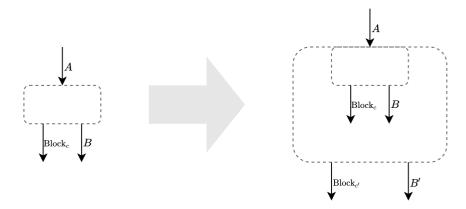
# **Queries**

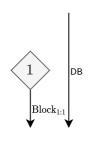


Queries extrend monadic transformations.

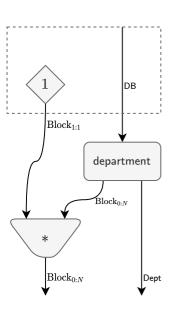
# **Queries: Example**

List all departments.

department

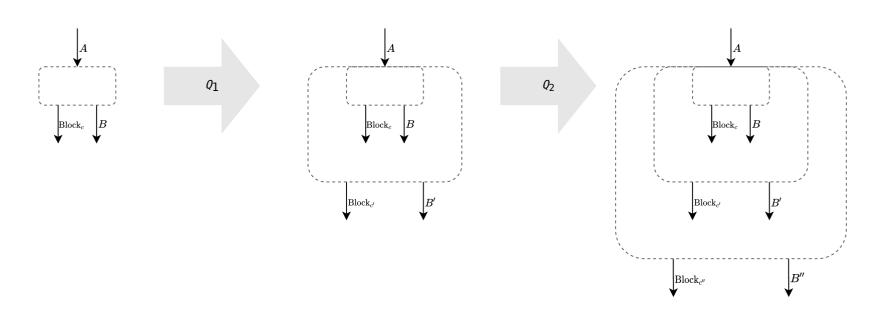


 ${\tt department}$ 



# **Query Composition**

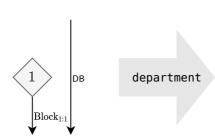
 $Q_1.Q_2$ 

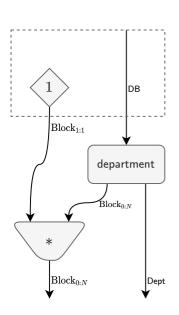


#### **Query Composition: Example**

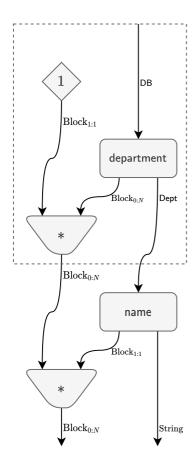
List the names of all departments.

department.name





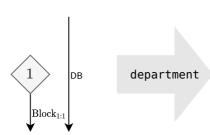
name

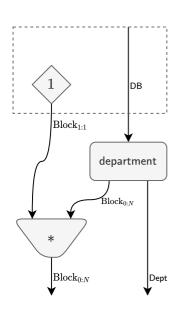


#### **Counting Example**

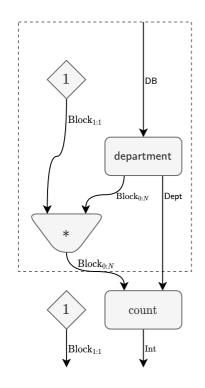
Show the number of departments.

count(department)



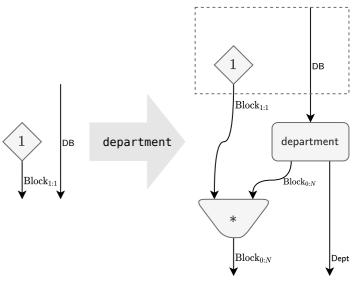


count(\_)



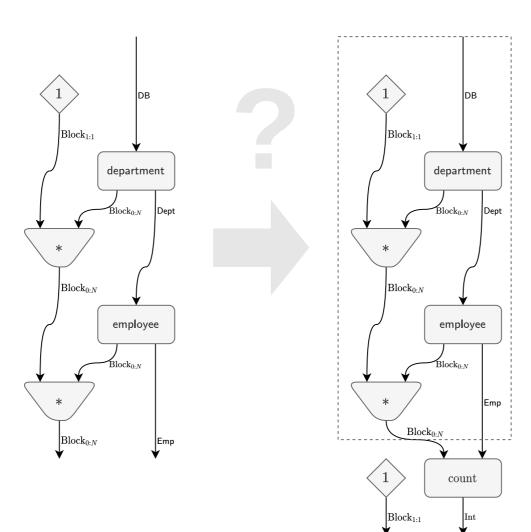
Show the number of employees in each department.

department.count(employee)



DB  $Block_{1:1}$ department  $\mathrm{Block}_{0:N}$ Dept  $\mathrm{Block}_{0:N}$ employee  $\mathrm{Block}_{0:N}$  $\mathrm{Block}_{0:N}$ Emp

employee



Show the total number of employees across all departments.

count(department.employee)

