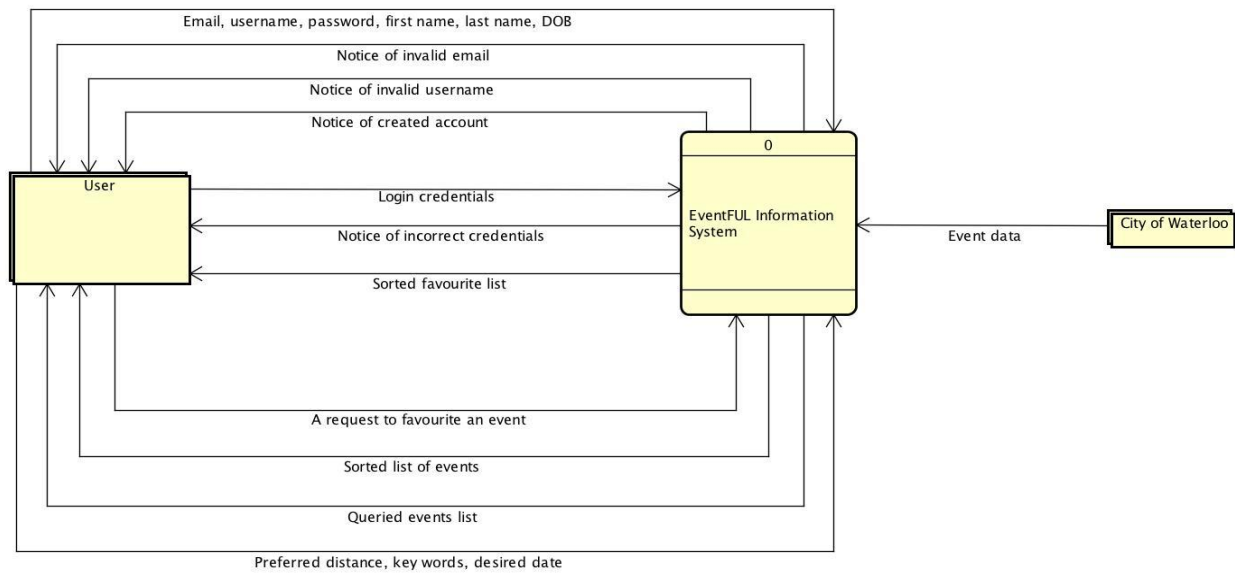# Stage 3: Logical Design

MSCI 444: Information System Design & Analysis

Prepared by:

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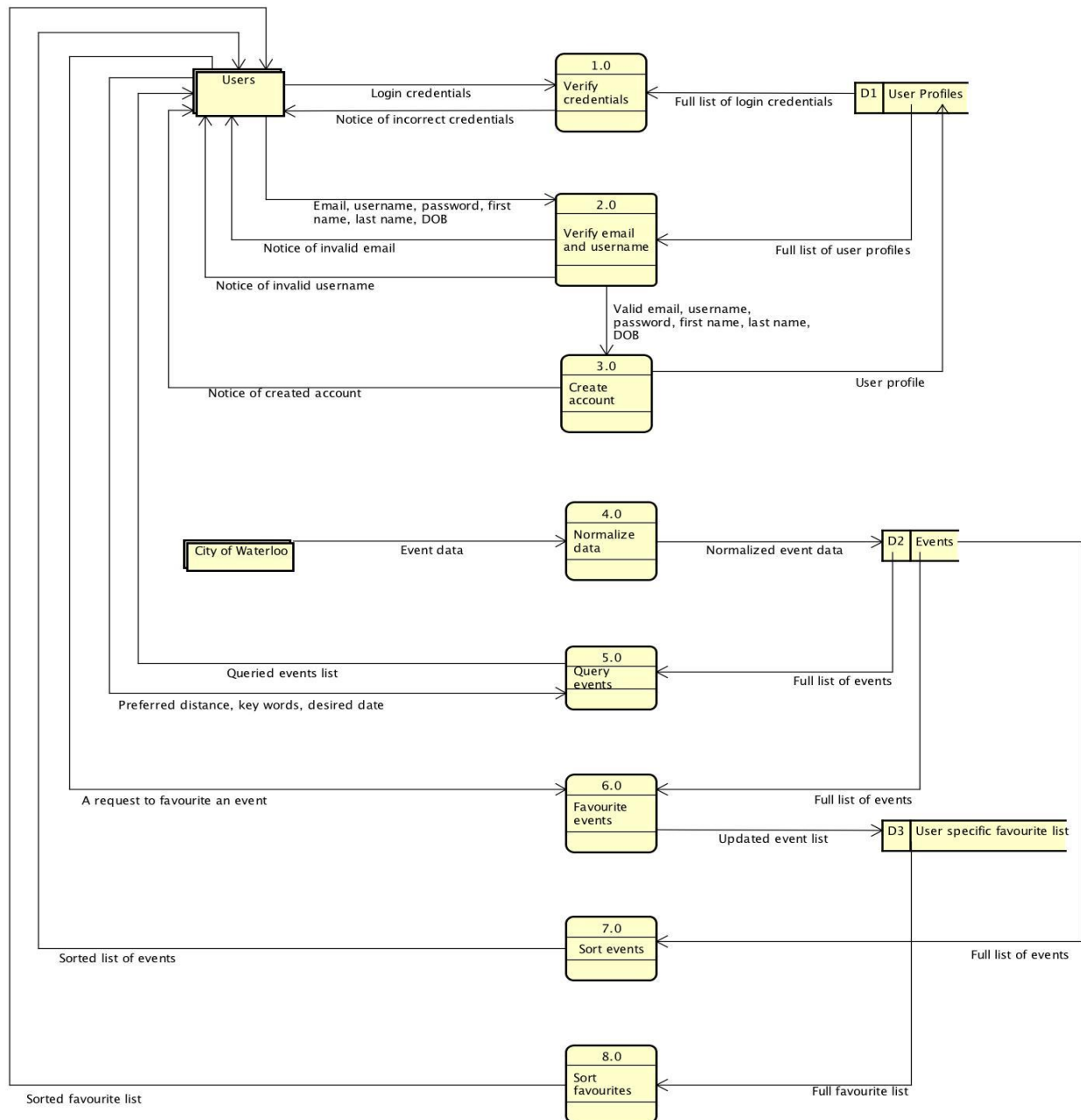Claire Pannolino - 20575930
Rui Zhang – 20599896

1.0: Data Flow Diagrams

Context Diagram

This context diagram visualizes the flow of data to and from the EventFUL Information System. The external entities that transfer data with the system are the users of the EventFUL web app and the City of Waterloo.

Level-0 Diagram

This Level-0 diagram displays in detail the flow of data between the external entities and the EventFUL system as well as the flow of data within the system itself. The processes 1.0 – 3.0 regard the login/sign up process in which the user will give the system data to either login or sign up and the system will verify the data. Process 4.0 deals specifically with the gathering of data from the city and transforming it into a useable format. Processes 5.0 - 8.0 surround the core functionalities of EventFUL and how the user interacts with the system.
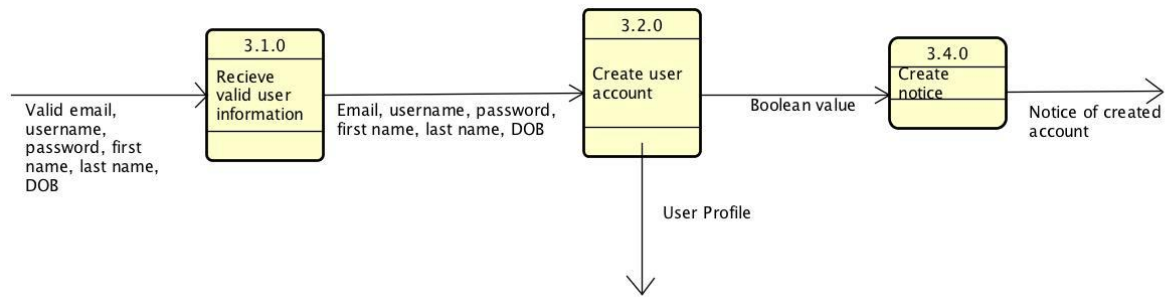
Level-1 Process 1.0
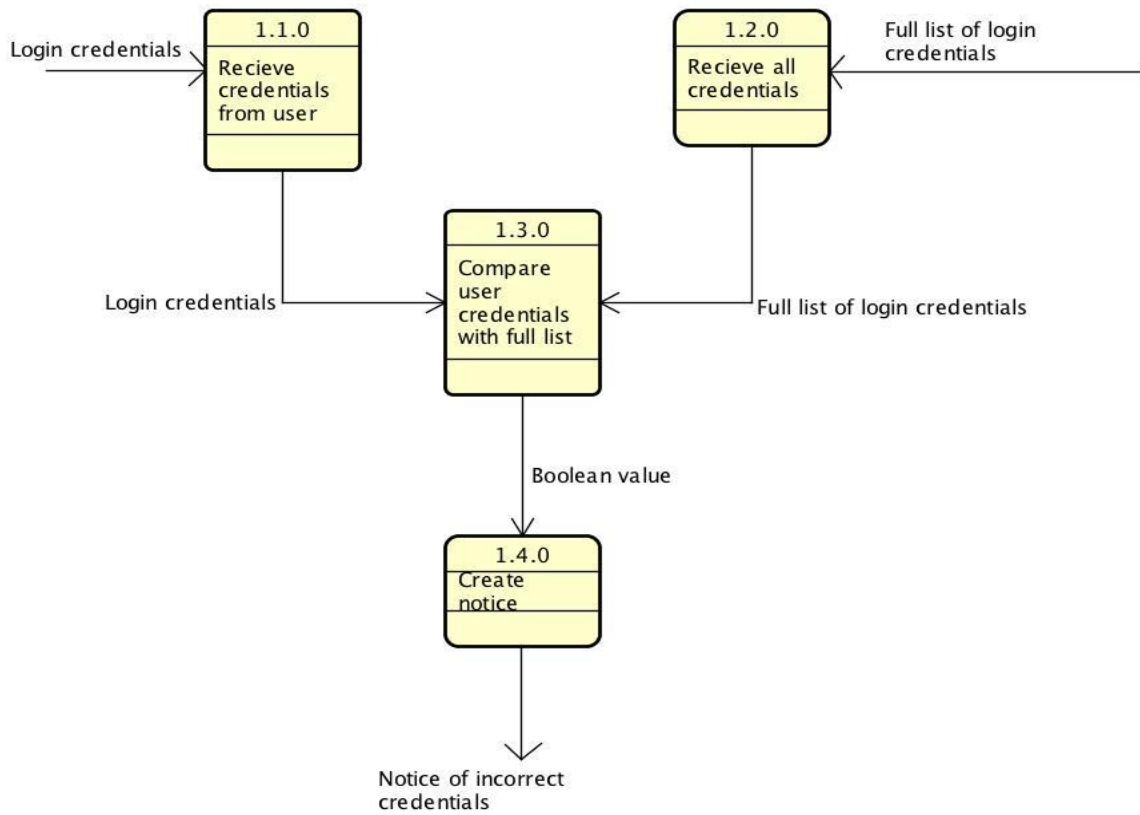
This diagram breaks down the process of verifying user credentials. Note this is regarding only the verification of existing user credentials and does not deal with account creation. A notice will be sent to the user if incorrect credentials were entered.

Level-1 Process 2.0
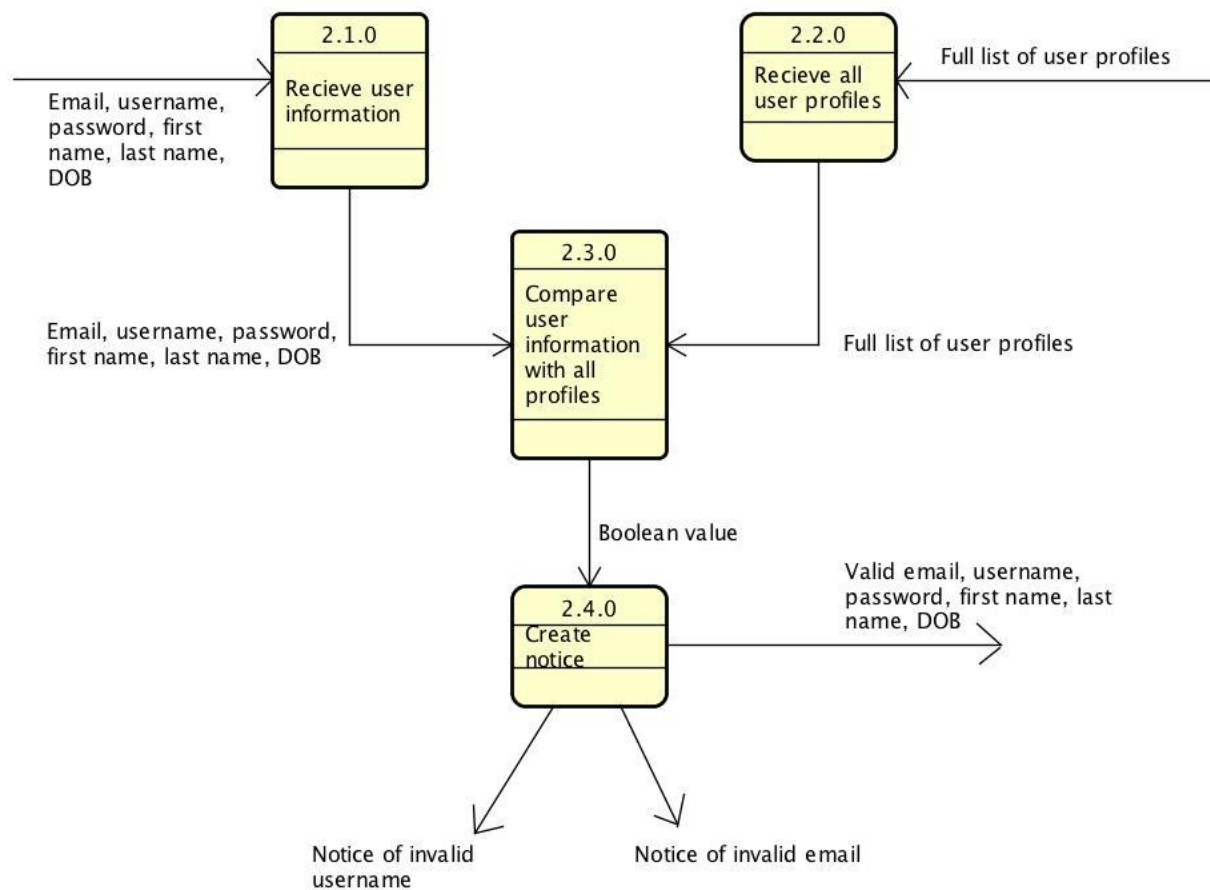
This diagram details the information verification process when creating an account. User information is received and compared with existing user information to ensure that duplicate accounts will not be created. Notices will be sent to the user if they enter an invalid username or email. If there is no error with the email or username entered, the valid information will be sent to Process 3.0 in order to create the account.

Level-1 Process 3.0

This process regards the creation of a new account using valid user credentials which were verified in the previous process.

Level-1 Process 4.0

This process regards receiving event/activity data from the City of Waterloo. The data received is open, readily accessible, and constantly updated by the city.

Level-1 Process 5.0
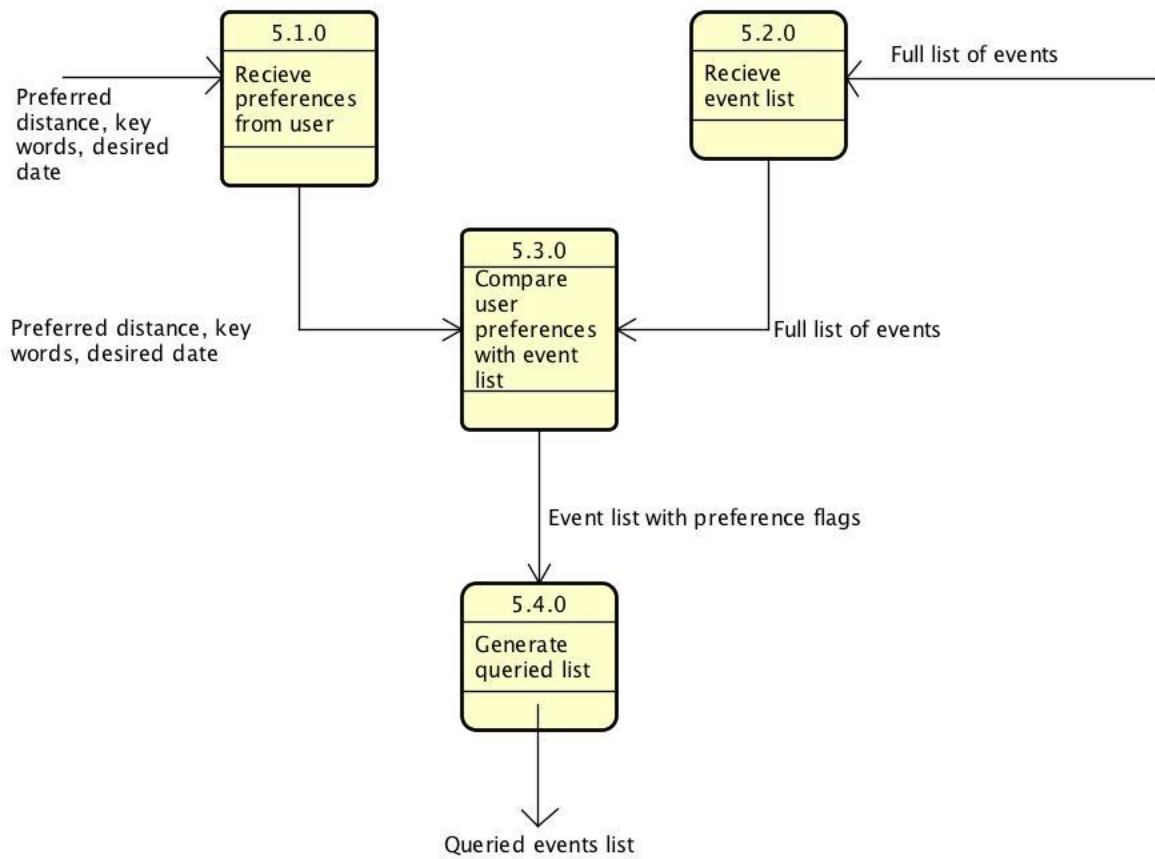
This diagram of Process 5.0 details the sub-processes regarding querying the full list of events/activities from the EventFUL database. A request will be sent in by the user and will be returned a list of events/activities based on their preferences.

Level-1 Process 6.0

6.1.0
Recieve the request to favourite

A request to favourite an event →

6.2.0
Recieve event list

Full list of events ←

6.3.0
Flag events list

A request to favourite an event →

Full list of events →

6.4.0
Generate user specific favourite list

Flagged list of events with favourites

Updated event list
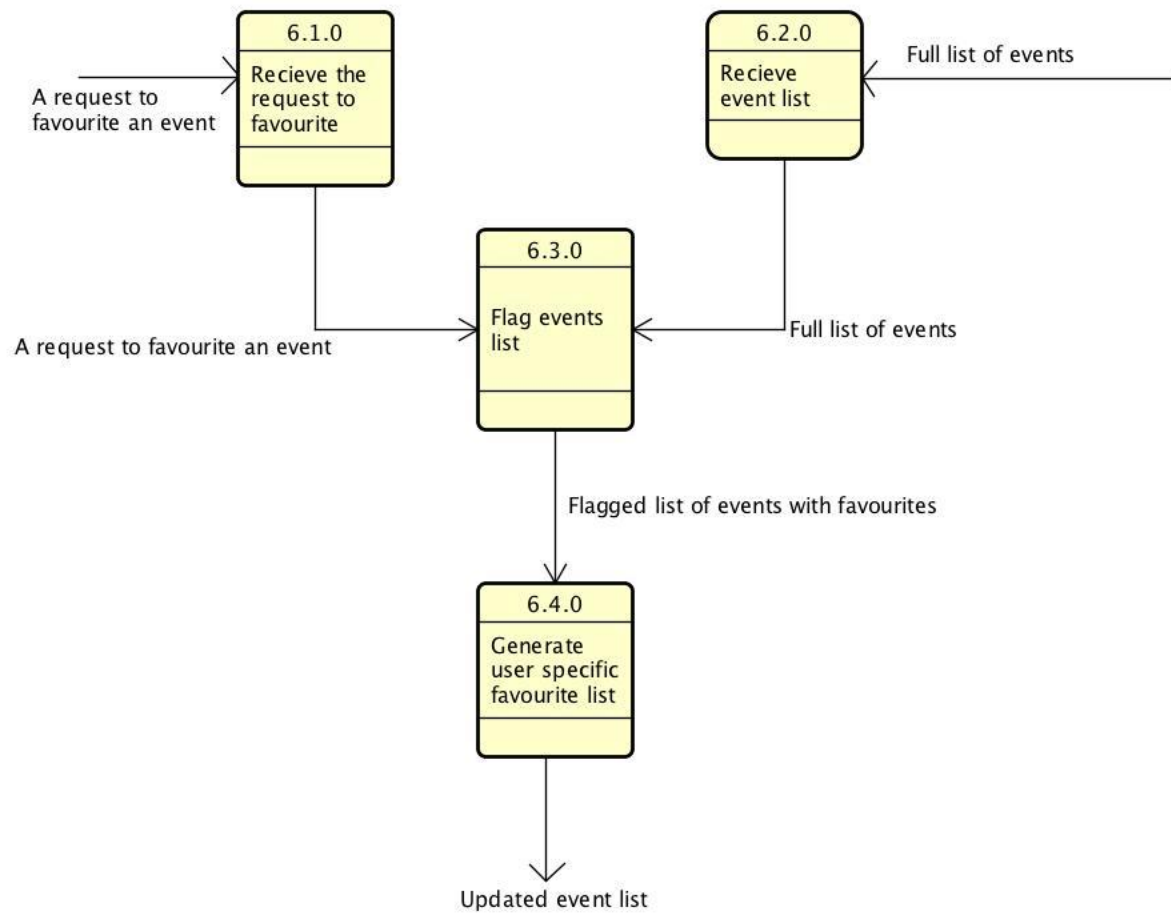
This diagram shows the sub-processes behind events being favourited by the users. When the events are favourited, they will be stored as such as a personalized events list for the user.

Level-1 Process 7.0

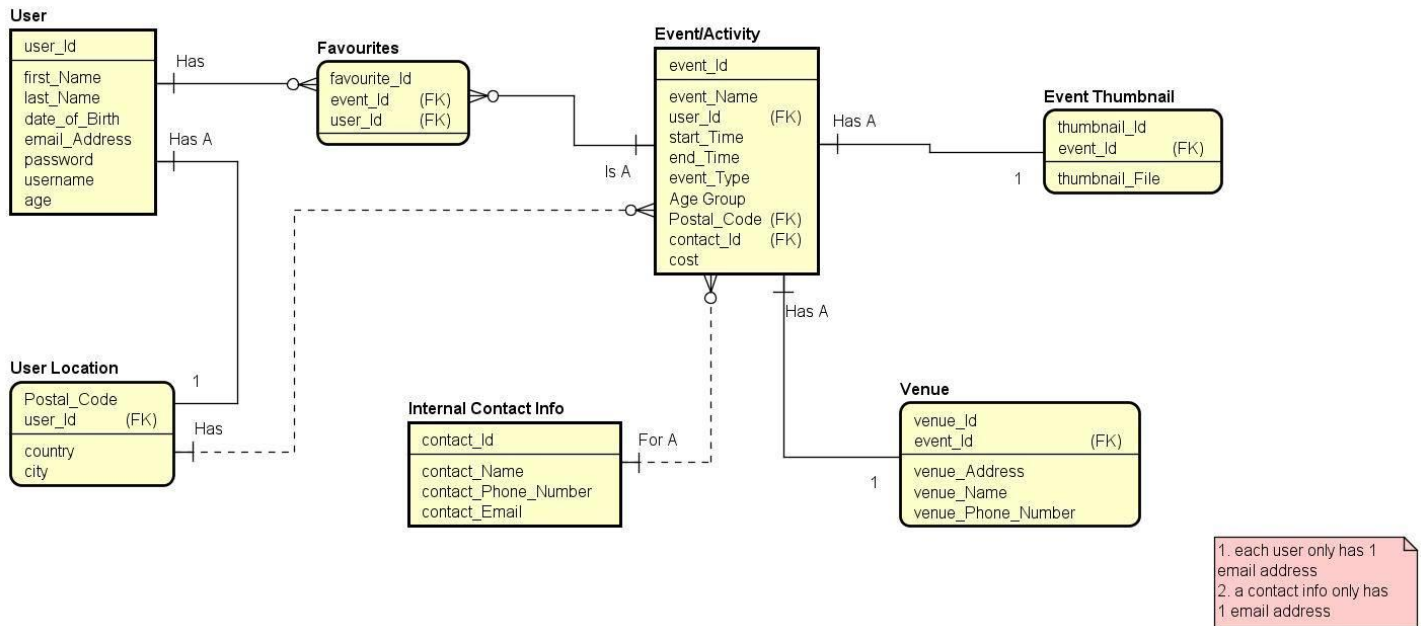Process 7.0 occurs when a user wants to view a full list of events/activities. After receiving the list from the database, the list will be sorted before being returned to the user.

Level-1 Process 8.0

Process 8.0 occurs when a user wants to view a full list of their favourited events/activities. After receiving the favourited list from the database, the list will be sorted before being returned to the user.

2.0 ER Diagram

User
user_Id
first_Name
last_Name
date_of_Birth
email_Address
password
username
age

Has

Favourites
favourite_Id
event_Id (FK)
user_Id (FK)

Has A

Event/Activity
event_Id
event_Name
user_Id (FK)
start_Time
end_Time
event_Type
Age Group
Postal_Code (FK)
contact_Id (FK)
cost

Has A

Event Thumbnail
thumbnail_Id
event_Id (FK)
thumbnail_File

1

Is A

Has A

User Location
Postal_Code
user_Id (FK)
country
city

1

Has

Internal Contact Info
contact_Id
contact_Name
contact_Phone_Number
contact_Email

For A

Venue
venue_Id
event_Id (FK)
venue_Address
venue_Name
venue_Phone_Number

1

1. each user only has 1 email address
2. a contact info only has 1 email address

There are 7 tables in the ER diagram: User, Favourites, User Location, Internal Contact Info, Event/Activity, Venue, and Event Thumbnail. Each user has a specific user location. Each event has a single venue, an event thumbnail and contact person. Each user has a list of favorited events specific to them.