

# Mobile Application Ontology



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# Outline of Talk

## Context and Purpose

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Why Mobile Applications and  
what is the purpose?

## Classes & Properties

2

How to model the ontology?

## Representation

3

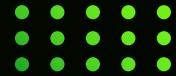
Entity-relationship diagram  
and graphical description.

## Querying Ontology

4

Data extrapolation.

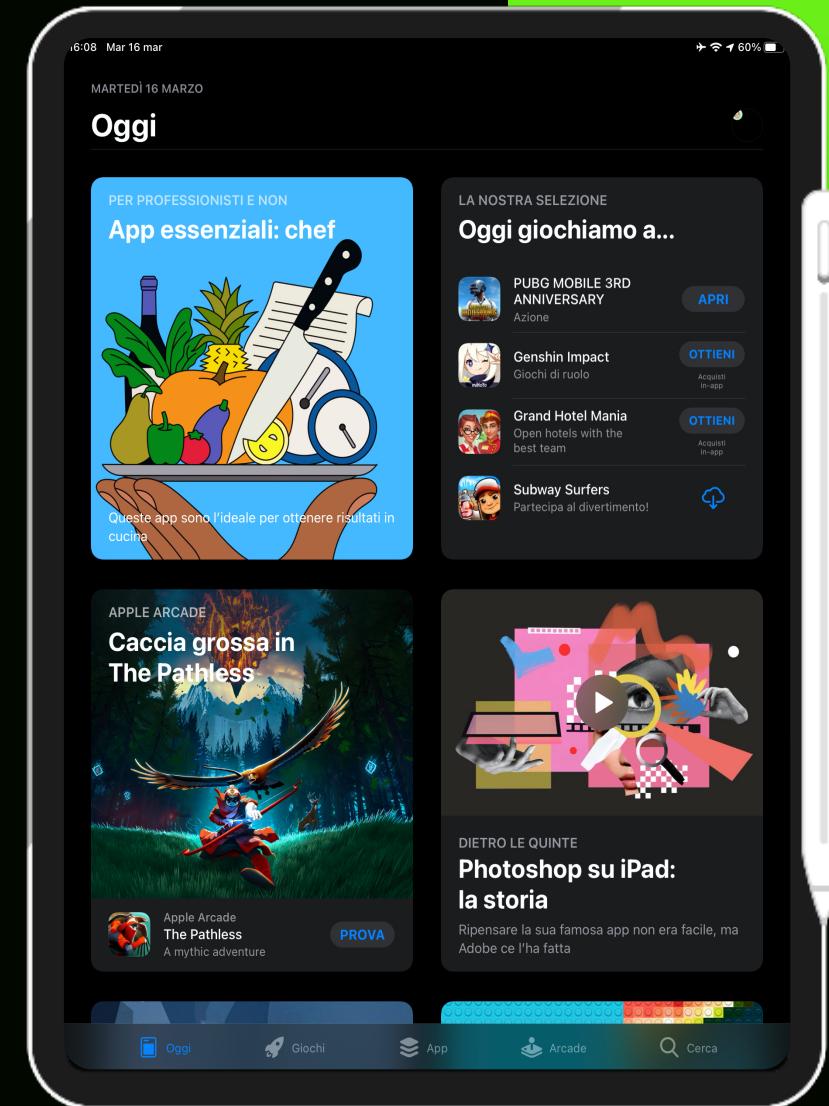




1

# Context and Purpose

- Mobile applications are a striking example of developing a complex ontology and capturing the links between their modeling.
- The purpose of the ontology is to provide an overview of the modeling and classification of mobile applications, along with some concrete examples.

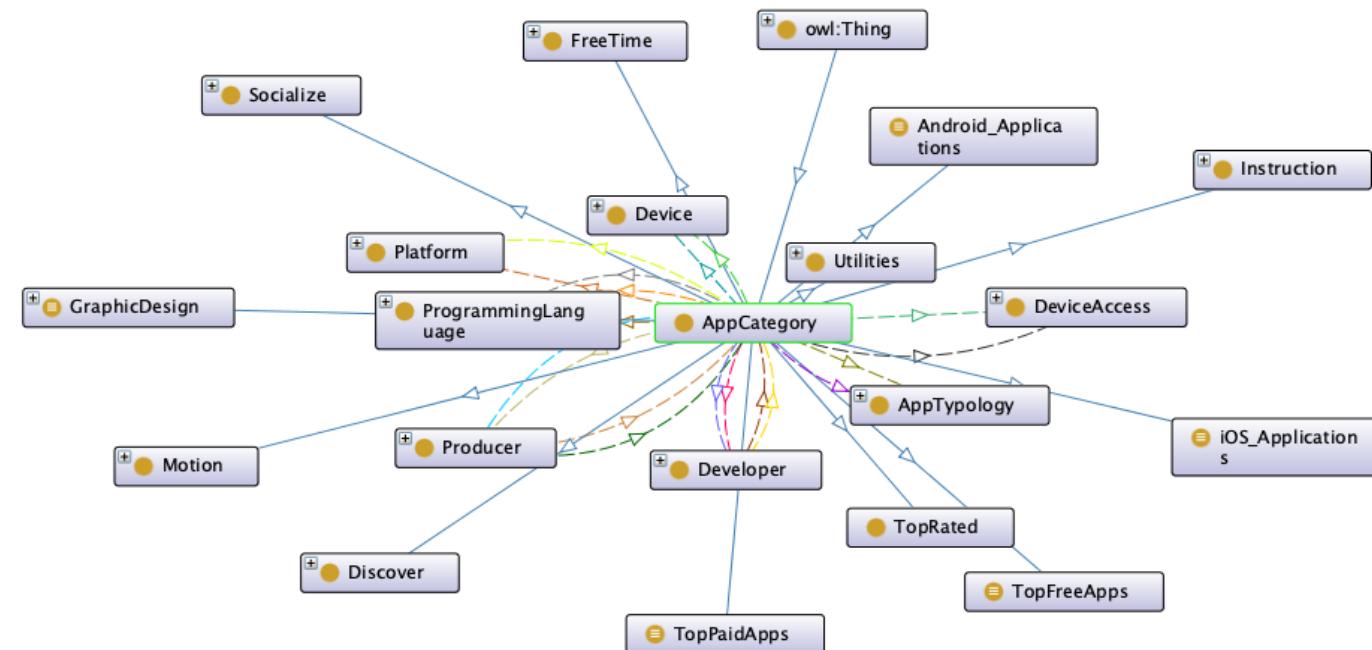




2.1

# Classes and Properties

## *Application Category*



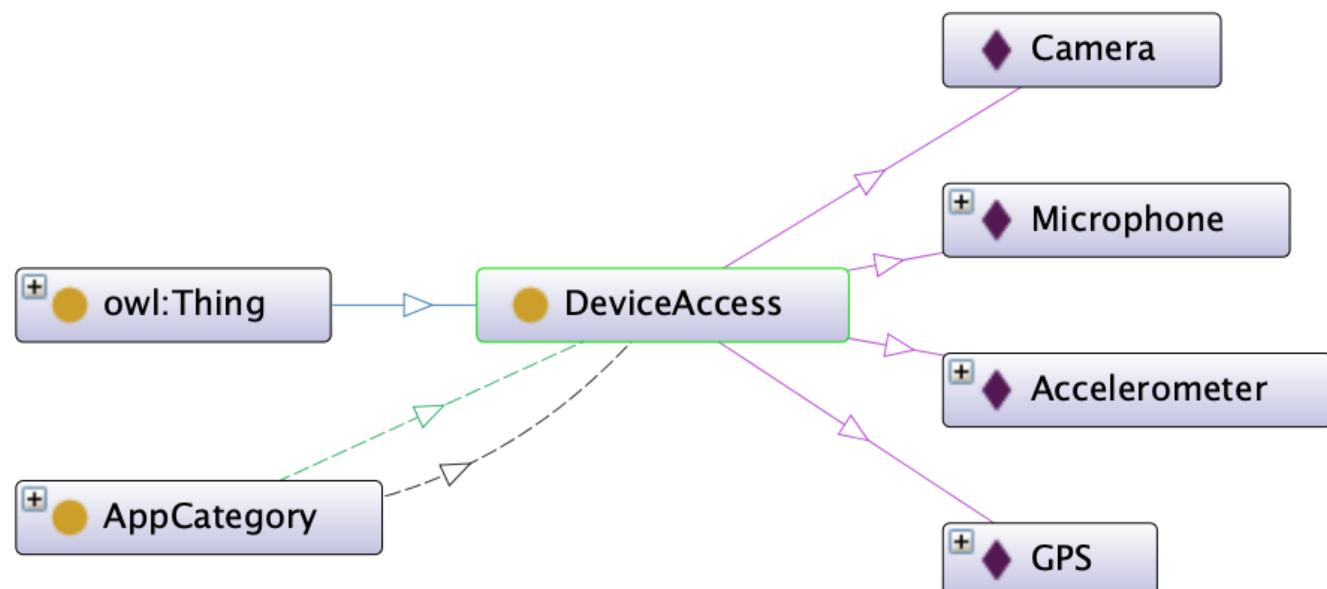
- To create ontology, **55 classes** have been used, designating the most important areas of interest for users of mobile applications, representing their interests.
- The **AppCategory** class represents the largest and most well represented ontology class: Among the subclasses we mention: **Lifestyle**, **Fitness**, **Games**, **Education**, **Social Networking**, etc.
- Each concrete example of the application is represented as an instance of a subclass of **AppCategory**.



2.2

# Classes and Properties

## *Device Access*



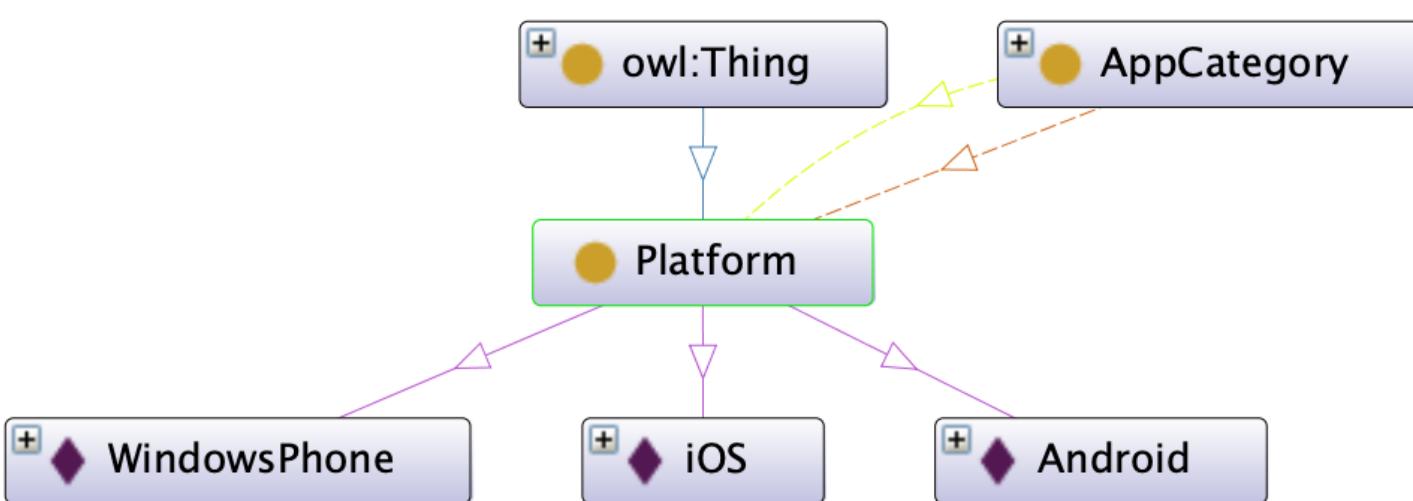
- **DeviceAccess** class has the role of representing the structures of the telephone to which the application can request access, in the form of a request for rights..
- As subclasses we specify: **Accelerometer, Camera, GPS, Microphone**.



2.3

# Classes and Properties

## *Platform*

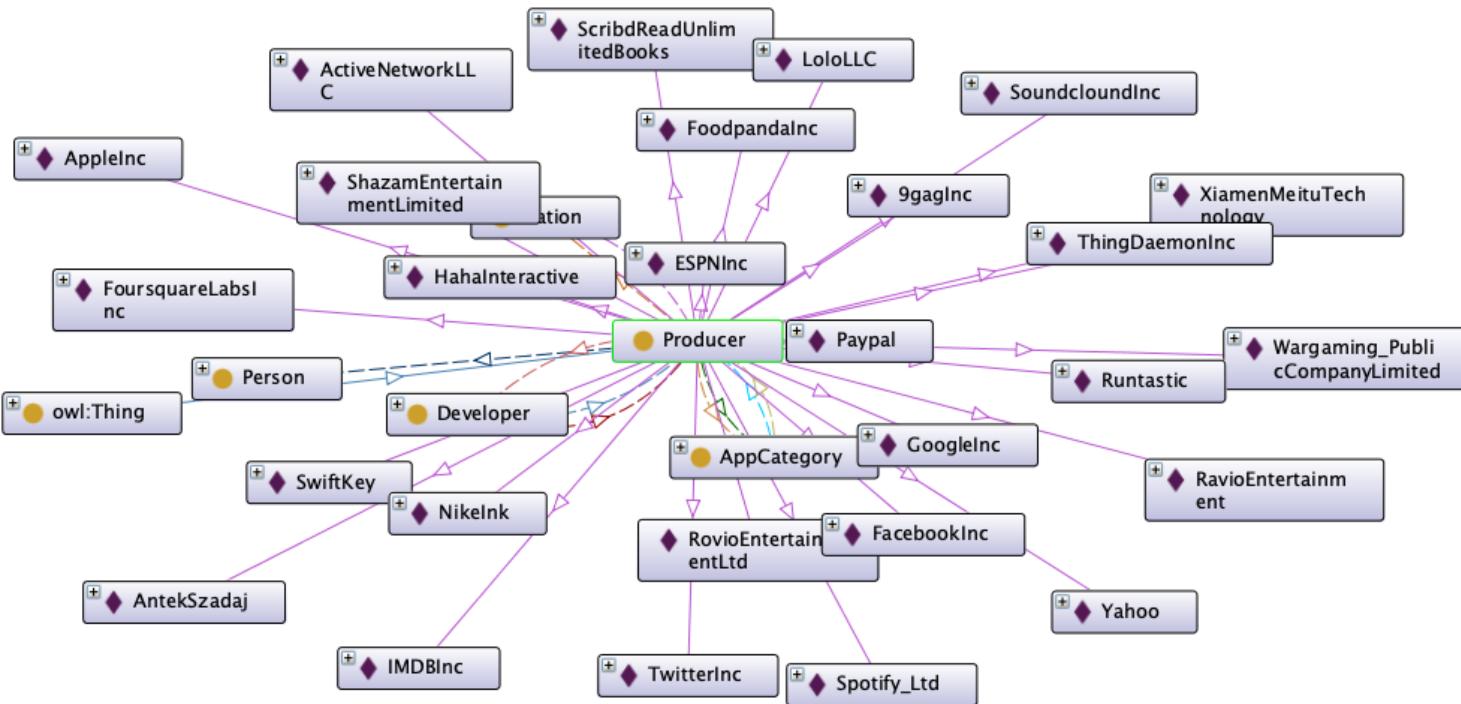


**Platform** class represent mobile platforms for which applications can be deployed, such as Apple's iOS platform, Google's Android and Microsoft's Windows Phone.



# Classes and Properties

## *Producer*



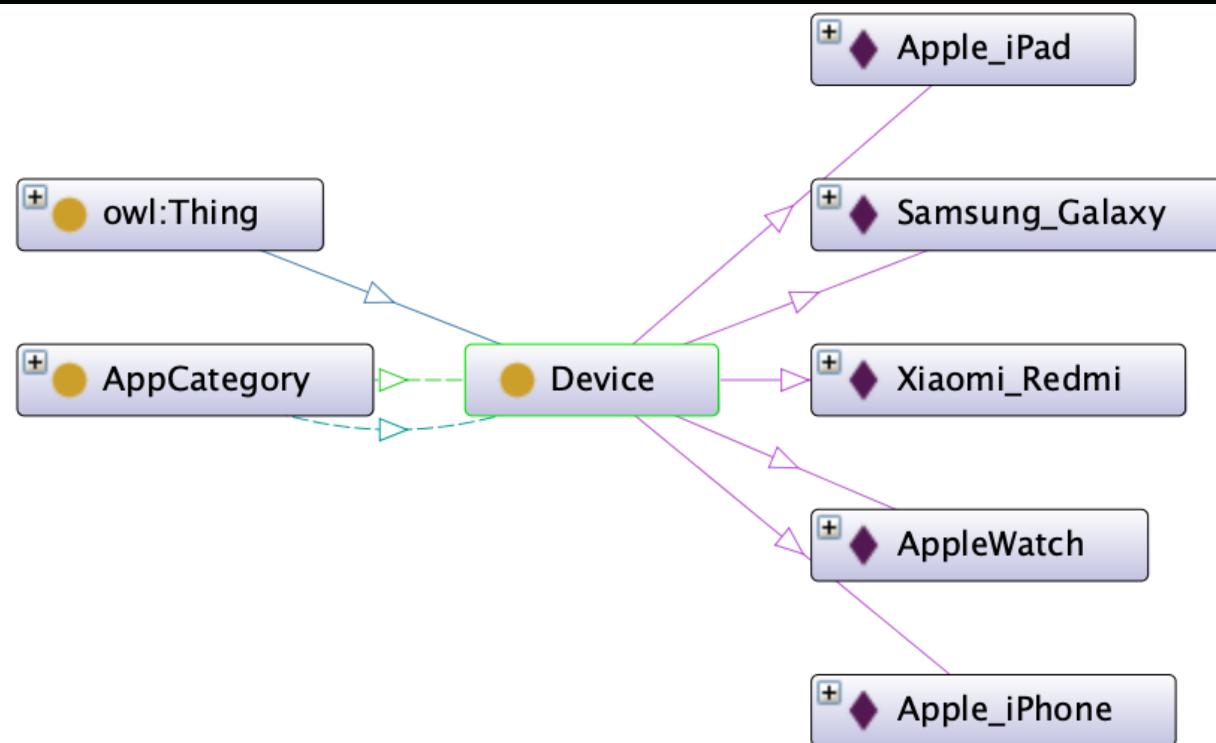
The **Producer** class models mobile application manufacturers, the independent entities responsible for creating, launching, and subsequent handling of bugs.



2.5

# Classes and Properties

## *Device*

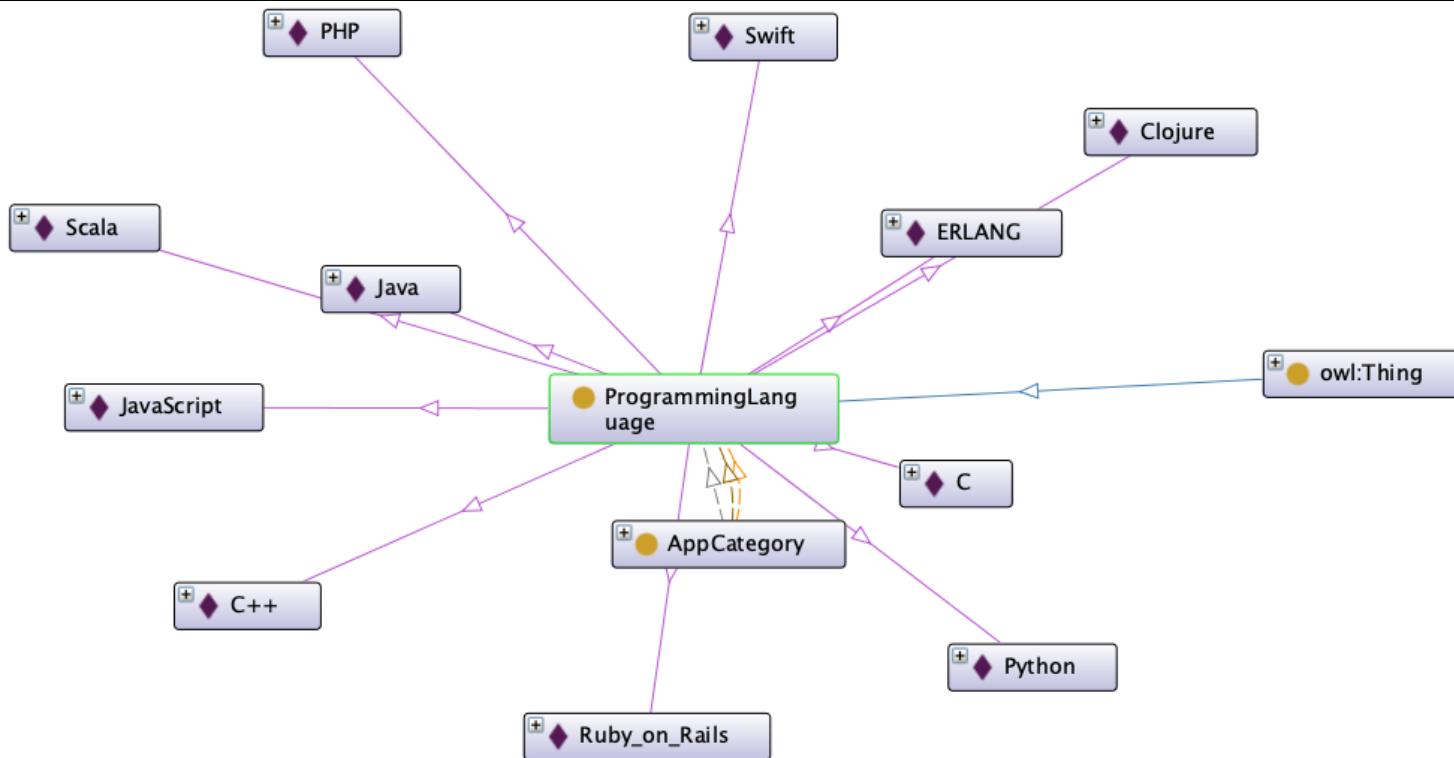


- **Device** class refers to some important mobile devices used in the ontology.
- Each Device instance has its own peculiarity and its own operating system and not all applications are installable on it.



# Classes and Properties

## *Programming Language*

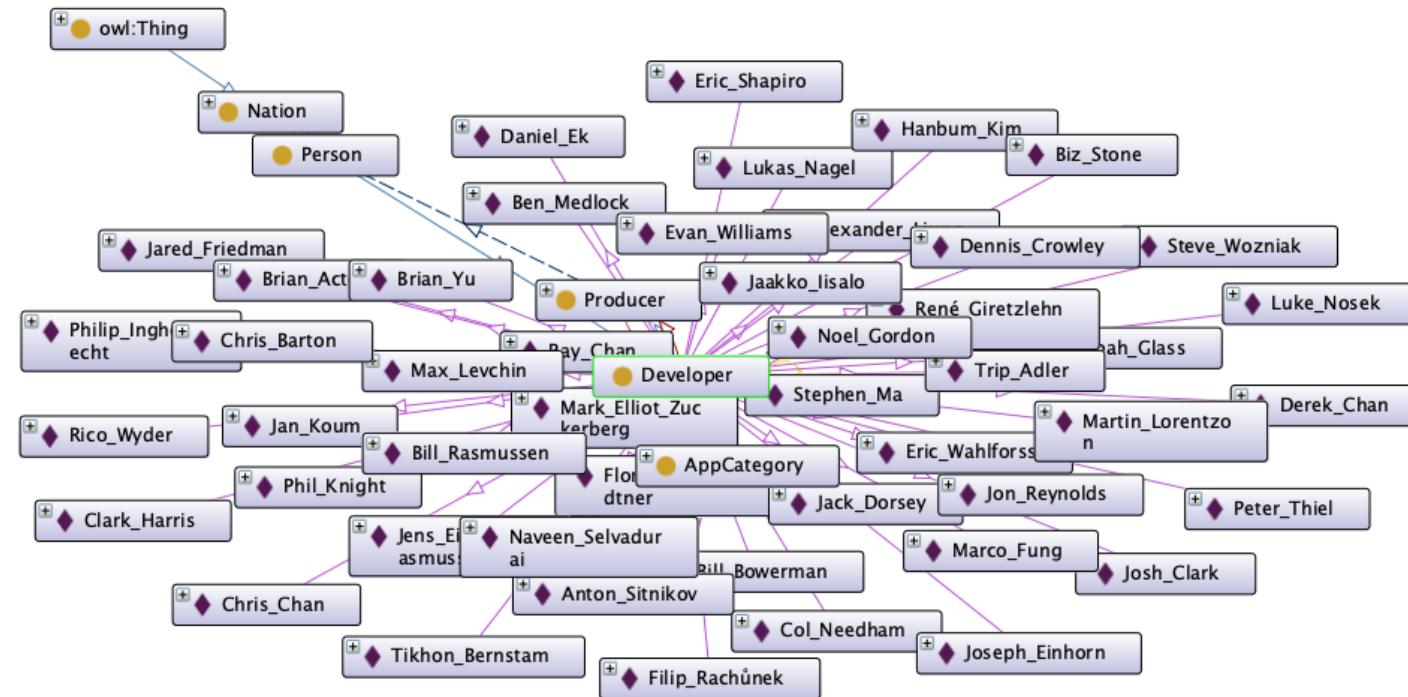


- Each application uses a specific **Programming Language**.
- Usually in software development we divide a programming language into *Front-end* and *Back-end*.



# Classes and Properties

## *Developer*



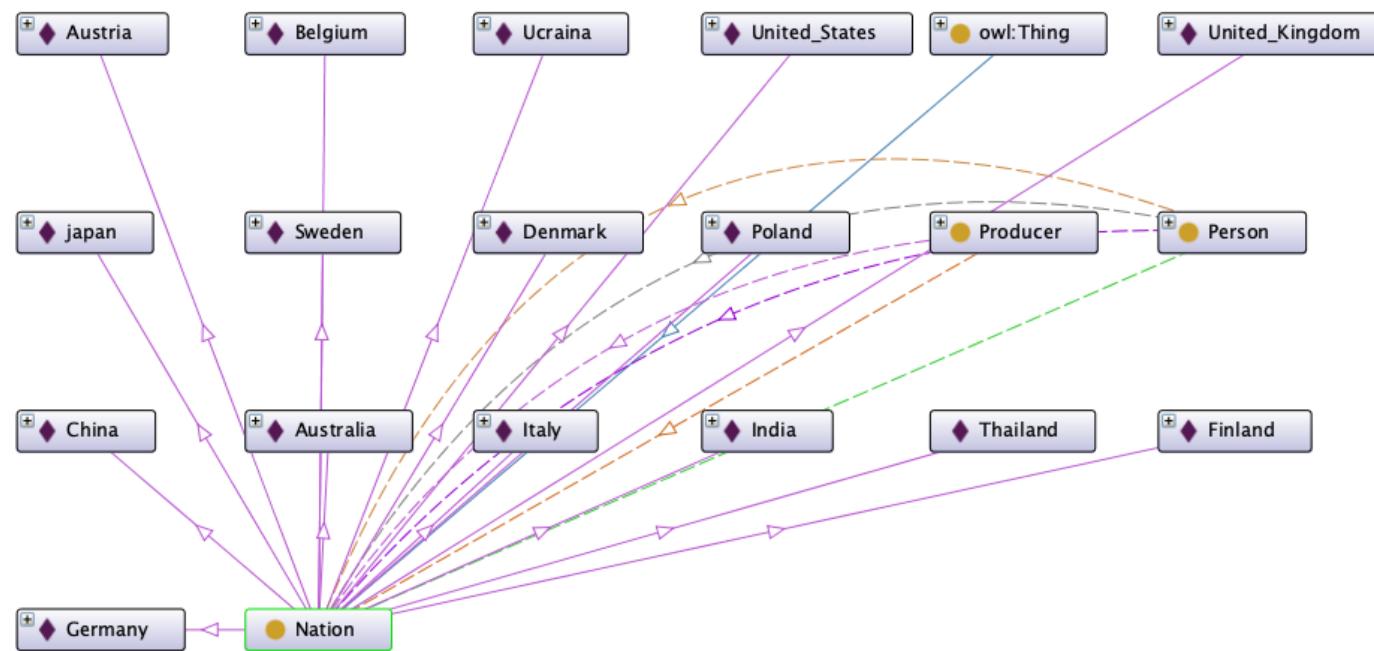
- The ***Developer*** class is a subclass of ***Person***
  - We need to connect applications with their Developers.



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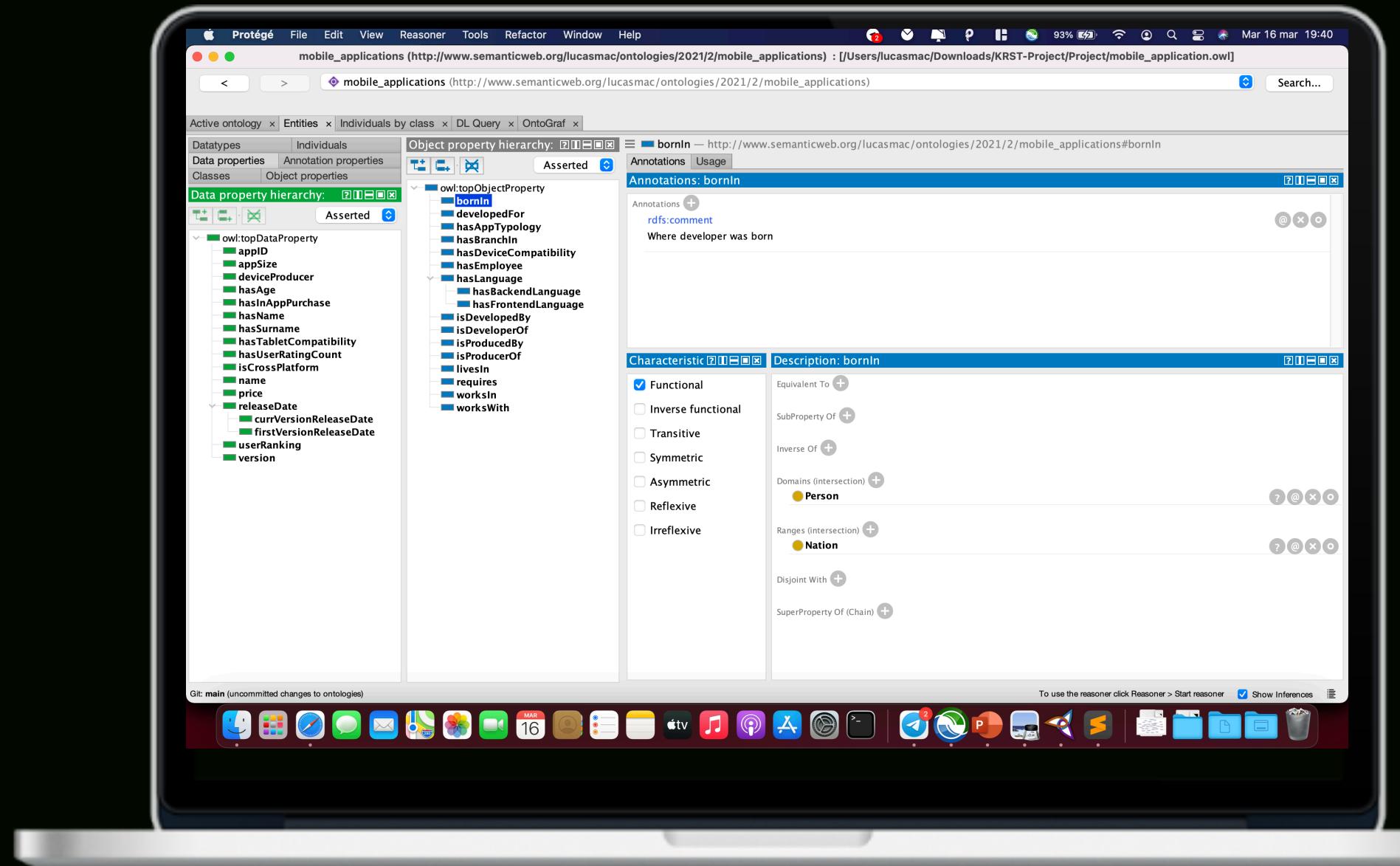
# Classes and Properties

## *Nation*



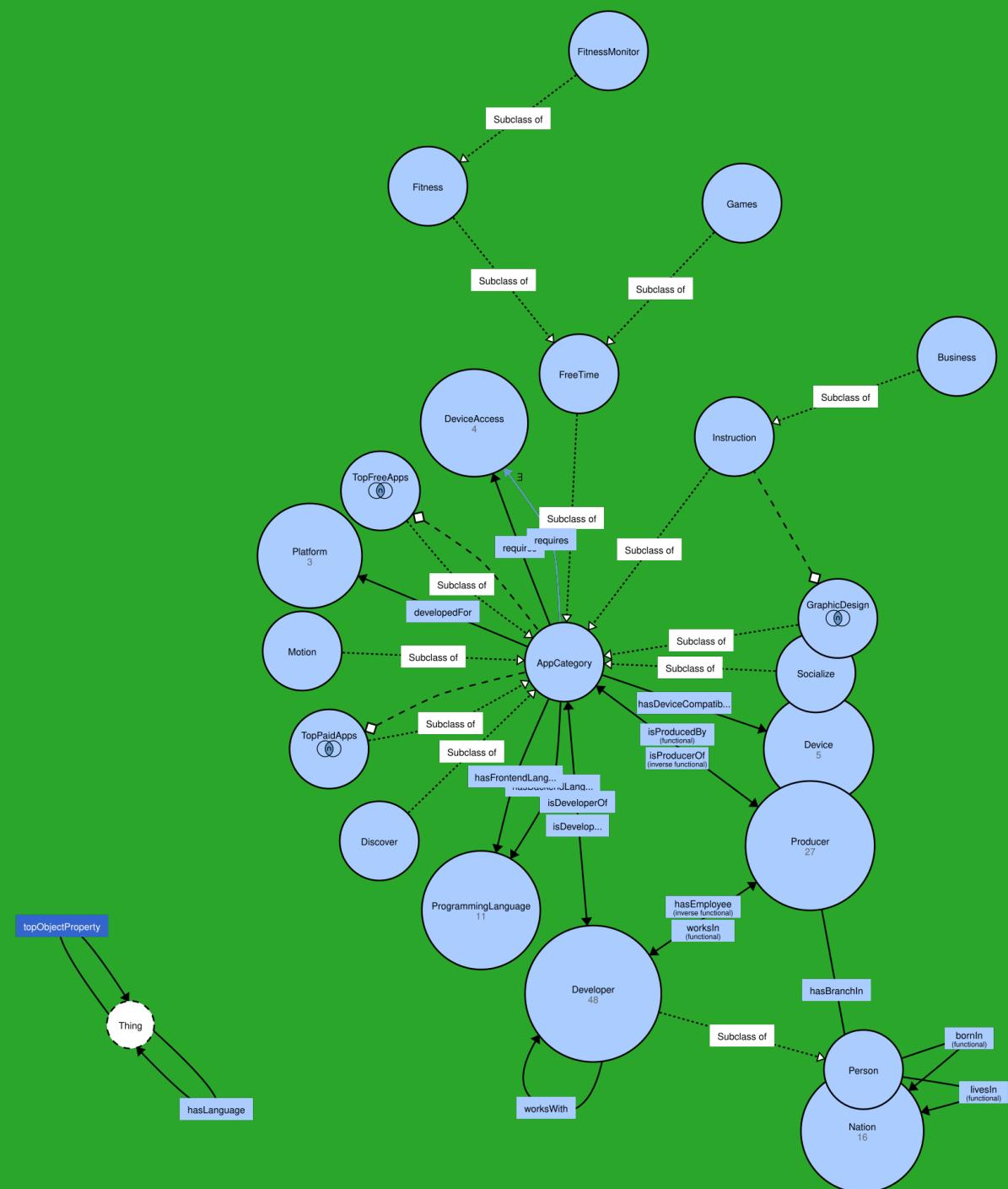
The ***Nation*** class is intended to connect Producers' headquarters and People's birthplaces and places.

# Object & Data Properties



# Representation

## Entity-Relationship Diagram



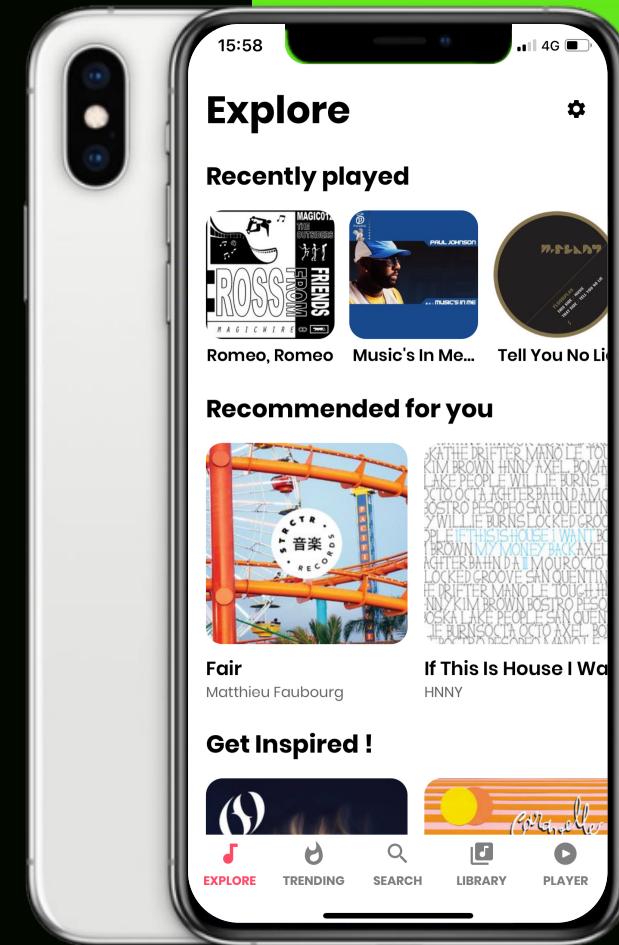


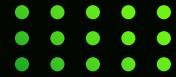
# Quering Ontology

Once the ontology is complete, you can query the model created for a better understanding of the classification.

Have been made DL Queries and SPARQL Queries directly on Protégé.

Queries and their results are on my GitHub Repository





# Thanks

And See You Next Time



GitHub Repository

Slides On LinkedIn

