

# Introduction To Databases



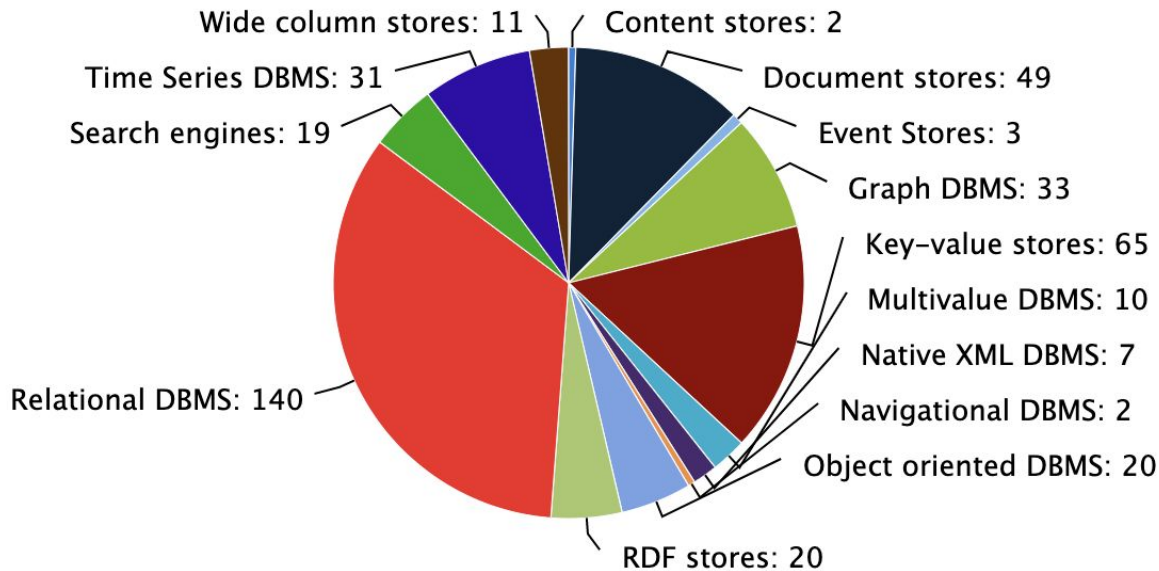
Designing Instagram

# Contents

- Database Models and Rankings
- Databases Models
- Designing Instagram Using Relational Database Model
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# DB Systems By Model

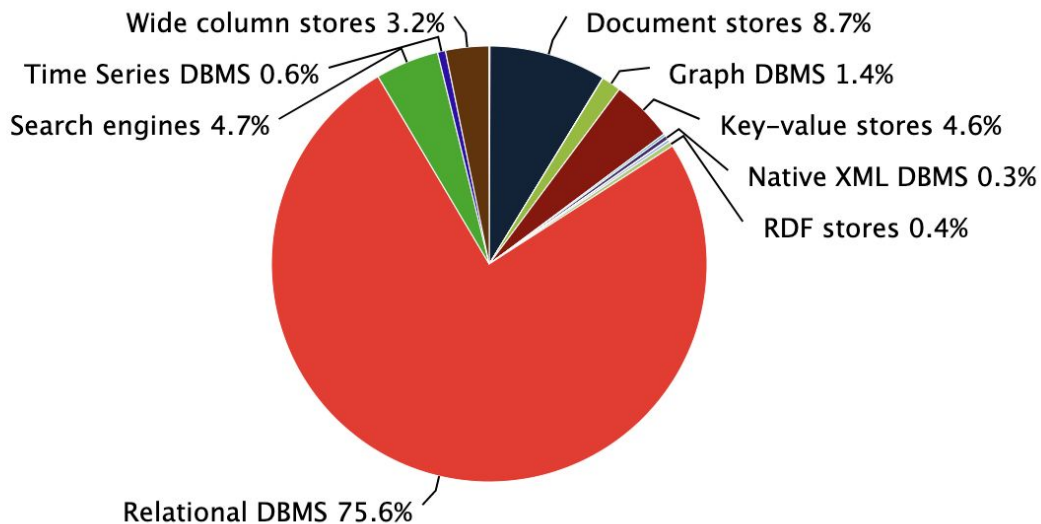
Total: 352



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Number of systems per category, September 2019

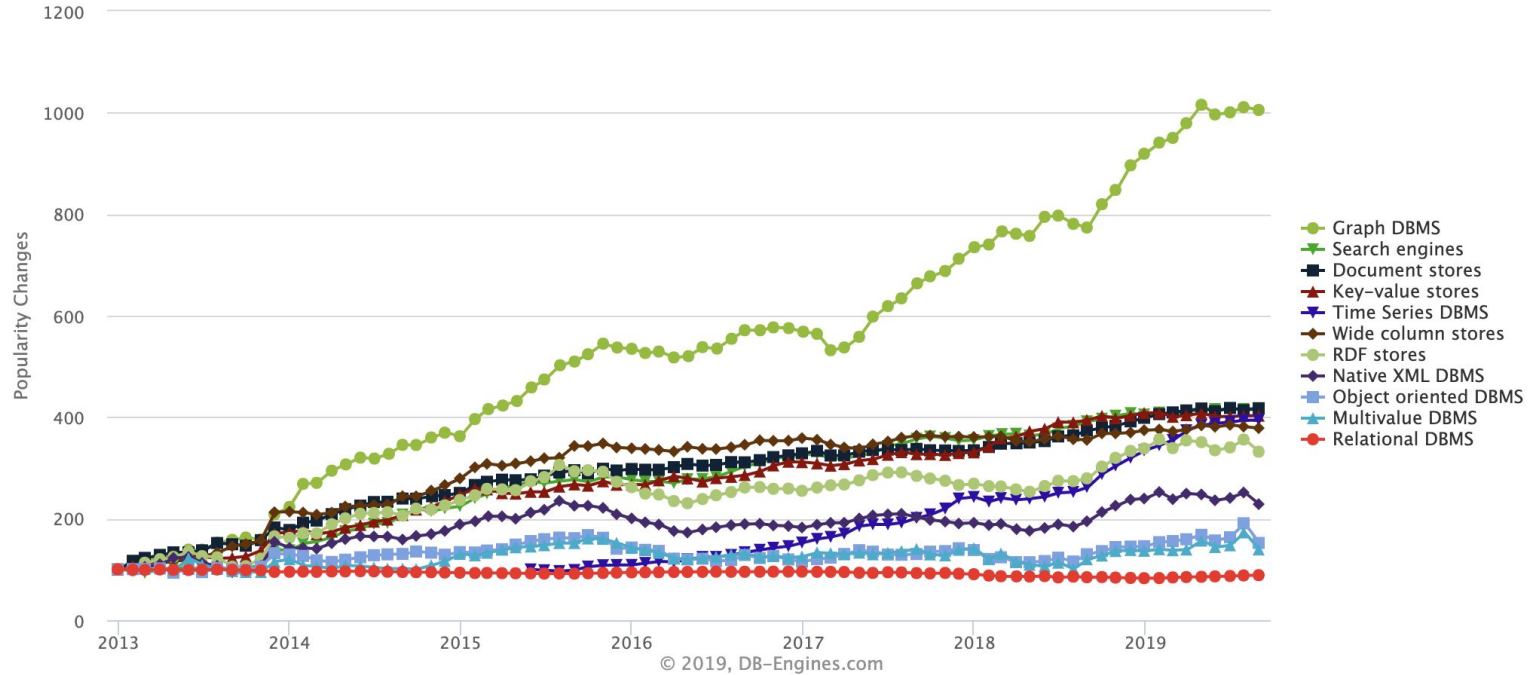
# DB Popularity By Category



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Popularity per category, September 2019

# DB Trends

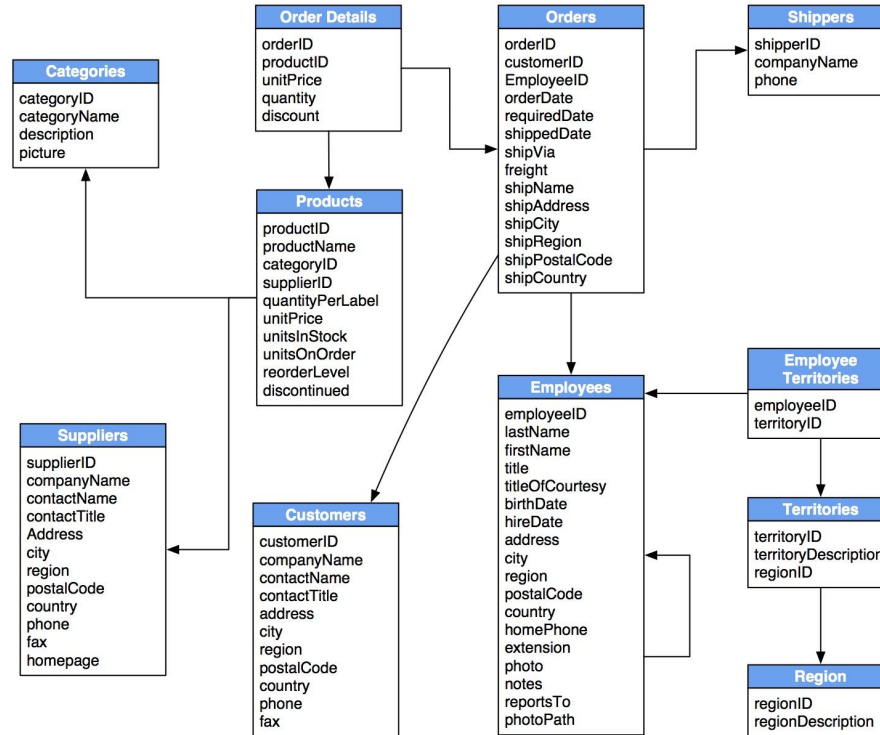


Complete trend, starting with January 2013

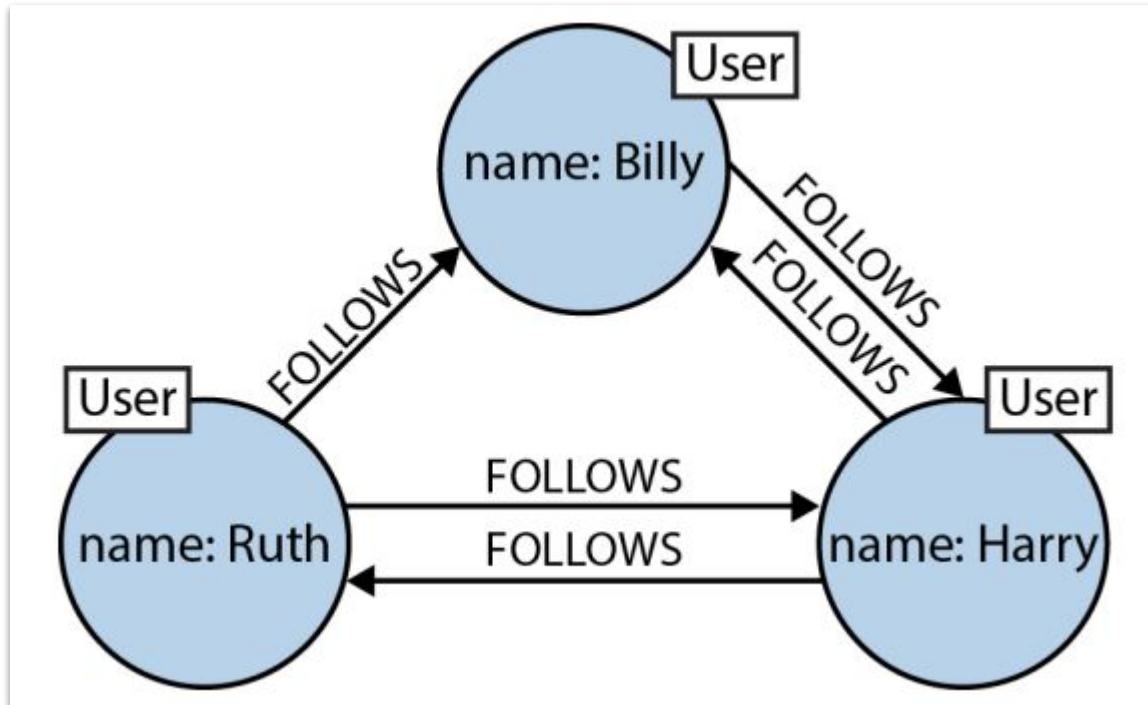
# Database Models

**Relational**  
**Graph**  
**Document**  
**Key-Value**

# Relational Databases



# Graph Databases

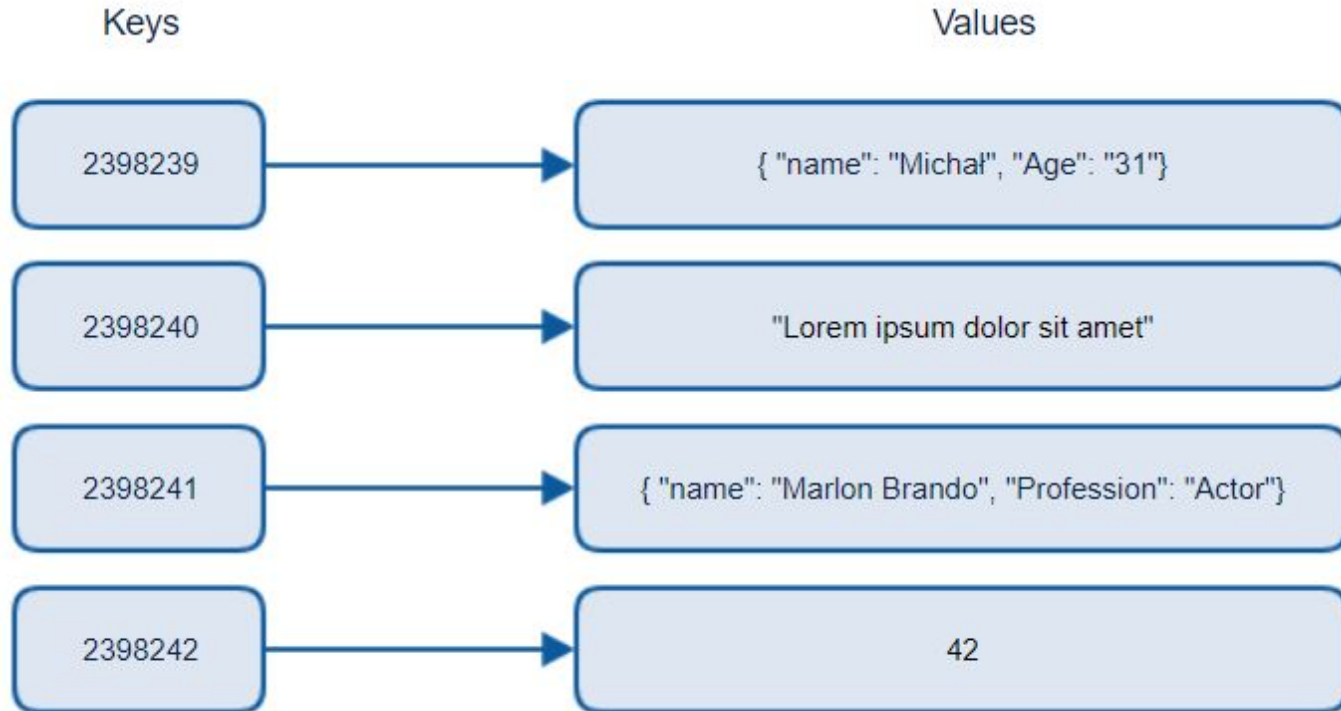




# Document Database

```
{  
  "_id": "5cf0029cafff5056591b0ce7d",  
  "firstname": "Jane",  
  "lastname": "Wu",  
  "address": {  
    "street": "1 Circle Rd",  
    "city": "Los Angeles",  
    "state": "CA",  
    "zip": "90404"  
  },  
  "hobbies": ["surfing", "coding"]  
}
```

# Key-Value



# **Designing Instagram Using Relational Database Model**

# **Retrieving Information From Table**

# **Homework**

**Money Transfer Application**

**Relational Database Design**

# References

- <https://db-engines.com>
- <https://www.mongodb.com/>
- <https://redis.io/>
- <https://graphql.org>
- <http://www.mysqltutorial.org/basic-mysql-tutorial.aspx>
- <http://www.luciopanasci.it/Ebooks/MySQL%20Cookbook,%203rd%20Edition.pdf>