Databases Project – Spring 2017

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# Deliverable 1

## Assumptions

<In this section write down the assumptions you made about the data. Write a sentence for each assumption you made>

## Entity Relationship Schema

<In this section you should have figure of the ER schema as well as descriptions about entities and relations>

### Schema



### Description

<Describe all the choices you made for Entities and Relationships>

**Story\_reprint.origin\_id – story.id**

An origin story (old printed story) is exactly one story.

A story can be the origin story 1 or many times (if reprinted many times).

Identifying relationship because the origin story printing is itself a story.

**Story\_reprint.target\_id – story.id**

A target story (old printed story) is exactly one story.

A story can be the target story 1 or many times (if reprinted many times).

Identifying relationship because the target story printing is itself a story.

**Story\_type.id – story.type\_id**

A story can be of exactly one type.

A story type could be attributed to 0 or many stories.

**Story.issue\_id – issue.id**

A story is contained by 1 issue

An issue contains 1 or many issues.

**Issue\_reprint.origin\_id – issue.id**

An origin issue (old printed issue) is exactly one issue.

An issue can be the origin issue 1 or many times (if reprinted many times).

Identifying relationship because the origin issue is itself an issue.

**Issue\_reprint.target\_id – issue.id**

A target (new printed issue) is exactly one issue.

An issue can be the target issue 1 or many times (if reprinted many times).

Identifying relationship because the target issue is itself an issue.

**Indicia\_publisher.id – issue.indicia\_publisher\_id**

An indicia\_publisher can publish 1 or many issue.

An issue can be published by 0 or one indicia publisher

**Publisher.id – indicia\_publisher.publisher\_id**

An indicia publisher can be owned by one publisher.

A publisher can be the owner of 0 or many indicia publishers.

Identifying relationship because an indicia\_publisher depends directly of a publisher, it can't exists without a publisher.

**Indicia\_publisher.country\_id – country.id**

An indicia publisher comes from one country

A country can be attributed to 0 or many company

**Country.id – publisher.country\_id**

A publisher comes from one country.

A country can be assign to many publisher.

**Publisher.id – brand\_group.publisher\_id**

A brand is owned by exactly one publisher.

A publisher can own 0 or many brands.

Identifying relationship because an brand\_group depends directly of a publisher, it can't exists without a publisher.

**Publisher.id – series.publisher\_id**

A publisher can publish 0, one or many series.

A serie can be published by one publisher.

**Series.country\_id – country.id**

A country can be attributed to 0, one or many series.

A serie comes from one country.

**Language.id – series.language\_id**

A language can be attributed to 0, one or many series.

A series can be in one language.

**Series\_publication\_type.id – series.publication\_type\_id**

A publication type can be attributed to 0, one or many series.

A serie can be of one publication type.

**Series.id – issue.series\_id**

An issue belongs to 0 or one serie.

A serie can wrap 1 or many issues.

**Issue.id – series.first\_issue\_id**

It could exists 0 or 1 first issue for a serie

An issue can be the first issue of 0, 1 or many series.

It's weird but according the data in the csv file, first and last issue both can be NULL.

**Issue.id – series.last\_issue\_id**

It could exists 0 or 1 last issue for a serie

An issue can be the last issue of 0, 1 or many series.

It's weird but according the data in the csv file, first and last issue both can be NULL.

## Relational Schema

### ER schema to Relational schema

<Describe the transition from ER schema to Relational schema>

### DDL

<Provide the DDL>

## General Comments

<In this section write general comments about your deliverable (comments and work allocation between team members>

# Deliverable 2

## Assumptions

<In this section write down the assumptions you made about the data. Write a sentence for each assumption you made>

## Data Loading

## Query Implementation

<For each query>

### Query a:

#### Description of logic:

<What does the query do and how do I decide to solve it>

#### SQL statement

<The SQL statement>

## Interface

### Design logic Description

<Describe the general logic of your design as well as the technology you decided to use>

### Screenshots

<Provide some initial screen shots of your interface>

## General Comments

<In this section write general comments about your deliverable (comments and work allocation between team members>

# Deliverable 3

# Assumptions

<In this section write down the assumptions you made about the data. Write a sentence for each assumption you made>

## Query Implementation

<For each query>

### Query a:

#### Description of logic:

<What does the query do and how do I decide to solve it>

#### SQL statement

<The SQL statement>

## Query Analysis

### Selected Queries (and why)

#### Query 1

<Initial Running time:

Optimized Running time:

Explain the improvement:

Initial plan

Improved plan>

#### Query 2

<Initial Running time:

Optimized Running time:

Explain the improvement:

Initial plan

Improved plan>

#### Query 3

<Initial Running time:

Optimized Running time:

Explain the improvement:

Initial plan

Improved plan>

# Interface

### Design logic Description

<Describe the general logic of your design as well as the technology you decided to use>

### Screenshots

<Provide some initial screen shots of your interface>

# General Comments

<In this section write general comments about your deliverable (comments and work allocation between team members>