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385T.9 Data Wrangling
10 March 2019

Project Database and Workflow Design

ER Diagram:

Restaurant	is scored by 1...*	Inspection
name	1...1 is conducted on	score restaurant_id

1...*
describes

0...*
hosts

is described by
1...*

occurs on
1...1

Type
type

Day

1...1
describes

is described by
1...*

Weather Report
wind_speed precipitation max_temperature fog thunder hail glaze dust haze station
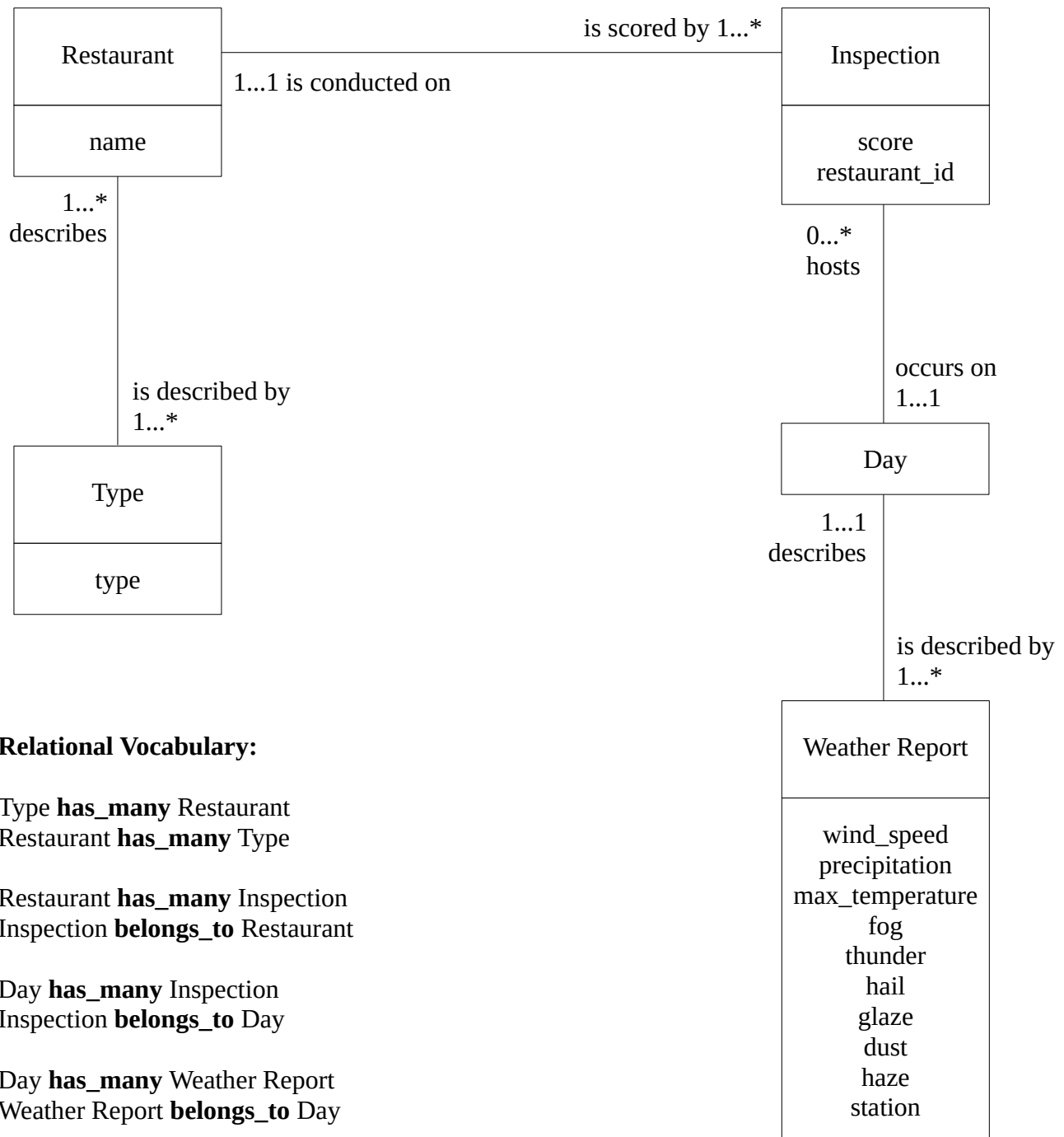
Relational Vocabulary:

Type **has_many** Restaurant
Restaurant **has_many** Type

Restaurant **has_many** Inspection
Inspection **belongs_to** Restaurant

Day **has_many** Inspection
Inspection **belongs_to** Day

Day **has_many** Weather Report
Weather Report **belongs_to** Day

Tables:

restaurants

id	name
1	Salty Sow
2	Moonshine
3	El Patio
4	Dragonbeard Kitchen

types

id	type
1	American (Traditional)
2	Southern
3	Mexican
4	Asian Fusion
5	Gastropub
6	Breakfast & Brunch
7	Hawaiian

restaurants_types

restaurant_id	type_id
1	1
1	5
2	2
2	6
3	3
4	4
4	7

inspections

id	date	score	restaurant_id
1	2016-05-23	87	1
2	2017-04-30	98	1
3	2016-11-06	94	2
4	2018-04-09	91	2
5	2017-10-29	95	3
6	2019-01-09	93	4

id	date	wind_speed	precip	max_temp	fog	thunder	hail	glaze	dust	haze
1	2016-05-23	14.1	0.01	85	1	0	0	0	0	0
2	2016-05-23	21.0	0.01	85	1	0	0	0	0	0
3	2016-11-06	12.1	0.07	76	1	0	0	0	0	0
4	2016-11-06	21.9	0.60	78	1	1	0	0	0	0
5	2017-10-29	10.1	0.00	76	0	0	0	0	0	0
6	2017-10-29	16.1	0.00	75	0	0	0	0	0	0
7	2018-04-09	10.1	0.00	65	1	0	0	0	0	1
8	2018-04-09	16.1	0.00	65	1	0	0	0	0	0
9	2019-01-09	14.1	0.00	62	0	0	0	0	0	0
10	2019-01-09	21.0	0.00	63	0	0	0	0	0	0
11	2018-07-23	8.1	0.00	110	0	0	0	0	0	0
12	2018-07-23	13.0	0.00	109	0	0	0	0	0	0

weather_reports (cont.)

station
USW00013958
USW00013904
USW00013958
USW00013904
USW00013958
USW00013904
USW00013958
USW00013904
USW00013958
USW00013904
USW00013958
USW00013904

inspections_weather_reports

inspection_id	weather_report_id
1	1
1	2
3	3
3	4
4	7
4	8
5	5
5	6
6	9
6	10

Workflow Diagram:

Inspection Data

Restaurant Data

Weather Data

Data Import to Database

Data Cleanup

Data Analysis by Grouping Comparisons

Graph Group Comparisons

Data Export to Tableau