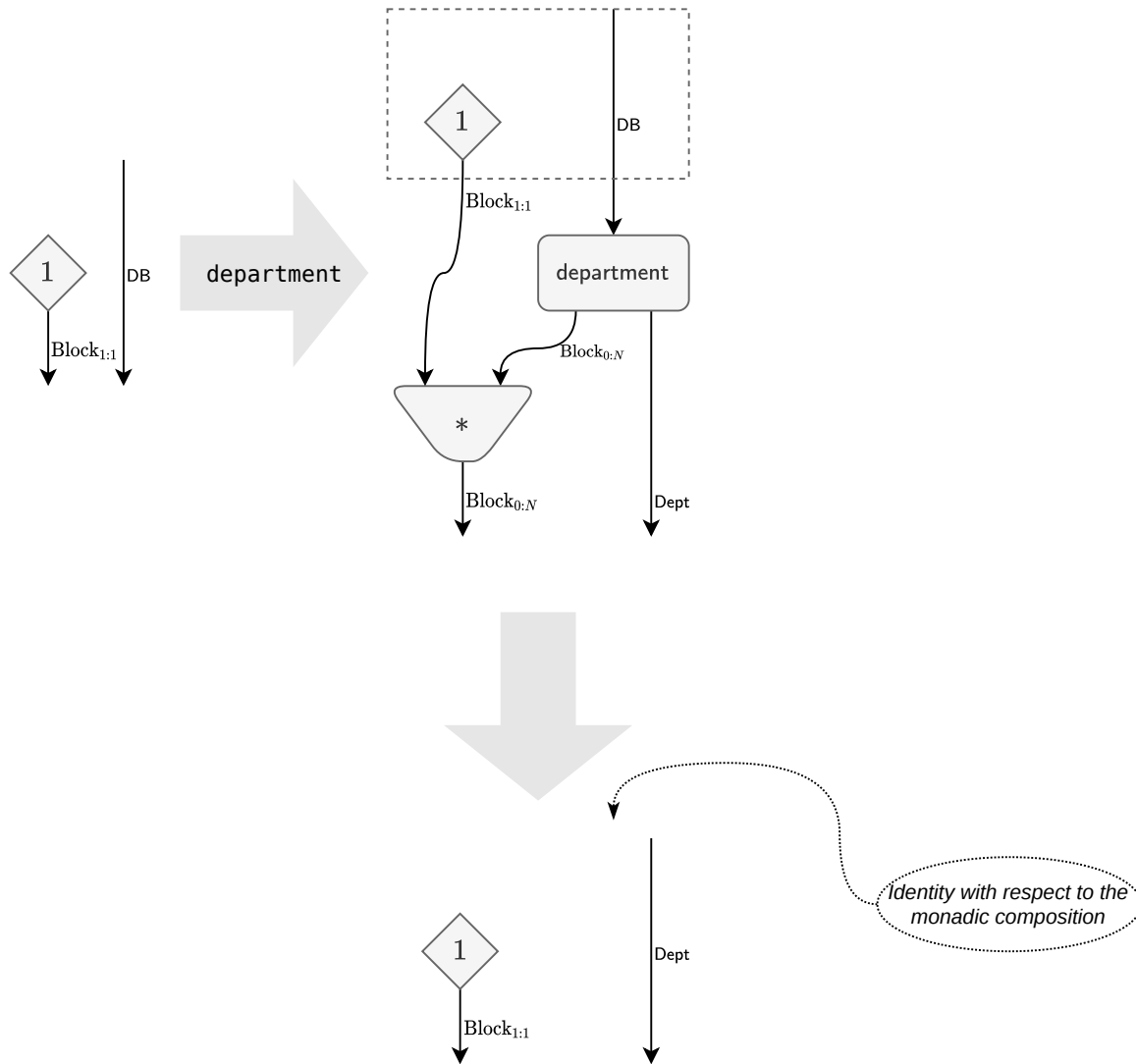
`department.count(employee)`





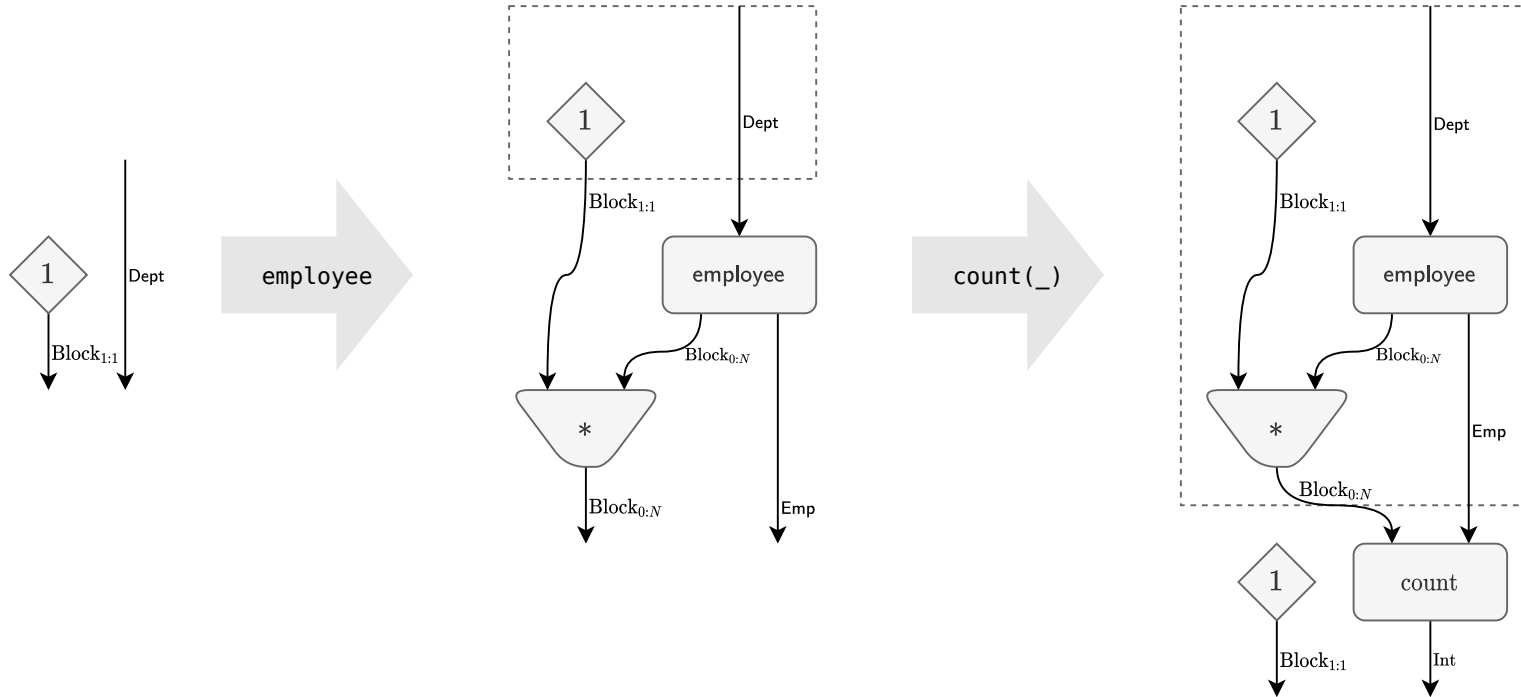
```
count(department.employee)
```

# Counting Challenge 3

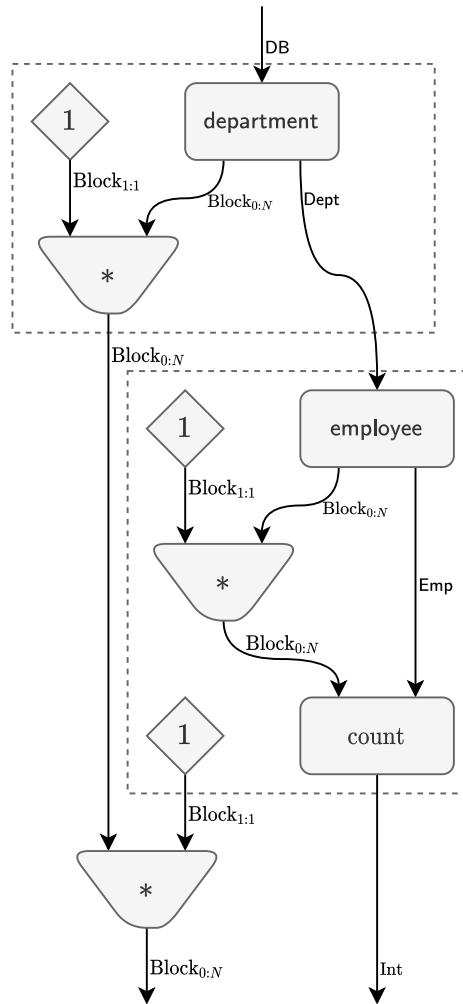
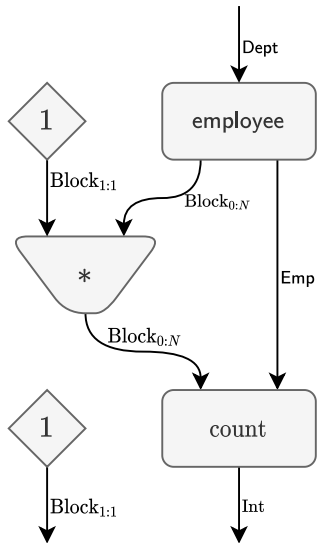
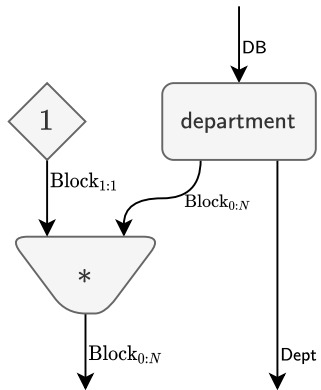




# Counting Challenge 4



# Counting Challenge 5



Show the number of employees  
in each department.

`department.count(employee)`