# **PLDB**

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# PHDB

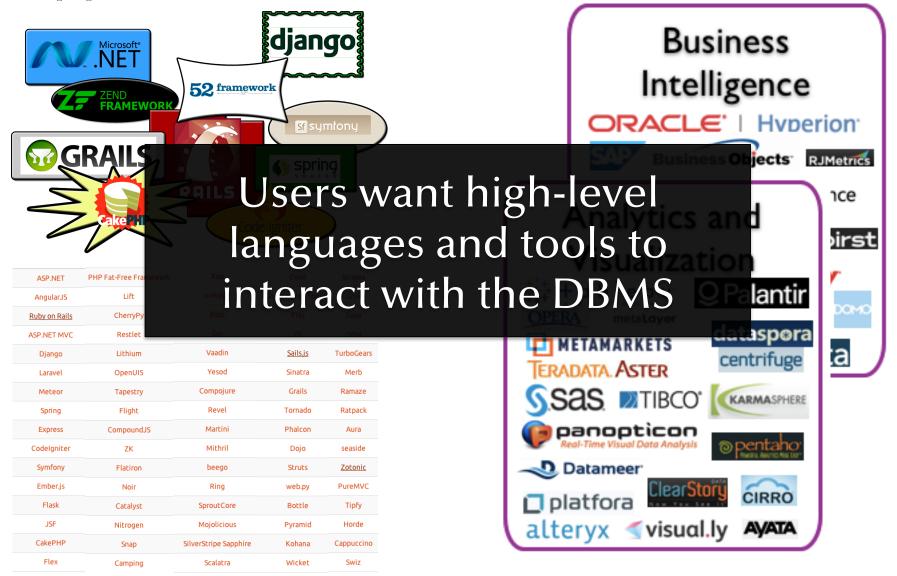
Programming Languages

Data Management



# Developing DBMS Applications

End-User Data Discovery



Easy integration with app Impedance mismatch

Maintain single code base End-to-end consistency

Don't need to learn SQL (!) Performance issues

Use PL techniques to help users interact with and build DBMS

#### **End-User Tools**



Is there something equivalent to argmax in SQL?

If I'm reading your question correctly, the following query should do it

#### SELECT x.\*

FROM YOUR\_TABLE x
WHERE x.column = (SELECT MAX(y.column)
FROM YOUR\_TABLE y)

Of course, if you have more than one row where the column a attains its maximum, then you'll get more than one row back from the guery.



Hello computer.
What in the world does
"SELECT \* FROM ... ..."
mean?



This is a query that returns the rows with the max value of column A from table T.

### Queries from Constraints

Time		Sensor	ID	Reading
Time > 1	pm			
		10		
Time	Sen	sor ID	Re	ading
10am	10		20	.1
11am	10		4.1	-
10am	20		30.	.2
1pm	20		35	
Sensor II	D/	R	eadir	ng
•	/			
1				

## PL for Building DBMS

Brandon Haynes (this morning)
 PipeGen: Automatic Generation of Data
 Pipes for Hybrid Analytics

• Shumo Chu (later this afternoon)
Formal Verification Framework for Query
Optimization

# PL for Writing DBMS Apps

#### Cong Yan

Leveraging Lock Contention to Improve Transaction Application Performance

#### Maaz Ahmad

Translating Sequential Java Programs to MapReduce Using Verified Lifting