FACULTY OF COMPUTING
UTM Johor Bahru

Phase 2 (P2) – Database Conceptual Design (ERD)

<NEXSCHOLAR EVENT/TICKET MANAGEMENT SYSTEM>

SECD2523-03 DATABASE

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1. INTRODUCTION

Due to the rising use of social media, we have actually come up with an idea for the usage of postgraduate students to do research and connect with real people who share the same interest together. This helps them to actually connect with one another and do research. Not only that, Nexscholar can be used to also book events and purchase tickets. This could make postgraduates' life easier where they don't have to break their heads thinking about where they should go to make their research worthwhile. This app would give them notifications if there’s an upcoming event where they can buy the tickets straight away from the app itself. Sounds convenient isn't it?

Encik Najmi can only post it and acts as middle-men. This event can be booked online and subscribed to tickets. Want to know how to attend the event.The event details would be sent to whatsapp. Anyone would be able to join the event. This would be a good opportunity for undergraduate students just in case if they want to get more informations.The tickets can be purchased online from any account.

We want to improve Nexsholar performance in terms of online banking, order stocking, and analysis of order data. By this Nexscholar would be better and many other postgraduate students will enjoy using this application.

2.0 DFD (to-be)

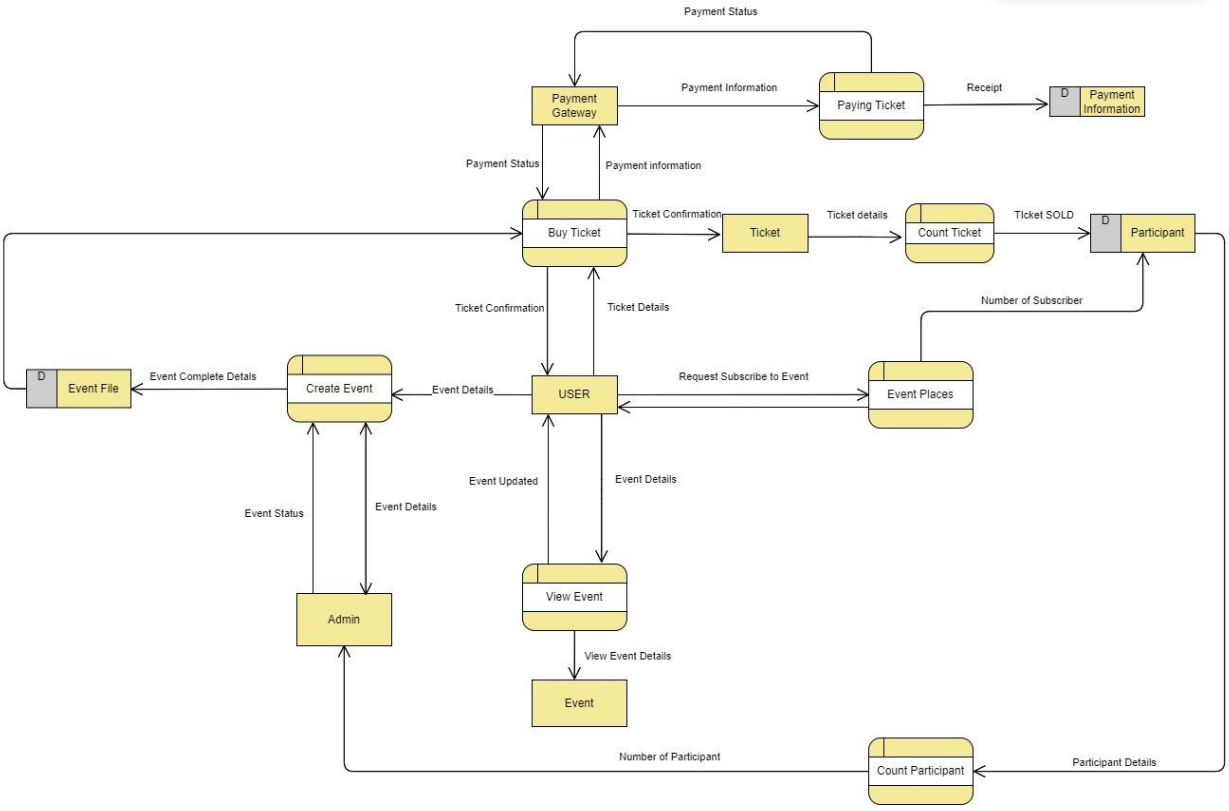


Figure 1.Data Flow Diagram (TO-BE)

3. DATA & TRANSACTION REQUIREMENT

3.1 Proposed Business Rule

1. Events can only be added to the system by authorized administrators or organizers.
2. Accurate documentation of the event's name, location, date, and type (paid or free) is required.
3. Track the total amount of money received for events that are paid for precisely.
4. In order to participate in events, users must register.
5. Preserve user data and maintain privacy.
6. Preserve the integrity, accuracy, and consistency of your data.
7. Limit the ability to delete or modify events.
8. Facilitate the creation of participant and financial reports as well as efficient data queries.

3.2 Proposed Data & Transactional

Organizer

Data Requirement

- Event Information
  The organizer of the event or user of nexScholar that wants to hold any event. The event details required by the admin to see. The data stored include event id, event name, organizer/user id, total participants, event location, event start and end date, one-day event indicator, event address and type of event whether free or paid.

- Financial Information
  Event’s financial information. If the event is free there is no data required. If the event is paid, total money collected is required.

Transaction Requirements

Data Entry
- Add Event

Data Update/Delete
- Update Event
- Delete Event
- Update total Money Collected

Data Query

- View Event Details
- Financial Reports
- Participants Information

Admin

Data Requirement

- Event Information
  The organizer of the event or user of nexScholar that wants to hold any event. The event details required by the admin to see. The data stored include event id, event name, organizer/user id, total participants, event location, event start and end date, one-day event indicator, event address and type of event whether free or paid.

- Financial Information
  Event's financial information. If the event is free there is no data required. If the event is paid, total money collected is required.

- User Information
  Registered or unregistered user of nexScholar. The user information is required for the admin to see the participants in particular events. The data consists of first name, last name, phone number, email address, gender and matric number(if any).

Transaction Requirements

Data Entry
- Add Event

Data Update/Delete
- Update Event
- Delete Event

Data Query
- View Event Details
- List All Events
- Financial Reports

- Participants Information
- Filter Events

User

Data Requirement

- User Information
  Registered or unregistered user of nexScholar. The user information is required for the admin to see the participants in particular events. The data consists of first name, last name, phone number, email address, gender and matric number(if any).

- Event Information
  The organizer of the event or user of nexScholar that wants to hold any event. The event details required by the admin to see. The data stored include event id, event name, event location, event description and type of event whether free or paid.

- Registration Information
  The registration for a particular event for registered/unregistered users. The data required is registration id, user id(if any), event id, registration date and payment status(if paid).

Transaction Requirements

Data Entry
- Registration
- Join Event
- Event Subscription

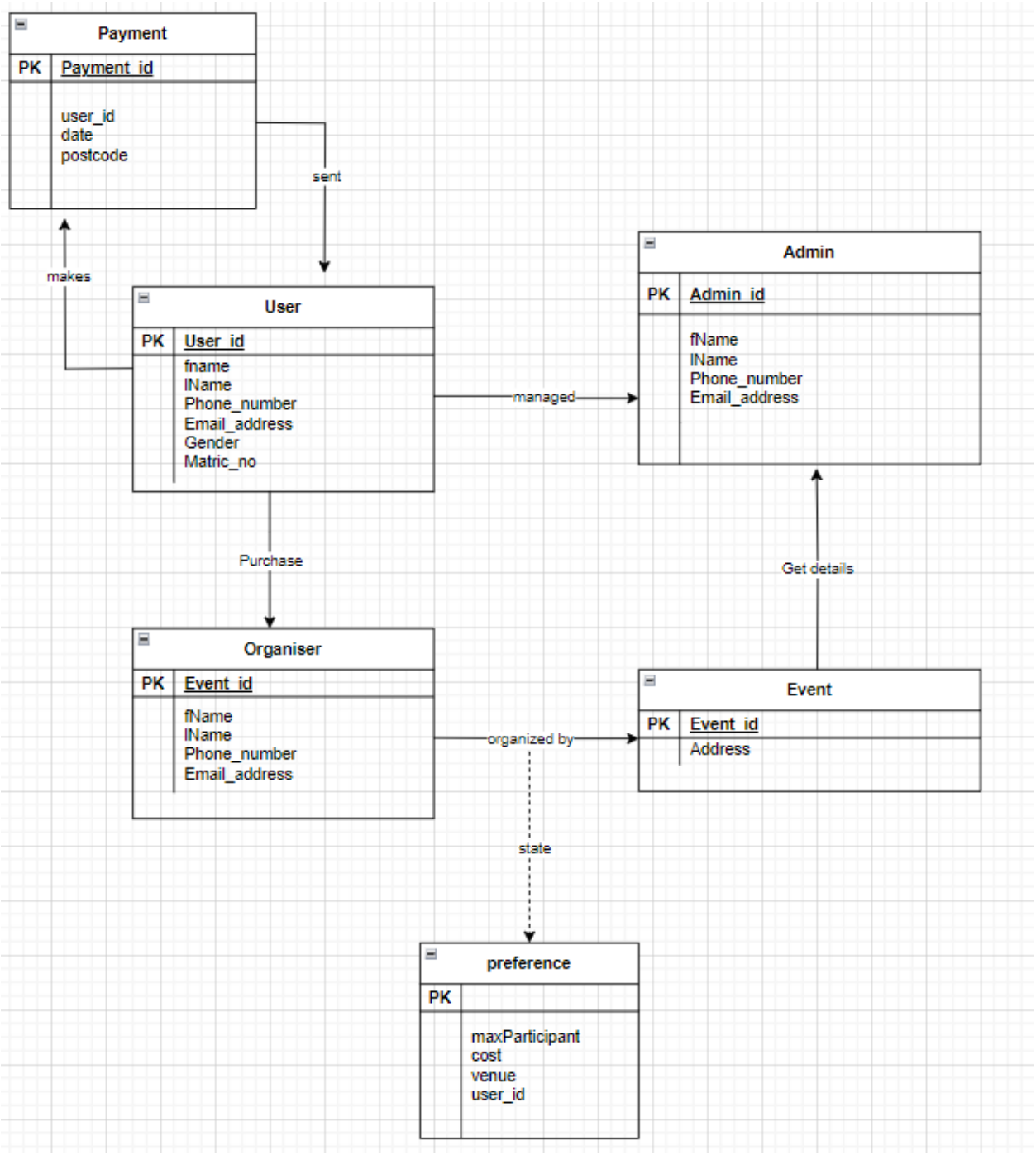
Data Update/Delete
- Event Subscription
- Payment Process
- Calendar Integration

Data Query
- Confirmation Email

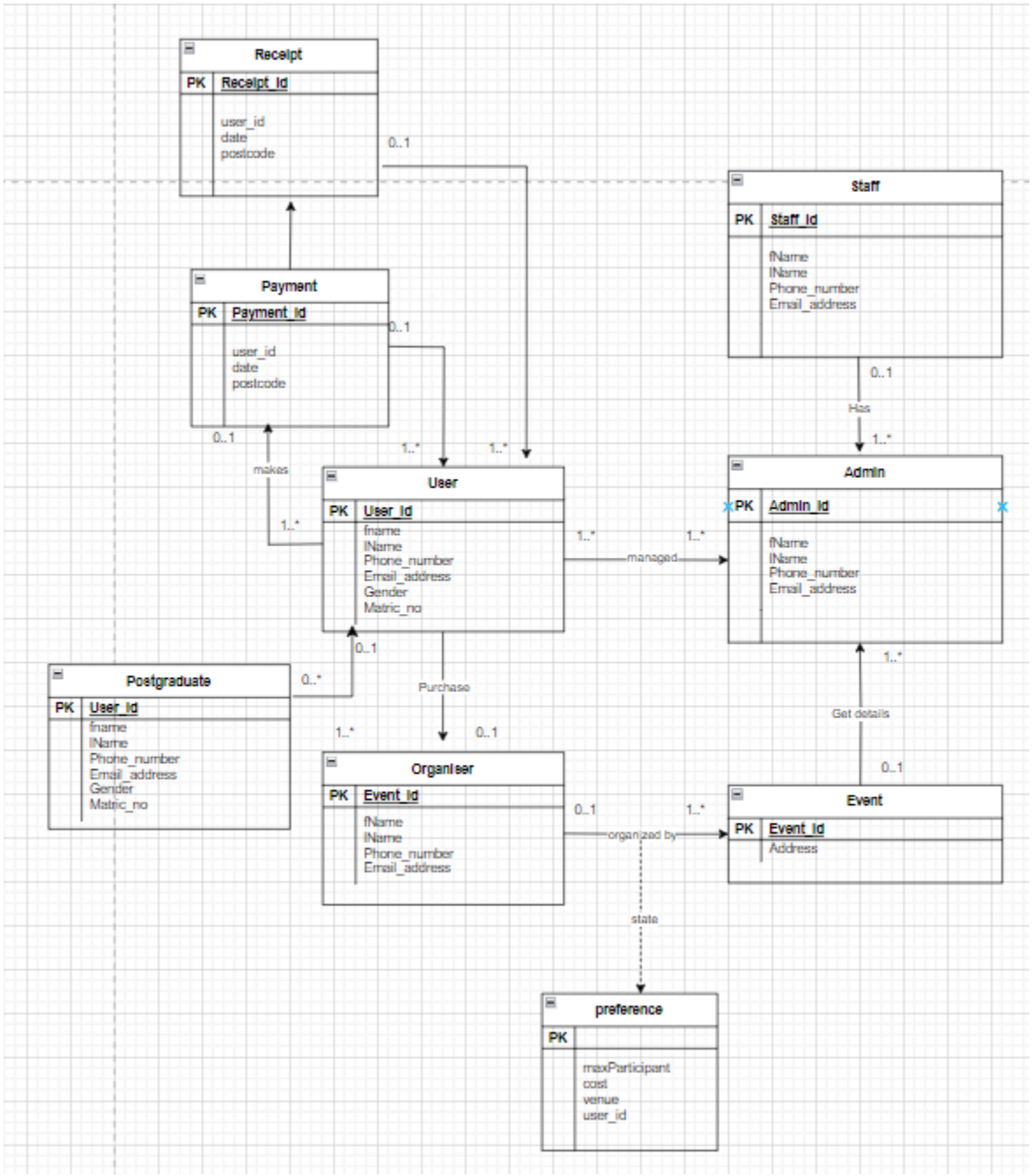
- Calendar Integration
- Calendar Reminder
- Ticket
- Post-Event Follow-up

4. DATABASE CONCEPTUAL DESIGN

4.1 Conceptual ERD Design



4.2 EERD


Receipt
PK
Receipt_Id
user_id
date
postcode
0..1
Staff
PK
Staff_Id
fName
lName
Phone_number
Email_address
Payment
PK
Payment_Id
user_id
date
postcode
0..1
0..1
0..1
Has
1..*
1..*
makes
User
PK
User_Id
fname
lName
Phone_number
Email_address
Gender
Matric_no
1..*
Admin
PK
Admin_Id
fName
lName
Phone_number
Email_address
1..*
1..*
managed
0..1
Postgraduate
PK
User_Id
fname
lName
Phone_number
Email_address
Gender
Matric_no
0..*
Purchase
1..*
0..1
1..*
Get details
0..1
Organiser
PK
Event_Id
fName
lName
Phone_number
Email_address
0..1
1..*
organized by
Event
PK
Event_Id
Address
state
preference
PK
maxParticipant
cost
venue
user_id

5. DATA DICTIONARY

Entity	Attributes	Description	Data types	Nullity
Receipt	user_id date postcode	Unique id for the user The date of payment Address postcode	varchar2(20) varchar2(15) number(10)	No No No
Admin	Admin_id {pk} fName lName phone_number email_address	Unique id for admin staff First name of admin Last name of admin Admin phone number Admin home address	varchar2(20) varchar2(10) varchar2(15) varchar2(15) varchar2(50)	No No No No No
Payment	payment_id {pk} user_id {fk} postcode	Unique id for customer history Another unique id to search for user Address postcode	varchar2(20) varchar2(20) number(10)	No No No
Postgraduate	postgraduate_user_id {pk} fName lName phone_number email_address matric_no	Unique id for postgraduate user First name of user Last name of user User phone number Email address of the user Unique string for the students	varchar2(20) varchar2(10) varchar2(15) varchar2(15) varchar2(50) varchar2(10)	No No No No No No
Organizer	event_id {pk} fName lName Phone_number email_address	Unique id for the event First name of organizer Last name of organizer Phone number of organizer Organizer email address	varchar2(20) varchar2(10) varchar2(15) varchar2(15) varchar2(50)	No No No No No
Event	Event_id {pk} maxParticipant cost Venue user_id	Unique id for the event How many participant can attend How much to pay for the event Where the event is held on The id of participant	varchar2(20) number(3) number(40) varchar2(50) varchar2(20)	No No No No No

6. SUMMARY

In summary this phase show the systematic design process for implementing the create event and buy ticket function for the NexScholart website,this encompasses essential diagram such as Data Flow Diagram(DFD),Entity-Relationship Diagrams (ERD), Enhanced Entity-Relationship Diagrams (EERD),and a comprehensive Data Dictionary. The DFD provides an overall view of how the system is going to be,ERD and EERD show advanced concept for more detailed representation.The data dictionary serves as a reference/guide of the documentation to ensure clear understanding of the document.