WIKIDATA

A quick introduction

- Ian Watt, Code The City

Wikidata logo By Planemad - Own work, Public Domain, https://commons.wikimedia.org/w/index.php?curid=20650833

Introduction

- Graph Databases

- Key concepts

- What is Wikidata?

- Example data

- Querying Wikidata with SPARQL

- How to get involved

- Useful resources
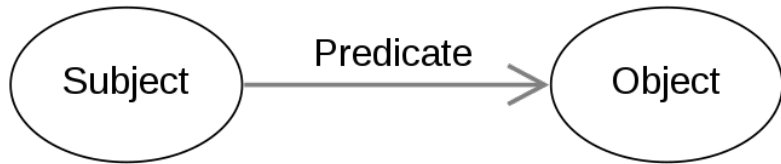
Graph Databases vs Relational Databases

RDBMS

- Tables
- Schema
- Linking of tables
- Normalisation
- (Primary) keys
- Table Joins
- SQL

Graph DB

- Nodes (items)
- Edges (relationships)
- Schema-less
- Nodes and edges have properties
- Ad hoc additions
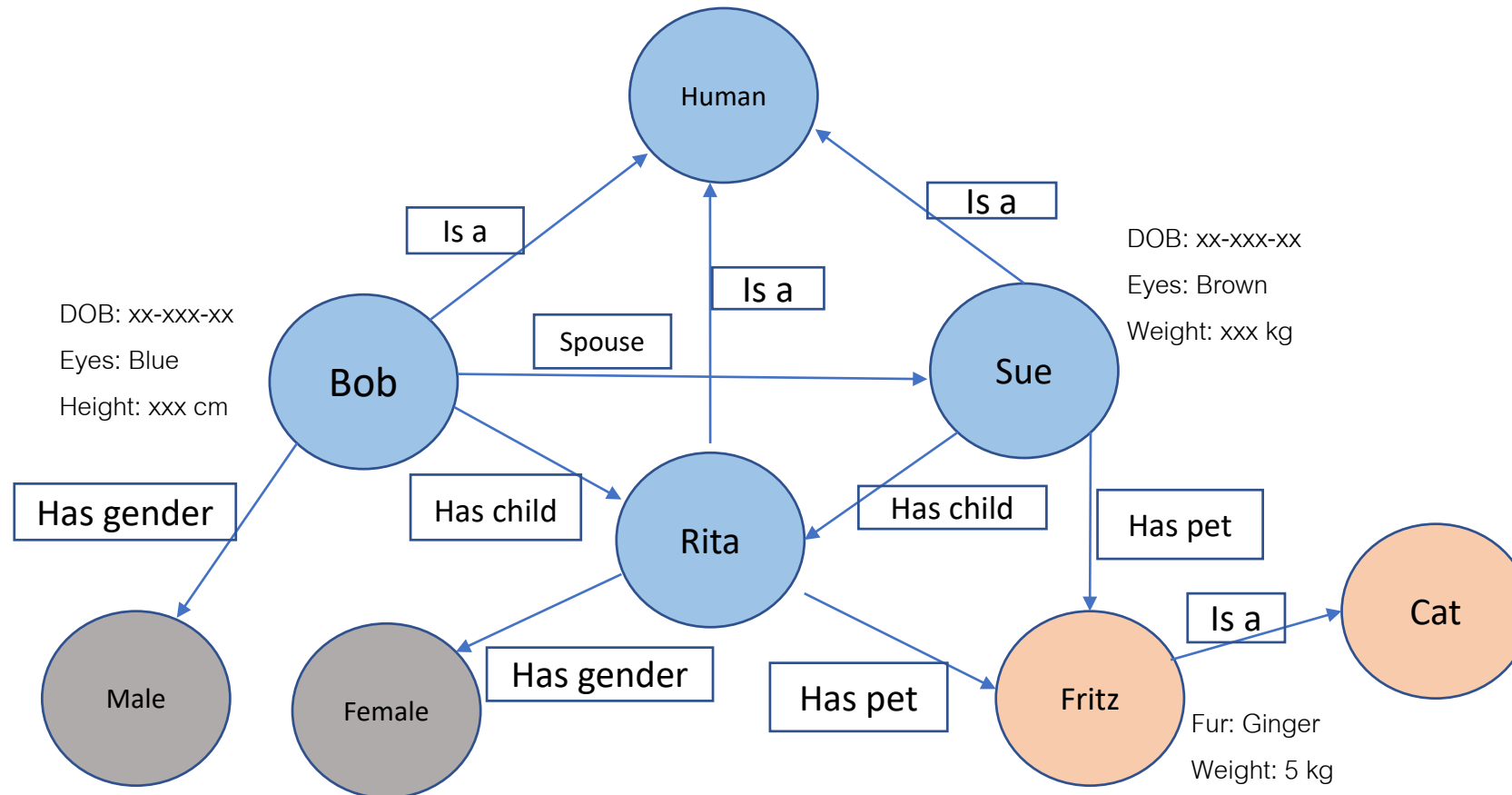- SPARQL / CYPHER

The RDF triple

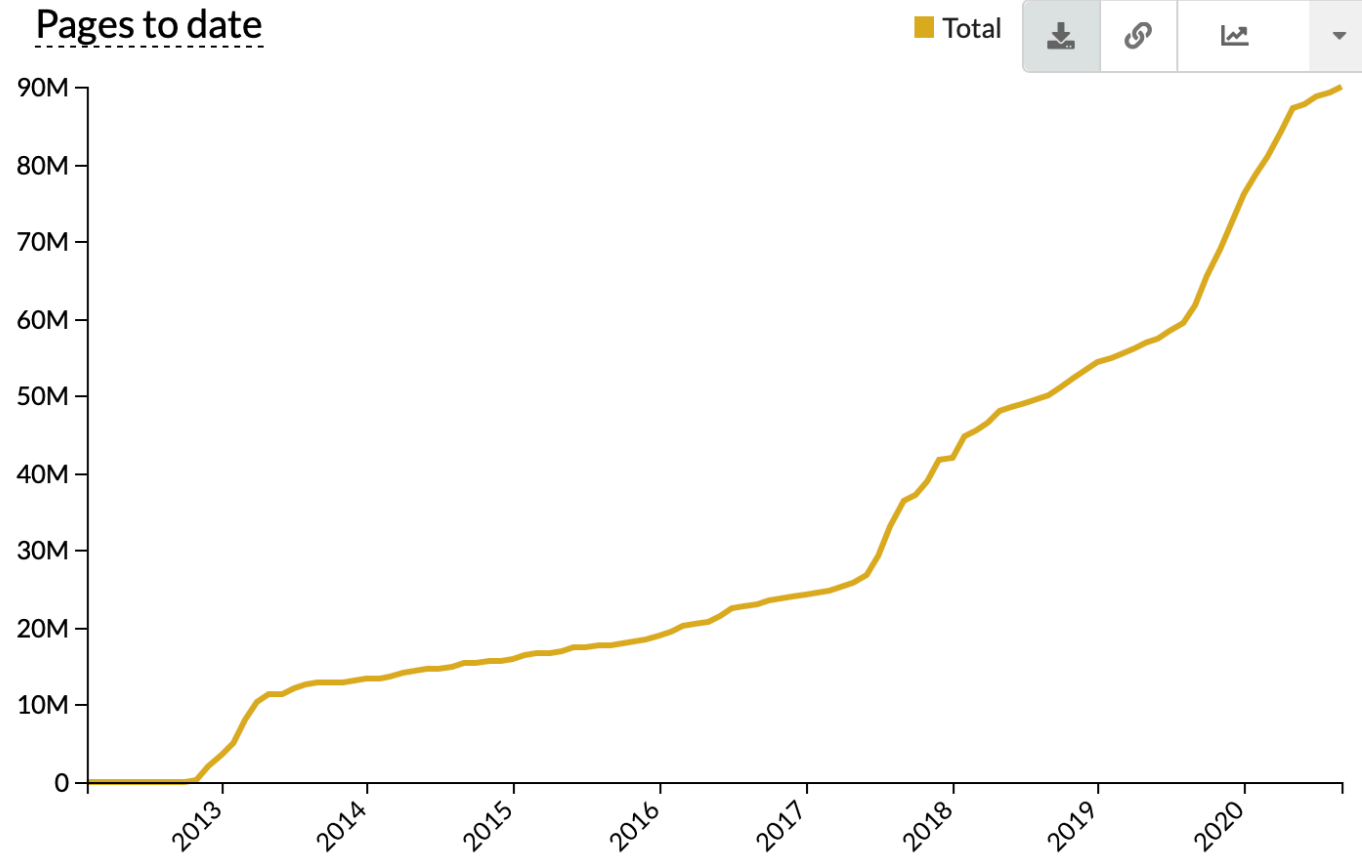In Linked Data we express the relationships as follows.

Applying this to our graph data we can say that Node A (subject) has a relation (predicate) of / to Node B (object)
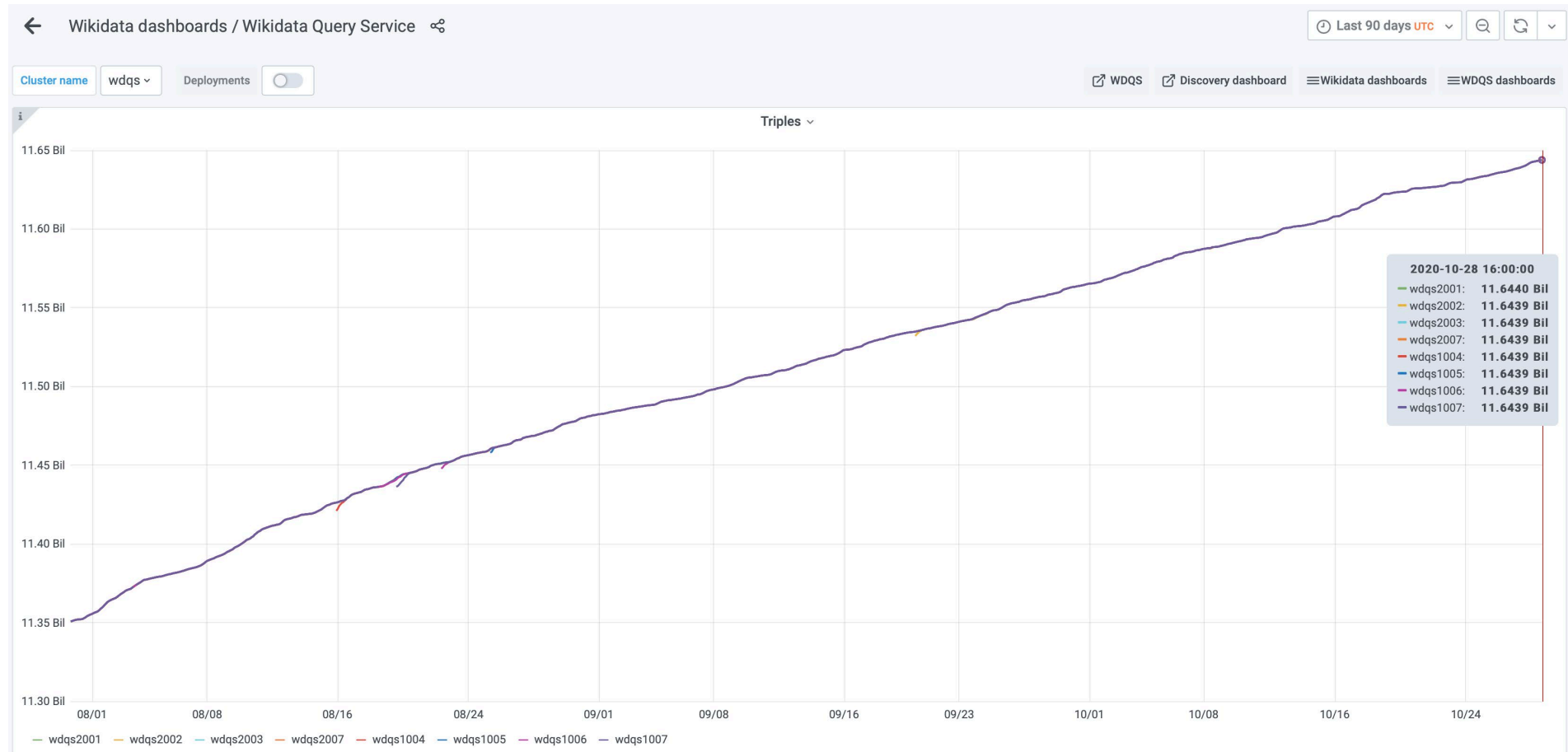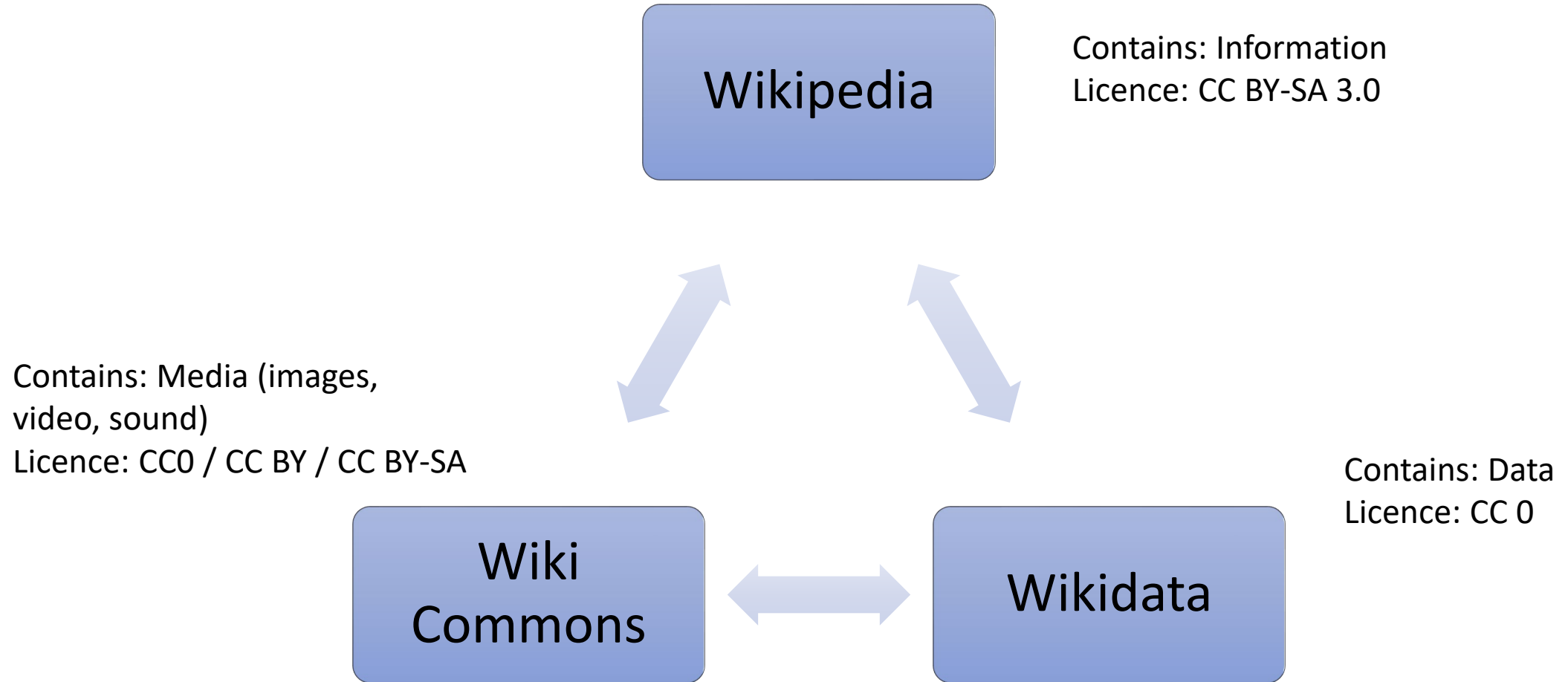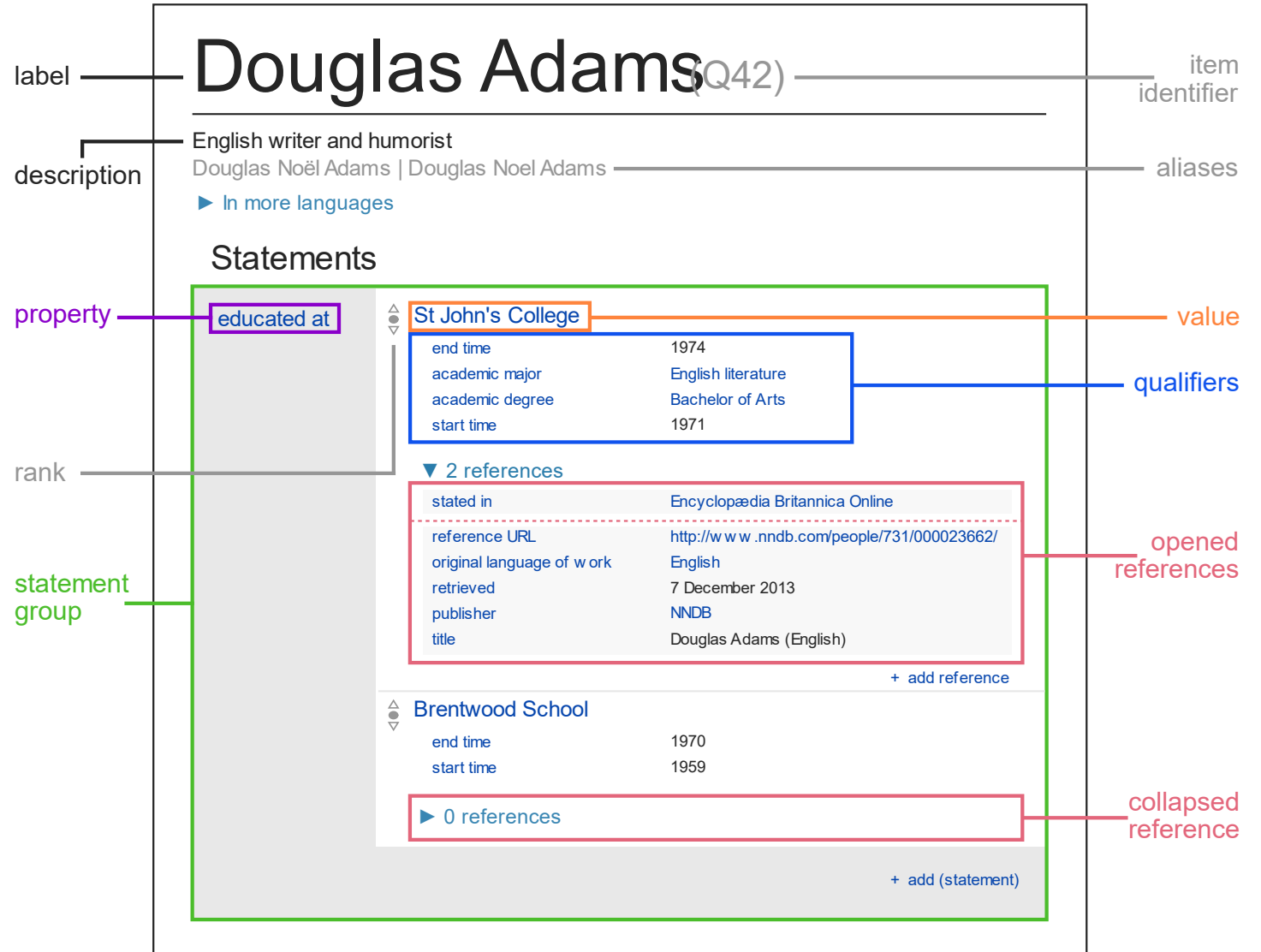
Meet the family

What is Wikidata?

Pages to date

■ Total

https://www.wikidata.org/

Wiki Data triples

Wikimedia Family

Wikipedia

Contains: Information
Licence: CC BY-SA 3.0

Contains: Media (images, video, sound)
Licence: CC0 / CC BY / CC BY-SA

Contains: Data
Licence: CC 0

Wiki Commons

Wikidata

Example data

- Wikidata items identified by QIDs

- [Q42](#)

Douglas Adams (Q42)

- label
- item identifier

English writer and humorist
- description
Douglas Noël Adams | Douglas Noel Adams
- aliases

► In more languages

Statements

| property | educated at | St John's College | value |

		end time	1974
		academic major	English literature
		academic degree	Bachelor of Arts
		start time	1971
- qualifiers

- rank

▼ 2 references

stated in	Encyclopædia Britannica Online
reference URL	http://www.nndb.com/people/731/000023662/
original language of work	English
retrieved	7 December 2013
publisher	NNDB
title	Douglas Adams (English)
- opened references

- statement group

+ add reference

Brentwood School

| end time | 1970 |
| start time | 1959 |

► 0 references
- collapsed reference

+ add (statement)

Querying Wikidata

Wikidata Query Service 🗁 Examples ❓ Help ▾ ⚙ More tools ▾

```
1 #Table of locations of all hospitals in Aberdeen
2 SELECT * WHERE {
3
4 ?item wdt:P31/wdt:P279* wd:Q16917;
5     wdt:P625 ?geo .
6 ?item wdt:P131 wd:Q62274582 .
7 }
```

https://query.wikidata.org

Useful example queries

Where we write our query

How we run our query

Results

Results

Let's write some queries!

Useful resources

- Introduction to Graphs

- NEW – Interactive WIKIDATA Query Service Tutorial

- 16-min SPARQL tutorial

- Building SPARQL Queries (41 min tutorial)

- Querying WIKIDATA with Python

- Wikidata Integrator (Python library)

- Lucas Werkmeister – Querying Wikidata with SPARQL

- Timeline of Aberdeen Uni Graduates

- Aberdeen Plaques – Part 1

- Aberdeen Plaques – Part 2

- Today's slides: http://bit.do/IW_RGU_WIKIDATA

Getting involved

- Sign up for a Wikidata account http://Wikidata.org

- Come to Code The City events: https://codethecity.org

- Sign up for the Code The City newsletter: http://eepurl.com/dNW2RA

- Email: ian@codethecity.org

- Twitter: @watty62

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