COMS20700 Databases: Coursework #3

Report

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Abstract

This report represents an outline of the Databases third coursework. The aim of this coursework is to design and implement, in a group of four, a database for an online multiplayer social gaming network similar to the Game Centre on iOS. **Section 1** includes a brief summary of our approach. In **Section 2** we mention what decisions and assumptions regarding the specification we have made. We then continue with detailing what the system we implemented can do (in **Section 3**), by going through the SQL statements requested by the client. **Section 4** discusses conclusions as well as future improvements, while **Sections 5 and 6** include References and Appendices.

1 Introduction

2 Design and Implementation

Schema

Database dump

3 Results and Evaluation

Question 1

Question 2

Question 3

Question 4

Question 5

Question 6

Question 7

Question 8

Question 9
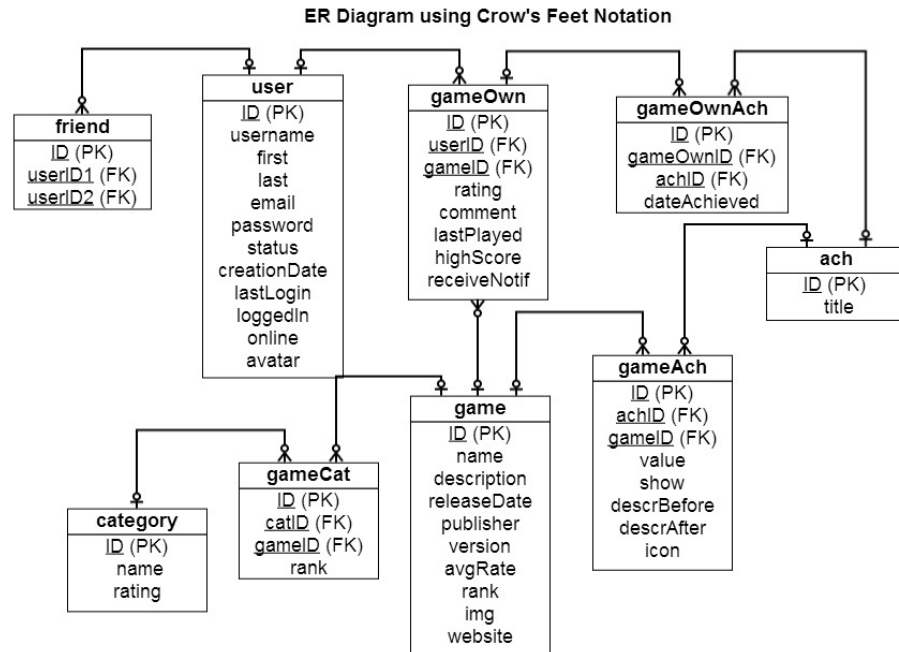
Question 10

4 Conclusions

5 References

In addition to the lecture slides, we have used the following resources in order to fully understand the concepts used in this assignment and to be able to easily work with PostgreSQL:

[1] Carolyn E. Begg Thomas M. Connolly. *Database Systems: A Practical Approach to Design, Implementation, and Management.* 2005.

6   Appendices

Appendix A: ER Diagram

ER Diagram using Crow's Feet Notation

user
ID (PK)
username
first
last
email
password
status
creationDate
lastLogin
loggedIn
online
avatar

friend
ID (PK)
userID1 (FK)
userID2 (FK)

gameOwn
ID (PK)
userID (FK)
gameID (FK)
rating
comment
lastPlayed
highScore
receiveNotif

gameOwnAch
ID (PK)
gameOwnID (FK)
achID (FK)
dateAchieved

ach
ID (PK)
title

gameAch
ID (PK)
achID (FK)
gameID (FK)
value
show
descrBefore
descrAfter
icon

game
ID (PK)
name
description
releaseDate
publisher
version
avgRate
rank
img
website

gameCat
ID (PK)
catID (FK)
gameID (FK)
rank

category
ID (PK)
name
rating

Appendix B: Data Types

Attribute name	Data type	Description	Attribute name	Data type	Description
friend			**category**		
id	serial*		id	serial	
userId1	integer	Not null	name	varchar	255, Not null
userId2	integer	Not null	rating	integer	
user			**gameCat**		
id	serial		id	serial	
username	varchar	50, Not null	catId	integer	Not null
first	varchar	25, Not null	gameId	integer	Not null
last	varchar	25, Not null	rank	integer	
email	varchar	50, Not null	**game**		
password	varchar	50, Not null	id	serial	
status	text		name	varchar	255
creationDate	date	Not null	description	text	
lastLogin	timestamp	With time zone	releaseDate	date	Not null
loggedIn	boolean	Not null	publisher	varchar	255, Not null
online	boolean	Not null	version	integer	
avatar	varchar	255	avgRate	integer	
gameOwn			rank	integer	
id	serial		img	varchar	255
userId	integer		website	varchar	255
gameId	integer		**gameAch**		
rating	integer		id	serial	
comment	text		achId	integer	Not null
lastPlayed	timestamp	With time zone	gameId	integer	Not null
highScore	double precision	Not null, default 0	value	integer	Not null
receiveNotif	boolean	Not null, default true	show	boolean	Not null
gameOwnAch			descrBefore	text	
id	serial		descrAfter	text	
gameOwnId	integer	Not null	icon	varchar	255
achId	integer	Not null	**ach**		
dateAchieved	timestamp	With time zone	id	serial	
			title	varchar	50, Not null

* Serial = autoincrementing integer

Appendix C: Mark Allocation

Name	Allocated Mark	Signature
Liban Abdulkadir	0.25	L.A
Ana Dumitraş	0.25	A.D
Andra Irimia	0.25	A.I
Ioan Troană	0.25	I.T