



# NoSQL And Python

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# Topics Covered

## NoSQL

- Need for change
- What is NoSQL
- Pros and cons

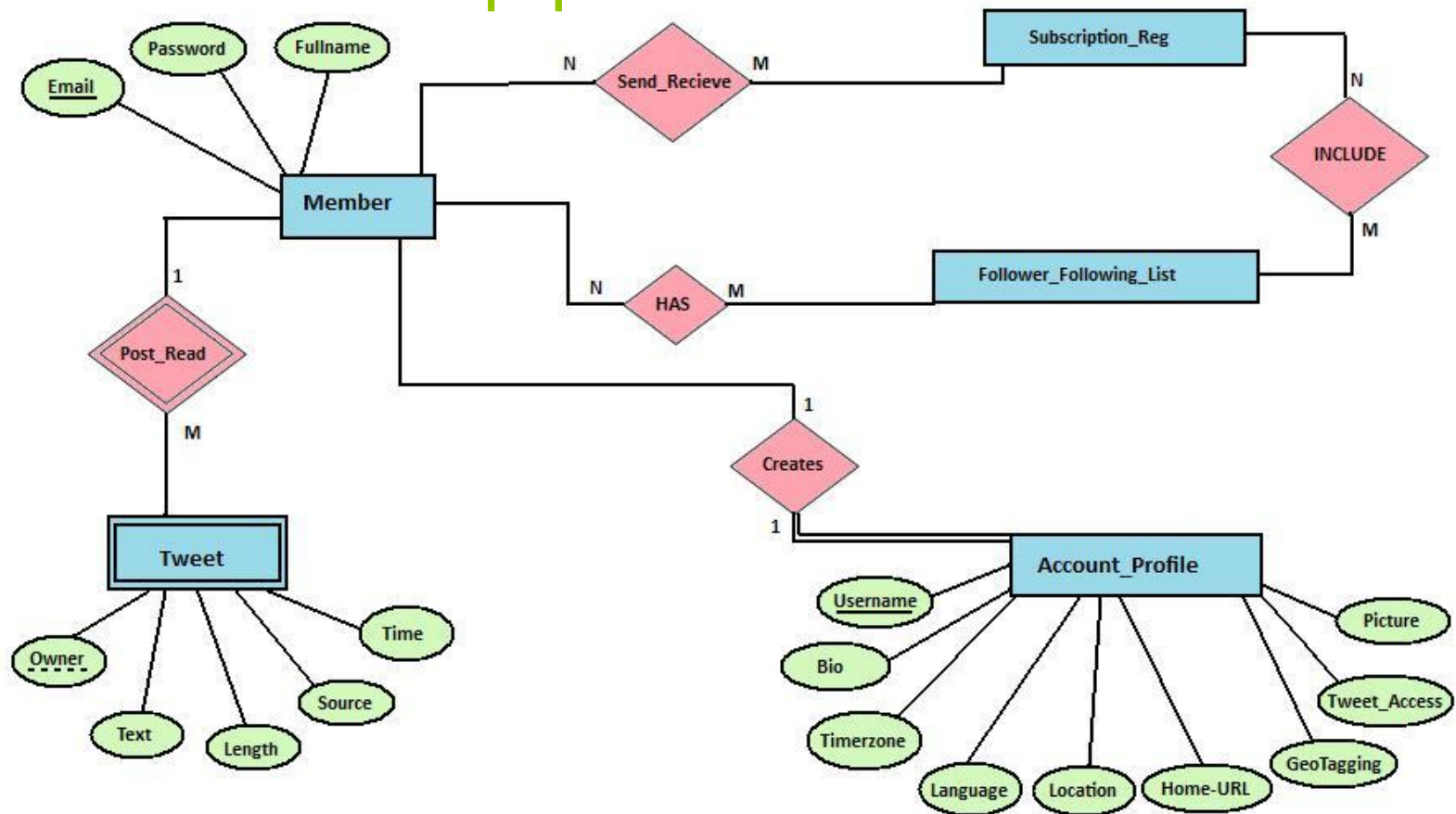
## PyMongoDB

- Introduction
- Tutorial

# The Motivation!

- RDBMS was fine for small applications
- Huge amount of data.
- Tables can not be used for everything.

# RDBMS Approach



# Not Only SQL

## Solution

10041	Details:UserName ap <del>l</del> usk	Details:City California	Data:tweet Going to the studio.					
10123	Details:UserName Sachin <del>_</del> rt	Data:tweet Yeahh! We won!						

# Classification

- Wide Column Store / Column Families
- Document Store
- Key Value / Tuple Store
- Graph Databases
- Object Databases
- XML Databases

Python Compatible:

MongoDB, Keyspace, Hypertable, Objectivity, Perst

# SWOT-Analysis

## Strengths

- uninterrupted access/high availability
- Scalability
- Security and flexibility
- Freedom to choose

# Continued...

## Weakness

- Porting the applications
- No Normalization, unions or joins
- lost updates

## Opportunities

- Huge investments
- Data Intensive applications

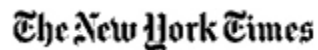
## Threats

- FOSS business model
- FUD amongst Users





- Document-Oriented Storage
- Faster Updates
- Replication and High Availability
- Rich Queries
- Map Reduce
- GridFS
- Multiple language and platforms supported
- Commercial Support



# Pymongo

- Python distribution containing tools for working with MongoDB
- Pymongo distribution contains three top-level packages for interacting with MongoDB



# Quick Start

- Installation:

```
$ easy_install pymongo
```

- Usage:

```
Start mongod instance
```

```
$ mongod
```

```
Making a connection
```

```
>> from pymongo import Connection()
```

```
>> connection = Connection()
```

# Querying and Commands

- Getting or Creating
  - Database
  - Collection
  - Documents
- Insert
  - Single
  - Bulk

# Querying and Commands...

- Search

  - `find_one()` – fetching single document

  - `find()` – more than one

  - Range queries

  - `count()`

- Indexing



Questions?

# References

- <http://nosql-database.org/>
- <http://www.mongodb.org/>



Thank You