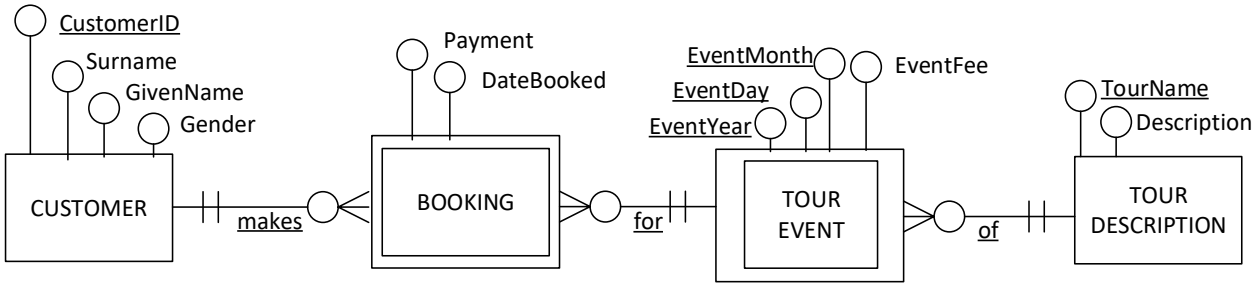
Database Analysis & Design
INF60009
SP1 2018

Distinction Task 2

Urban Street Arts Tours (USAT) is an organisation than runs tours around inner and outer Melbourne. They take groups of street art enthusiasts to dedicated street art precincts. They have been running for about 2 years. The organisation plans to increase marketing and create more tours, and also expand further into other Australian states. USAT currently store all of their data in a spreadsheet (a sample is provided on Blackboard). To assist the USAT it is believed they need a database solution developed for them. USAT would like you to create an ERD, Relational Schema and Sample Database Tables for them. In the future, other students will develop a web interface to the database, a rich user experience, and analytical data tools and so on.

Part 1a - ERD



Part 1b – Relational Schema

CUSTOMER (CustID, Surname, GivenName, Gender)

PK (CustID)

Assuming only one booking can be made per credit card transaction/payment record. No multiple bookings to be combined in one booking.

Assuming only one tour per booking instance.

BOOKING (CustomerID, TourName, EventMonth, EventDay, EventYear, Payment, DateBooked)

PK (CustomerID, TourName, EventMonth, EventDay, EventYear)

FK (CustomerID) references CUSTOMER

FK (TourName) references TOUREVENT

FK (EventMonth) references TOUREVENT

FK (EventDay) references TOUREVENT

FK (EventYear) references TOUREVENT

TOUREVENT (TourName, EventMonth, EventDay, EventYear, EventFee)

PK (TourName, EventMonth, EventDay, EventYear)

FK (TourName) references TOURDESCRIPTION

TOURDESCRIPTION (TourName, Description)

PK (TourName)

Part 1c – Results Set

Paste your screen captures for this task here. Run queries that list the data in each of the tables ▪

Note: Your database solution must use a single column primary key in each table. This may require you to utilize surrogate keys.

Part 2a - ERD

CUSTOMER (CustID, Surname, GivenName, Gender)

PK (CustID)

TOURDESCRIPTION (TourName, Description)

PK (TourName)

PRODUCTCATEGORIES (Category, Description)

PK (Category)

TOUREVENT (TourName, EventMonth, EventDay, EventYear, EventFee)

PK (TourName, EventMonth, EventDay, EventYear)

FK (TourName) references TOURDESCRIPTION

PRODUCTS (ProdID, Category, ProdName, Price)

PK (ProdID)

BOOKING (CustomerID, TourName, EventMonth, EventDay, EventYear, Payment, DateBooked)

PK (CustomerID, TourName, EventMonth, EventDay, EventYear)

FK (CustomerID) references CUSTOMER

FK (TourName) references TOUREVENT

FK (EventMonth) references TOUREVENT

FK (EventDay) references TOUREVENT

FK (EventYear) references TOUREVENT

PURCHASEDETAILS (CustomerID, TourName, EventMonth, EventDay, EventYear, ProdID, Qty)

PK (CustomerID, TourName, EventMonth, EventDay, EventYear, ProdID)

FK (CustomerID) references BOOKING

FK (TourName) references BOOKING

FK (EventMonth) references BOOKING

FK (EventDay) references BOOKING

FK (EventYear) references BOOKING

FK (ProdID) references PRODUCTS

Part 2b – Relational Schema

Paste your screen captures for this task here.

Part 2b. (worth up to 4 marks out of 20) ·

Make a Copy the previous database. ·

Implement the changes described in your ERD and relational schema

· You will need to create some sample data for Merchandise, Categories and Purchases to adequately test your solution (some examples are provided in the sample data) ·

Additional Data: Add additional data to the database so that the customer with your details makes tour event bookings and makes purchases.

Part 2c – Query Grid / SQL Statements

Paste your screen captures for this task here.

Part 2c. (worth up to 2 marks out of 20) ·

Run build and execute queries that show the following:

o How much money has been spent by every USAT customer – in terms of merchandise purchases.

o The total sales of each item of merchandise.

o The total sales of each USAT tour event. o The total sales by merchandise category.

o Show all purchases made by the customer with your details made on each tour event that they attended.