

Assignment 2

Overview

For this assignment you will implement and query a database from a supplied ER Diagram and Schema. You will be required to write the SQL statements to create the database structures, to fill the database with data and to run queries on the data.

Timelines and Expectations

Percentage Value of Task: 20%

Due: Thursday Week 11 (11:55 pm)

Minimum time expectation: 20 hours

Learning Outcomes Assessed

The following course learning outcomes are assessed by completing this assessment:

- A1.design and implement a relational database using a database management system
- A2.utilise a query language tools and techniques to obtain data and information from a database
- K5. describe relational algebra and its relationship to Structured Query Language (SQL)
- S1.interpret entity-relationship diagrams to implement a relational database
- S2.demonstrate skills in designing and building a database application using a commercially available database management system development tool
- S3.use a query language for data manipulation

Assessment Details

BHE Holdings has provided you with a standard solution for the conceptual data model (the ER diagram). You have been commissioned to continue your role (in your capacity as a Database Management System consultant) and to write the SQL statements to create the database and its tables, add data, and provide answer to some of their everyday queries. The database should be created based on the ER diagram provided at the end of this document. Some sample data are also provided to be used for inserting data to tables. You are required to insert sufficient data to test the reports given below.

To implement the database

1. Translate the ER diagram provided into a relational schema using the correct notations and standards for this course. It should include:
 - a. Table names
 - b. Attribute names and field types (as required by XAMPP)
 - c. Primary and foreign keys identified
2. Create a text file called *nnnn_create.sql* (where *nnnn* is your student number). The file should include:
 - a. The SQL statements to create a database called *BHE_Holdings_nnnn.txt* (where *nnnn* is your student ID)
 - b. The SQL statements to create the tables and the relationships between them.
3. Create a text file called *nnnn_insert.txt* (where *nnnn* is your student number). The file should include:
 - a. The SQL statements to load sufficient data into each table you have created to test the queries given below. Sample data has been provided, but **you will need to include further** data test the requirements. You should add at least one record to the existing test data for each table.
 - b. You **are required** to include your name as one of the customers (you don't have to have your address if you don't want to), but you **MUST** have your name and give your student id as the phone number.
4. Create a text file called *nnnn_query.txt* (where *nnnn* is your student number). The file should include the SQL statements necessary to display the following reports:
 - a. List all details of all the records in the customers table, sorted by postcode in descending order.
 - b. List all the titles of all the items in inventory with their supplier's name, email, phone number and postcode.
 - c. List all the actors who are deceased. Print their name as ONE column with a suitable heading, their date of birth and their date of death.
 - d. List all of the inventory by genre. Display the title and the genre of each.
 - e. List all the movies in the shop in alphabetical order. Include movie name, genre, classification, star rating and director name.
 - f. List all genres that have no titles.
 - g. Delete the all customers from Beaufort.
 - h. Change customer Mary Spring's name to Mary O'Sullivan.
 - i. List all the movie titles with their cast and their director. Print the name of the actors and the directors in one column for each with an appropriate title.
 - j. Insert a game with the title "Faraway Stars" (genre scifi) published by Moonstruck Games in 2016. The company is located at 1020 Oak Dr, Longwood, 3546, email sales@moonstruck.com.au, phone 4561327895, and contact is Jessie Fandango. The wholesale price is \$38 and the mark up is 40%. The shop has 13 in stock and there is no discount applicable to this item.

- k. List all the inventory with its title, its quantity on hand and its sales price (wholesale plus markup).
- l. List every item in inventory with its title, genre and whether it is a game or a movie.

Your documentation should include:

1. A title page clearly stating your name and student ID and your tutor's name.
2. A copy of the relational schema you have developed from the ER diagram provided.
3. A copy of the three files you are required to create included in the document (ie *nnnn_create.txt*, *nnnn_insert.txt* and *nnnn_query.txt*).
4. Full APA referencing of any resources you have used to complete your submission

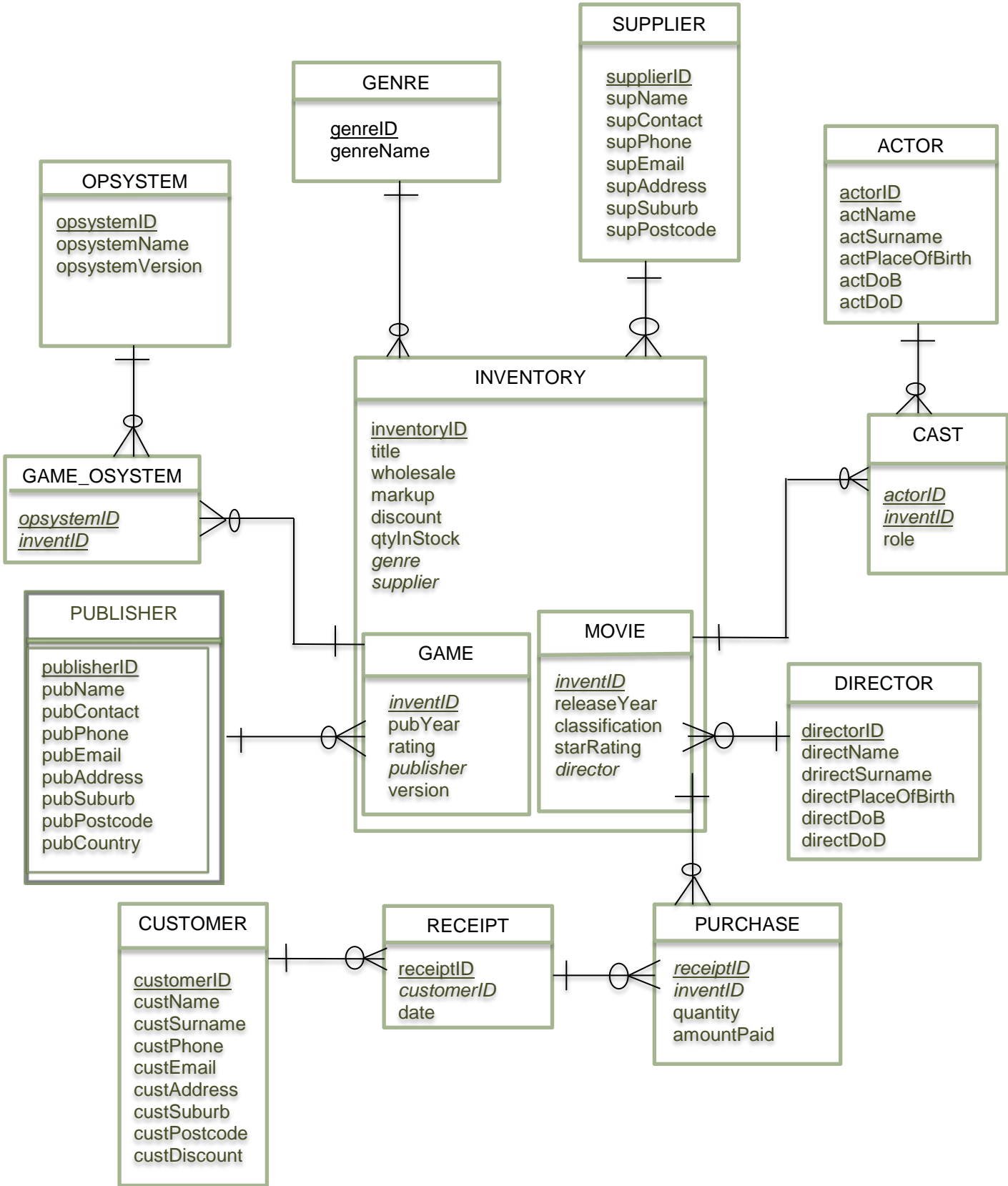
You should submit the following:

1. The documentation file described above EITHER as a MS word file or a PDF. If you are using a mac, please submit in a PDF so I can be sure of opening it.
2. The *nnnn_create.txt* file (where *nnnn* is your student number).
3. The *nnnn_insert.txt* file (where *nnnn* is your student number).
4. The *nnnn_query.txt* file (where *nnnn* is your student number).

Please note that the SQL files must be either .txt or .sql because I will be running them. If they are in a word or pdf file there will be extra characters that will prevent the files from running without errors and **THIS WILL COST YOU MARKS!**

The assignment is to be submitted via the Assignment 2 submission box in Moodle. This can be found in the Assessments section of the course Moodle shell.

ER Diagram



Sample Data for Tables.

GENRE
GenreName
Comedy
Sports
Children
SciFi
Crime Fiction
Historical Fiction
Roleplay
Nonfiction
Horror
SciFi Fantasy
Adventure
Action

Game				
ID	year	rating	publisher	version
1	2016	6/10	1	1
2	2011	9/10	3	1.0
3	2006	8/10	2	2
7	2016	7/10	2	1.0
8	1993	9/10	4	3
9	2013	6/10	4	V

Supplier						
Name	Contact	Phone	Email	Address	Suburb	Postcode
Murphy's Best Games	Paddy Murphy	0456789163	murphysbestgames.com	1239 Smith St	Collingwood	3066
James' Games and Movie Supply	James McGrath	+61355551549	jamesgamesnmovies.com.au	32 East St	Ballarat	3350
Games R Us	Suzie Smith	0494335701	gamesrus.com.au	853 Burwood Hwy	Burwood	3125
Rare Films	Samantha Stevens	0751672924	rarefilms.com.au	9 Newcastle Ave	Cabramatta	2166
Premiere Entertainment	Winston Jones	0657168342	premiereentertainment.com	1548 Hume Hwy	Glenfield	2167
Games 'n' Things	Sandra Hill-Jones	0407529817	gamesnthings.com.au	5 Commodore Parkway	Melville	6156
VIC Entertainment	Rupert Ballinger	0498528417	vicentertainment.gov.au	62 Bluebird Crt	Collingwood	3066
Samson Films	Delilah Jones	+6174019841	samsonfilms.com.au	27 Fortitude Dr	Brisbane	4001

OPERATINGSYSTEM	
Name	Version
PlayStation	4
Xbox	ONE
MS Windows	10
MS Windows	8
MS Windows	7
Mac OS	10
Nintendo	DS
iOS	10.2
Android	Nougat

MOVIE				
ID	Year	classification	stars	director
4	1958	M	4	7
5	2011	M	4	8
6	2006	MA	3	2

ACTOR				
Surname	Name	Place of birth	Date of birth	Date of Death
Lee	Christopher	Belgravia London (UK)	27 th May, 1922	7 th June, 2015
Hemsworth	Chris	Melbourne Vic (Aus)	11 th August, 1983	
Jolie	Angelina	Los Angeles, California (USA)	4 th June, 1975	
Streep	Meryl	Summit New Jersey (USA)	22 nd June, 1949	
Monroe	Marilyn	Los Angeles California (USA)	1 st June, 1926	5 th August, 1962
Theron	Charlize	Benoni Gauteng (Sth Africa)	7 th August, 1975	
Barrymore	Drew	Culver City California (USA)	22 nd February, 1975	
Liu	Lucy	Jackson Heights New York (USA)	2 nd December, 1968	
Tennant	David	Bathgate (UK)	18 th April, 1971	
Johnson	Dwayne (The Rock)	Hayward California (USA)	2 nd May, 1972	
Downey	Robert (Jnr)	Manhattan, New York (USA)	4 th April, 1966	

DIRECTOR				
Surname	Name	Place of birth	Date of birth	Date of death
Jolie	Angelina	Los Angeles California (USA)	4 th June, 1975-06	
Barrymore	Drew	Culver City, California (USA)	22 February, 1975	
Spielberg	Steven	Cincinnati, Ohio (USA)	18 th December, 1946	
Heyman	David	London (UK)	26 th July, 1961	
Hitchcock	Alfred	London (UK)	13 August, 1899	29 April, 1980
Tarantino	Quinton	Knoxville Tennessee (USA)	27 th March 1963	
Fisher	Terence	Maida Vale, London (UK)	23 February, 1904	18 th June, 1980
Branagh	Kenneth	Belfast (UK)	10th December, 1960	

INVENTORY						
title	genre	wholesale	markup	discount	Quantity in Stock	supplier
The Technomancer	6	\$18.00	160%	0	2	3
Skyrim	6	\$10.00	170%	0	12	3
Super Mario Bros.	3	\$28.00	140%	0	7	2
Syberia	10	\$10.00	210%	0	4	9
Devil Wears Prada	1	\$10.00	130%	0	9	8
Great Expectations	5	\$10.00	230%	0	8	4
Pokemon Sun	3	\$18.00	130%	0	4	2
Myst	10	\$22.00	210%	0	6	1
Dracula	9	\$10.00	120%	10%	2	4

PUBLISHER							
Name	Contact Name	Phone	Email	Address	Suburb	PostCode	Country
Focus Home Interactive	Madeline Dujardin	+48299836600	cservice@focus-hom.com	11 Rue de Cambrai	Paris	75019	France
Nintendo Australia	John Clarke	+61397309822	sales@nintendo.com.au	804 Stud Road	Scoresby	3179	Australia
Bethesda Softworks	Karl White	+1456123789	info@bethsoft.com	1230 Avenue of the Americas	Rockville	1020	USA
Rockstar Games	Joe Ford	+1451586604	info@rockstargames.com	40 Grand Drive	Chicago	1999	USA

Customer							
Surname	Name	Phone	Email	Address	Suburb	Postcode	Discount
John	Findus	53159510	Johnno.f@gmail.com	1 Bells Road	Enfield	3352	.1
Joe	Summers	45613208	jsummers@yahoo.com	52 Main St	Maryborough	3465	
Sam	Winter	12356713	winter@xyz.net.au	2156 Skipton Rd	Sebastopol	3356	
Mary	Spring	13265413	flowers@iprimus.com	98 Neil St	Beaufort	3373	
Sally	Fall	15626543	autumn@gmail.com	65 Commercial St	Clunes	3370	
Fred	Richards	040853185	freddyrich@gmail.com	653 Creswicke Rd	Ballarat	3350	
Pat	Jones	049513572	patsyJ@anet.com.au	46 Wattle Ave	Wendouree	3355	.1
Doreen	Matthews	21356467	d.matthews@mynet.com	7 Hepburn Springs Blvd	Daylesford	3460	.15
Tommy	Jones	51657896	whereistom@gone4good.com	1254 Sturt St	Ballarat	3350	
Barry	McKenzie	32165489	bazza@adventure.com	47 Gillies St	Ballarat	3350	0.20

Marking Criteria/Rubric

Assessment Criteria and Marking Overview Tasks	Marks
1. Presentation <ul style="list-style-type: none"> • Cover page indicating student name and number and tutor name. • Page numbers included in report • Index giving page numbers of various sections • Overall presentation of the report • Full APA referencing of all materials used and full disclosure of assistance from all sources including tutors and other students. 	5
2 Revised Schema <ul style="list-style-type: none"> • Any assumptions explained • All tables included • Data types correct • Primary and foreign keys indicated and referenced correctly 	10
3. Create Statements <ul style="list-style-type: none"> • File runs with no error messages • Database created correctly • All tables created correctly • All primary and foreign keys created correctly • Any deletion anomalies corrected 	10
4. Insert Statements <ul style="list-style-type: none"> • File runs with no error messages • Default data is inserted correctly • Additional data for testing is inserted • Student's name and number are included in customer file 	10
5. SQL statements	Total 65 Marks
Q a <ul style="list-style-type: none"> • Correct syntax • Correct table used • Correct use of sorting statement 	3
Q b <ul style="list-style-type: none"> • Correct syntax • Correct tables used • Where statement correctly formulated 	4
Q c <ul style="list-style-type: none"> • Correct syntax • Correct table used • Where statement correctly formulated 	4
Q d <ul style="list-style-type: none"> • Correct syntax • Correct table used • Where statement correctly formulated • Correct indication of desired values 	4

Q e	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Where statement correctly formulated • Correct sorting statement used. 	5
Q f	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Correct use of aggregation statement • Sub-query formulated correctly • Correct answer given 	5
Q g	<ul style="list-style-type: none"> • Correct syntax • Correct table used • Correct result for deletion 	6
Q h	<ul style="list-style-type: none"> • Correct syntax • Correct table used • Correct result for update 	6
Q i	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Where statement correctly formulated • Output formatted correctly 	6
Q j	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Inserts done in correct order with correct results 	7
Q k	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Correct calculation of sales price • Where statement correctly formatted 	7
Q l	<ul style="list-style-type: none"> • Correct syntax • Correct tables used • Output formatted correctly 	8
Total		100

Feedback

Feedback will be provided via the marked rubric with comments handed out in the tutorial 2 weeks after the submission date. The marks will also be available on FDL Marks at this time.

Plagiarism:

Plagiarism is the presentation of the expressed thought or work of another person as though it is one's own without properly acknowledging that person. You must not allow other students to copy your work and must take care to safeguard against this happening. More information about the plagiarism policy and procedure for the university can be found at <http://federation.edu.au/students/learning-and-study/online-help-with/plagiarism>.