

Keyword-Driven Exploration of Relational Data using Firebase

Proposal Report

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Databases:

- Adventure Work

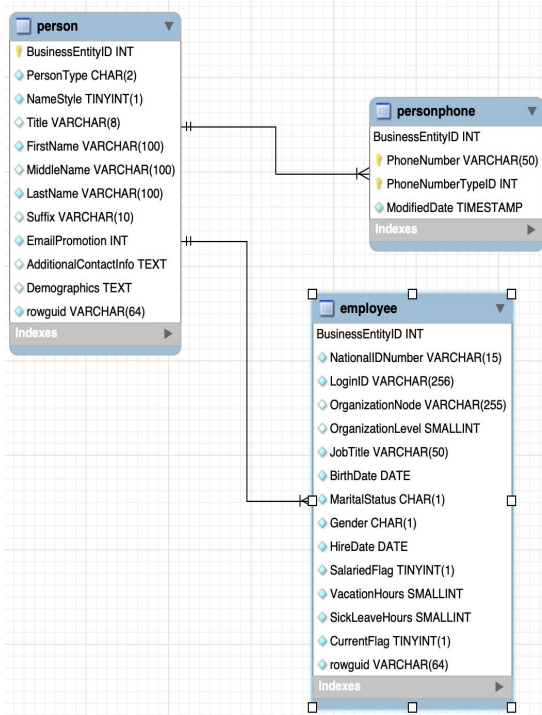
<https://msftdbprodsamples.codeplex.com/releases/view/125550>

This database which contains 71 tables includes the personal information of employees and work positions. We chose three tables which are correlated with each other by foreign key 'Business Entity ID'.

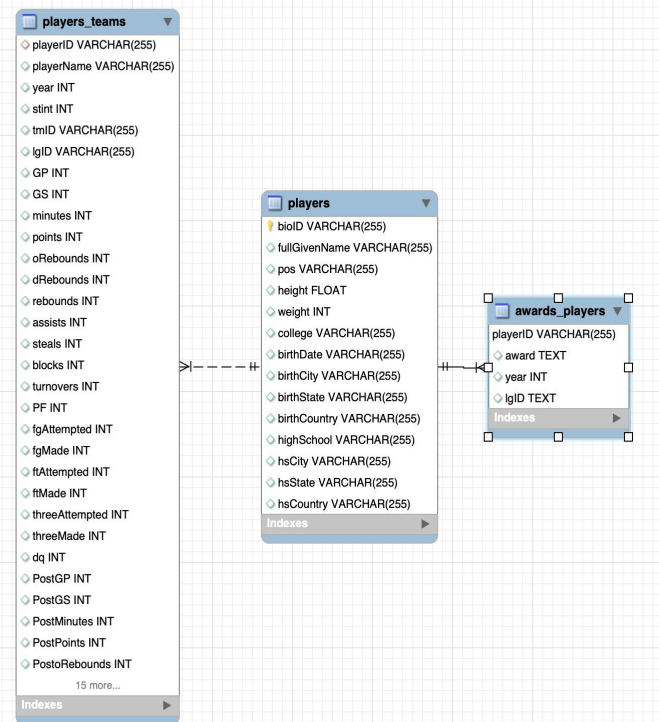
- Basketball Women

www.opensourcesports.com

This database is used for predicting whether the team plays playoff, or not. It contains 8 tables, and what we have chosen are tables player_teams, players and awards_players which are connected by the foreign key 'playerID'.



PICTURE 1 EER of Adventure Work



PICTURE 2 EER of Basketball Women

- Sample Data :

BusinessEntityID	FirstName	MiddleName	LastName
1	Ken	J	Snchez
2	Terri	Lee	Duffy
4	Gail	A	Erickson

BusinessEntityID	NationalIDNumber	JobTitle
1	509647174	Engineering Manager
2	112457891	Senior Tool Designer
4	695256908	Design Engineer

BusinessEntityID	PhoneNumber	ModifiedDate
1	697-555-0142	2009/1/7 0:00
2	819-555-0175	2008/1/24 0:00
4	612-555-0100	2007/11/28 0:00

PICTURE 3 Sample data of Adventure Work

playerID	playerName	year	GP
abrahta01w	Tajama Abraham	1997	28
abrahta01w	Tajama Abraham	1998	12
abrossv01w	Svetlana Abrosimova	2002	27

playerID	award	year	lgID
stillva01w	ABL Playoffs Most Valuable Player	1997	ABL
stillva01w	ABL Playoffs Most Valuable Player	1998	ABL
enishsh01w	All-Star Game Most Valuable Player	1998	ABL

bioID	fullGivenName	height	weight	birthDate	birthCity
adairje01w	Jessica Adair	76	197	12/19/1986	Washington
adamsda01w	Danielle Adams	73	239	2/19/1989	Kansas City
adamsjo01w	Jordan Adams	75	180	5/24/1981	Las Vegas

PICTURE 4 Sample data of Basketball Women

Initial Design of UI:

Data Explorer

Search

RESULTS

Choose a Database

Word

Adventure Work

Basketball Women

index	playerID	playerName	year	tmID	link
20	ajavoma01w	Matee Ajavon	2008	HOU	http://BasketballWomen/players_teams/index=20
21	ajavoma01w	Matee Ajavon	2009	WAS	http://BasketballWomen/players_teams/index=21
22	ajavoma01w	Matee Ajavon	2010	WAS	http://BasketballWomen/players_teams/index=22
23	ajavoma01w	Matee Ajavon	2011	WAS	http://BasketballWomen/players_teams/index=23
24	ajavoma01w	Matee Ajavon	2012	WAS	http://BasketballWomen/players_teams/index=24
bioID	fullGivenName	height	weight	birthdate	link
ajavoma01w	Matee Ajavon	68	160	5/7/1986	http://BasketballWomen/players/bioID=ajavoma01w

PICTURE 5 Design of UI Page

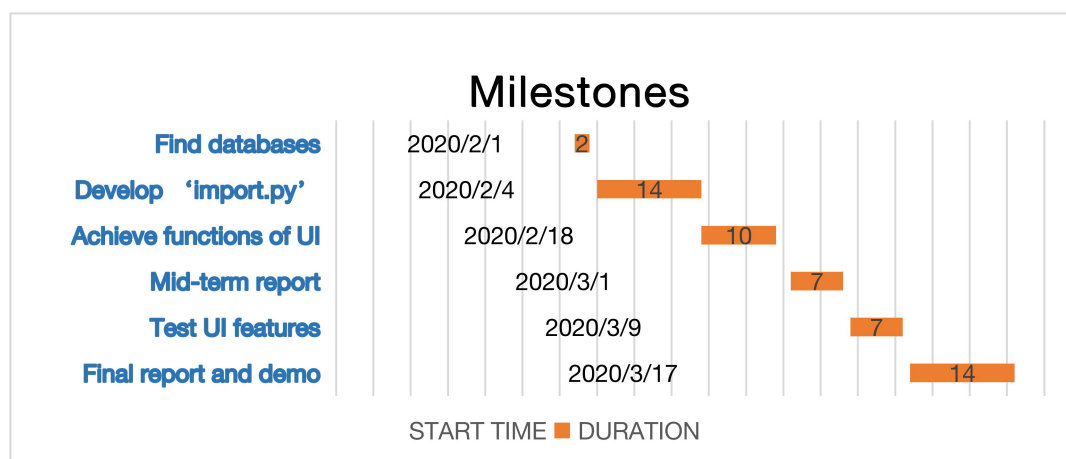
This UI page is more like a search engine which makes thousands rows of data visualized. Users can choose the database they need on the left module. And then they would type the key word in the search box. When they click the 'Search' button, the most related data will come first, and other data which contains the key word but not related too much will also be shown blow the most related one. There is an url link behind each of row of data. When users click on the link provided, all the data which connected with this primary data by foreign key will be shown up on the "RESULTS" module.

Group formation and responsibilities:

Linlin Sun	Zepei Zhao
Find database "Adventure Work"	Find database "Basketball Women"
Achieve "SCHEMAS" and "Results" parts of UI	Achieve "Keyword Search" and "Advanced Search" parts of UI
Develop python program "import.py"	Develop back end of Web browser

PICTURE 6 Responsibility

Milestones:



PICTURE 7 Milestones