Kelly Garrett
INF 385T: Data Wrangling
Feb. 5, 2017

has_many through Assignment

Magazine Subscriptions

	0 .. *		0 .. *	
Library	purchases	Subscription	provides	Magazine
	goes to		is about a	
	1 .. 1		1 .. 1	

Subscription
start_year
end_year
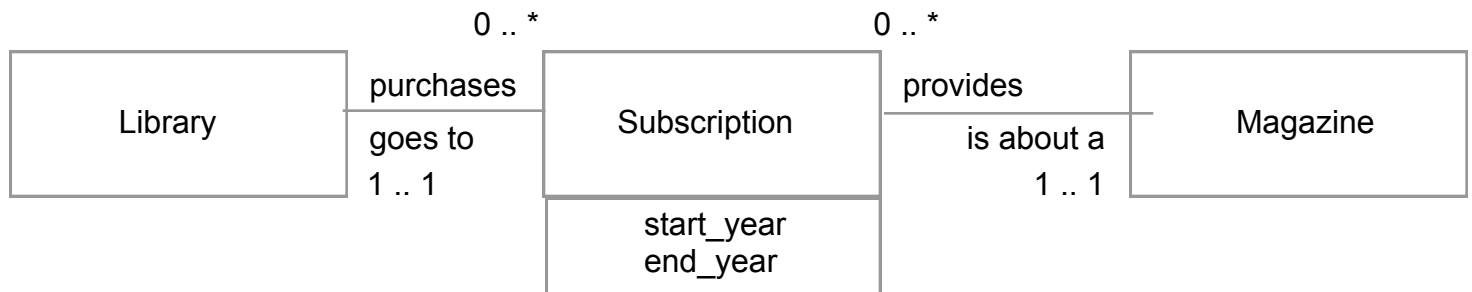
Library **has_many** Magazine **through** Subscription
Magazine **has_many** Library **through** Subscription
Subscription **belongs_to** Library
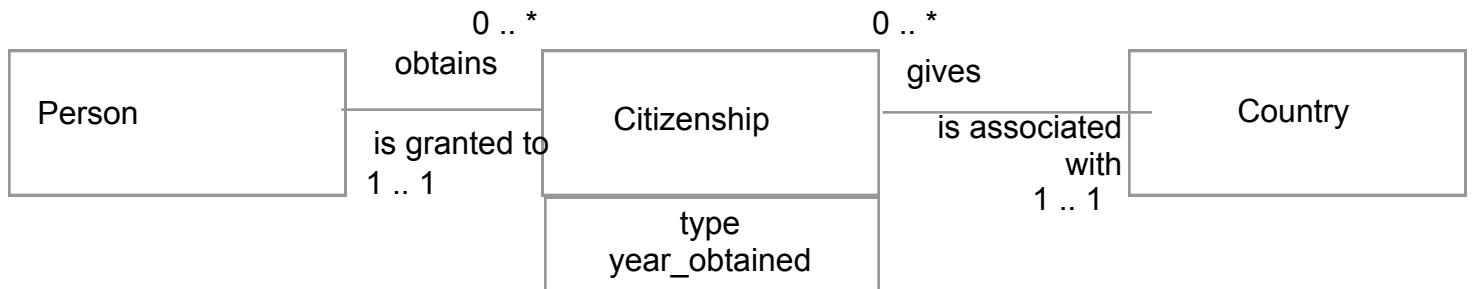Scubscription **belongs_to** Magazine

	libraries
id	name
1	Round Rock
2	Kyle

	magazines
id	name
3	The Economist
4	The Atlantic Monthly

		subscriptions		
id	library_id	magazine_id	start_year	end_year
20	1	3	1972	2014
30	2	3	1985	
40	2	4	2003	

Left null to indicate
subscription ongoing

Citizenship (Naturalization and Birth)

	0 .. *		0 .. *	
Person	obtains	Citizenship	gives	Country
	is granted to 1 .. 1		is associated with 1 .. 1	

type
year_obtained

Person **has_many** Country **through** Citizenship
Country **has_many** Person **through** Citizenship
Citizenship **belongs_to** Person
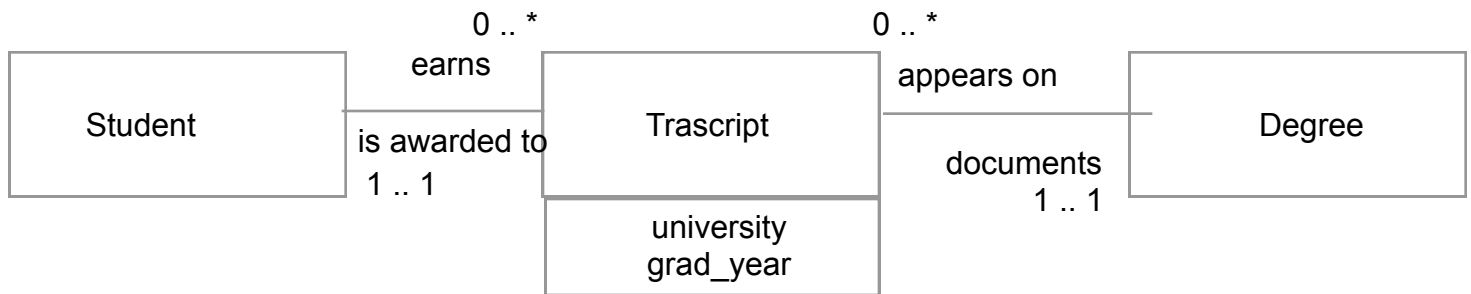Citizenship **belongs_to** Country

people

id	name
1	James
2	Lee

countries

id	name
3	United Kingdom
4	Australia
5	United States

citizenships

id	person_id	country_id	type	year_obtained
20	1	3	birth	1975
30	1	4	naturalization	1997
40	2	5	birth	1984
50	2	4	naturalziation	2012

Assumption: James was born in 1975, and Lee was born in 1984.

Degress Awarded by University to Students

Recieved help via email from Kerry Sim

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              0 .. *                    0 .. *
              earns                    appears on
┌──────────┐          ┌──────────────┐          ┌──────────┐
│          │──────────│              │──────────│          │
│ Student  │ is awarded to│ Trascript │ documents │  Degree  │
│          │   1 .. 1  │              │   1 .. 1  │          │
└──────────┘          ├──────────────┤          └──────────┘
                      │  university  │
                      │  grad_year   │
                      └──────────────┘
```

Student **has_many** Degree **through** Transcript
Degree **has_many** Student **through** Transcript
Trascript **belongs_to** Student
Trascript **belongs_to** Degree

students	
id	name
1	Shuyen
2	Anlyan

degrees	
id	name
3	B.A. in Finance
4	M.S. in Information Studies
5	B.A. in History

transcripts				
id	student_id	degree_id	university	grad_year
20	1	3	Peking University	2000
30	1	4	University of Texas at Austin	2012
40	2	5	Harvard University	2010
50	2	4	University of Texas at Austin	2016