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UNIVERSITI TEKNOLOGI MALAYSIA

**FACULTY OF COMPUTING**  
UTM Johor Bahru

**FACULTY OF COMPUTING**  
**SESSION 2023/2024**  
**SEMESTER 1**

**SECD2523-03 DATABASE (PANGKALAN DATA)**

**PHASE 2 - DATABASE CONCEPTUAL DESIGN (ERD)**

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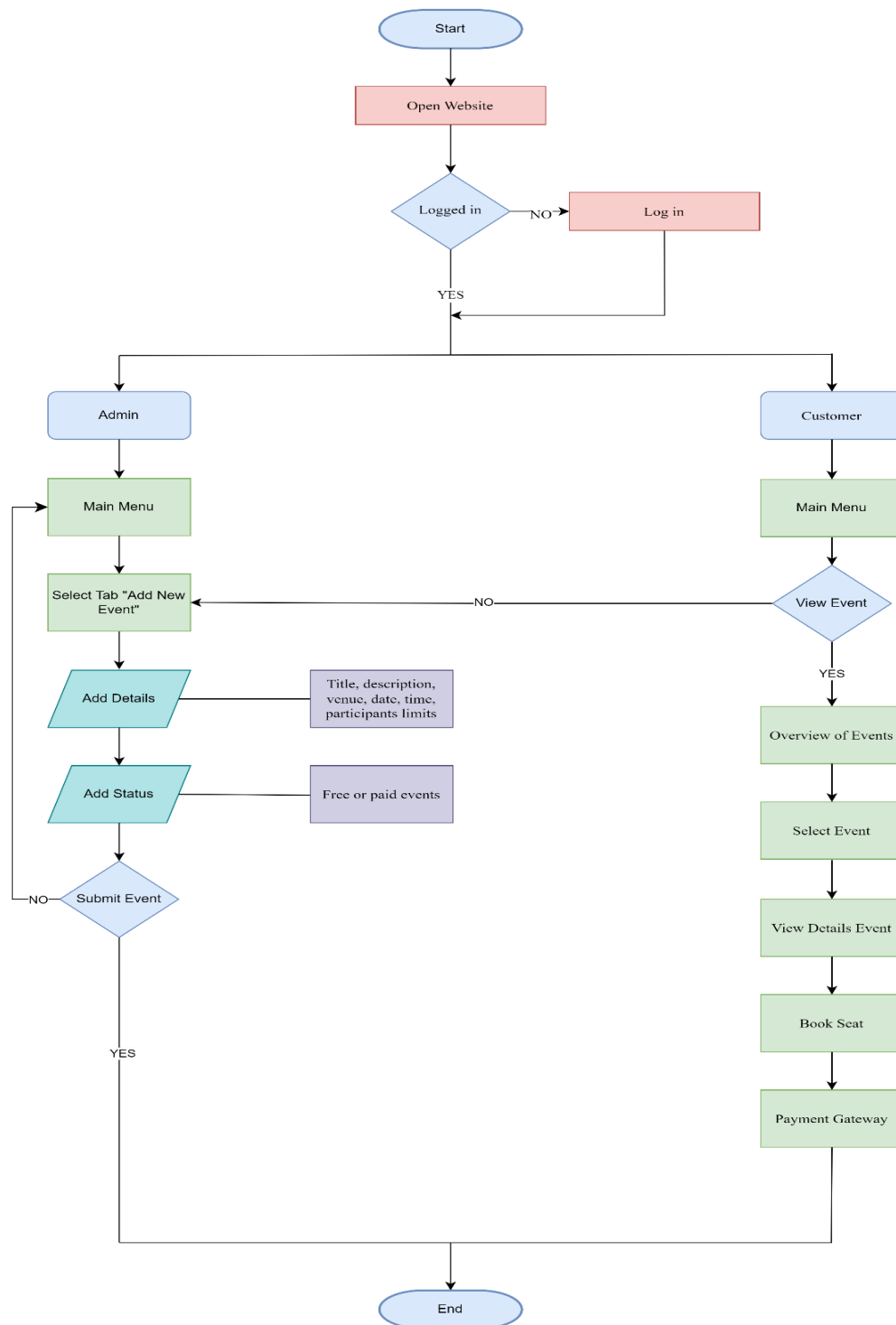
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## **1.0 Introduction**

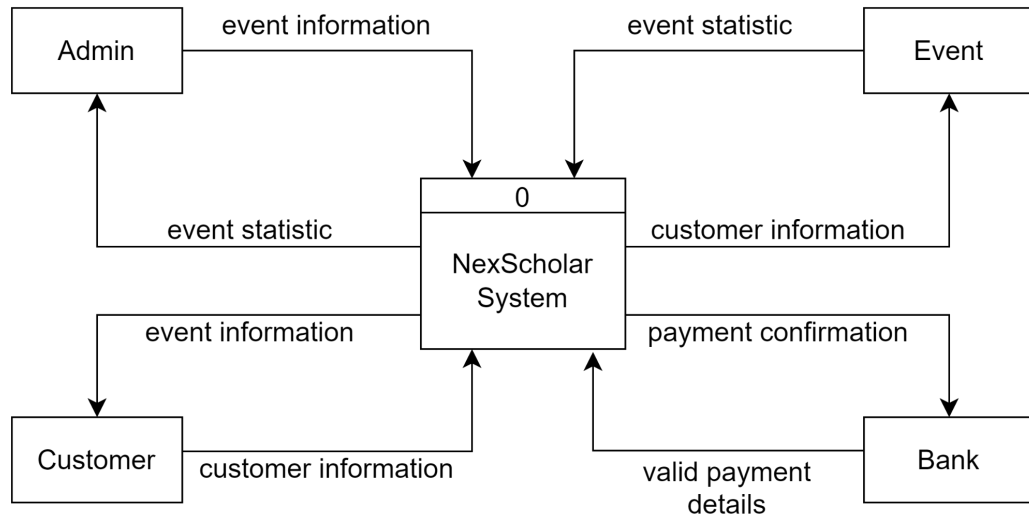
The goal of this project is to provide a user-friendly ticketing system that streamlines the event registration, ticket selection, ticket purchase, and event production processes, allowing organizers and registered users to create their own events. Users will be able to choose events of interest, subscribe to them with ease, select tickets, and complete the purchasing process with ease due to the system. The development of a full-service and accessible ticketing system would greatly improve the event management procedure, offering a simplified and convenient experience to event organizers, ticket buyers, and attendees. The system will help make the event environment more productive and well-organized, which will benefit events of all kinds.

## 2.0 DFD (to-be)

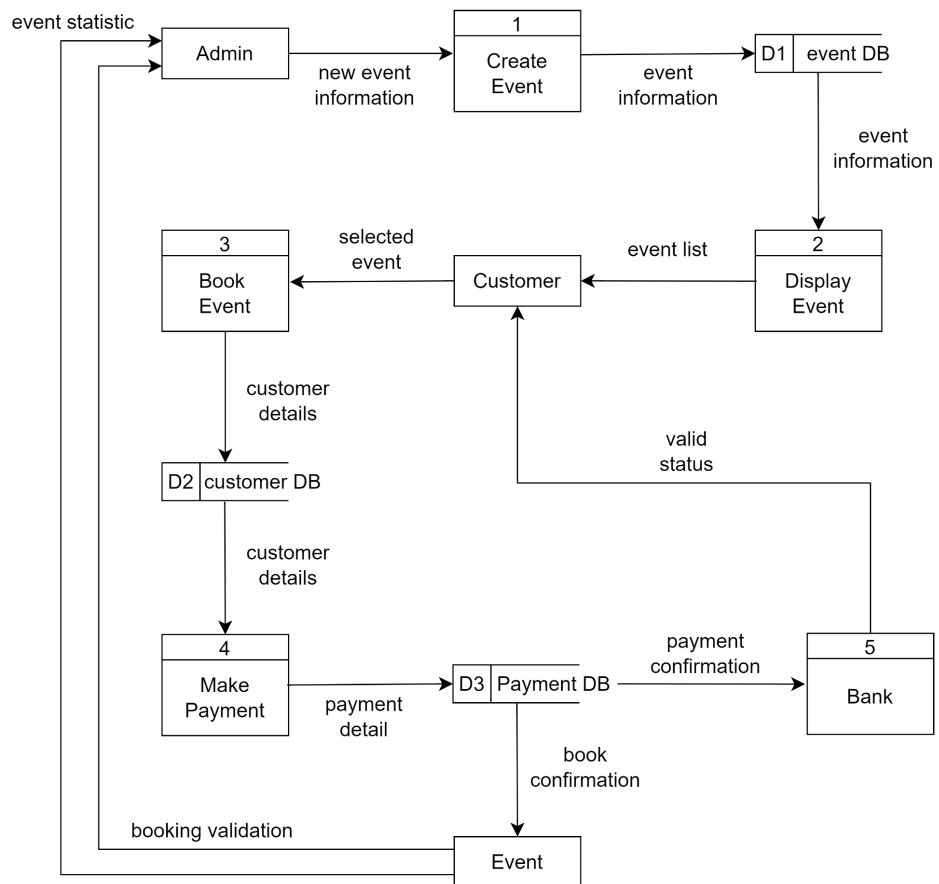
### Flowchart



## Context Diagram



## Parent Diagram (Level 0 Diagram)



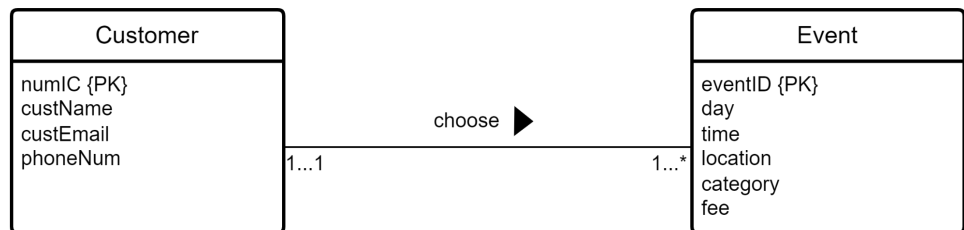
### 3.0 Data & Transaction Requirement

#### 3.1 Proposed business rule

##### 1. Customer choose events

Customers can choose many event while Event might be chosen by many customers

‘Choose’ events are **one-to-many (1...\*)** relationship



##### 2. Admin creates an event

Admin can create one or many events while Events can be created by only one admin

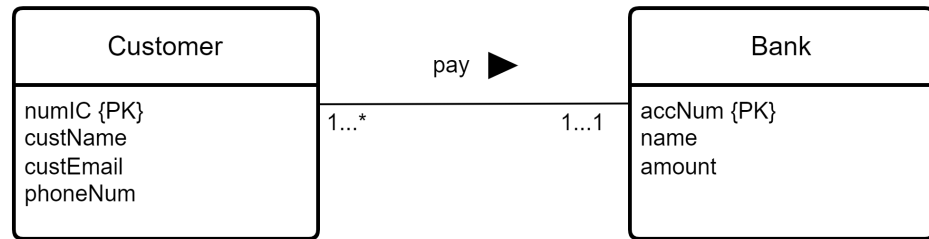
‘Create’ an event is a **many-to-one (\*...1)** relationship



### 3. Customer makes a payment

Customer can pay to only one bank while Bank can receive payments from many customers

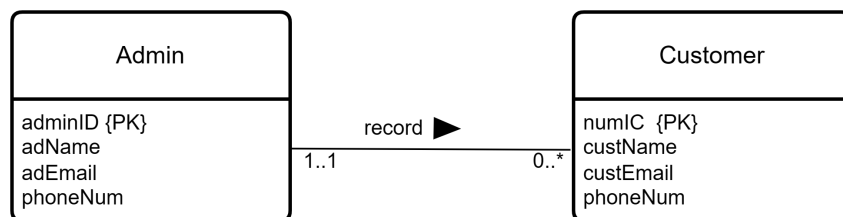
‘Pay’ is a **one-to-one (1:1)** relationship



### 4. Admin records customer's data

Admin can record none or many customer's information while Customer's information can be recorded by only one admin

‘Record’ is a **one-to-many (1:\*)** relationship



### 3.2 Proposed data & transactional

Entity	Data to be stored
Admin	<ol style="list-style-type: none"><li>1. Admin Id</li><li>2. Name</li><li>3. Email</li><li>4. Phone Number</li></ol>
Customer	<ol style="list-style-type: none"><li>1. IC Number</li><li>2. Name</li><li>3. Email</li><li>4. Phone Number</li></ol>
Event	<ol style="list-style-type: none"><li>1. Event ID</li><li>2. Day</li><li>3. Location</li><li>4. Time</li><li>5. Category</li><li>6. Fee</li></ol>
Bank	<ol style="list-style-type: none"><li>1. Account Number</li><li>2. Name of cardholder</li><li>3. Amount</li></ol>

#### Admin View

##### Data Entry

- Enter the admin detail

##### Data Update/Delete

- Update/delete the details of the admin in the system
- Update the new event details in the system

##### Data Query

- List the details of the event booking transaction made by the customer
- List the details of the event



## **Customer View**

### Data Entry

- Enter the customer's details

### Data Update/Delete

- Update/delete the details of the customer in the system

### Data Query

- List the details of the event joined by the customer

## **Event View**

### Data Entry

- Enter the new event details

### Data Update/Delete

- Update/delete the details of the event in the system

### Data Query

- List the details of the event
- List the booking transactions

## **Bank View**

### Data Entry

- Enter bank account details
- Enter payment details

### Data Update/Delete

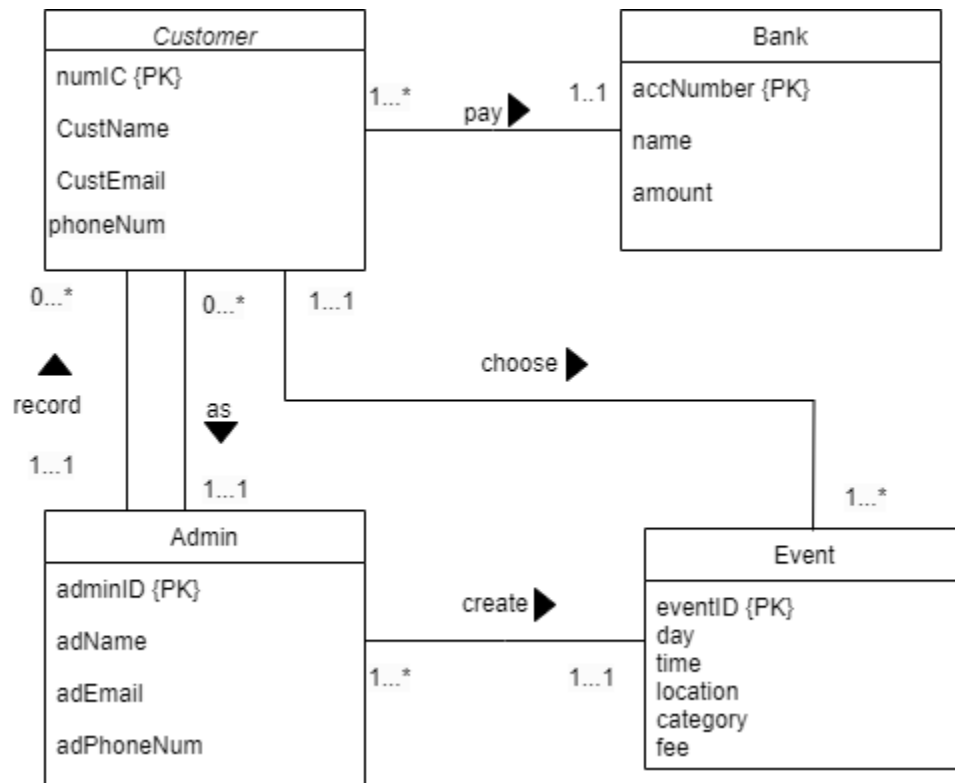
- Update/delete bank account details
- Update/delete customer transaction

### Data Query

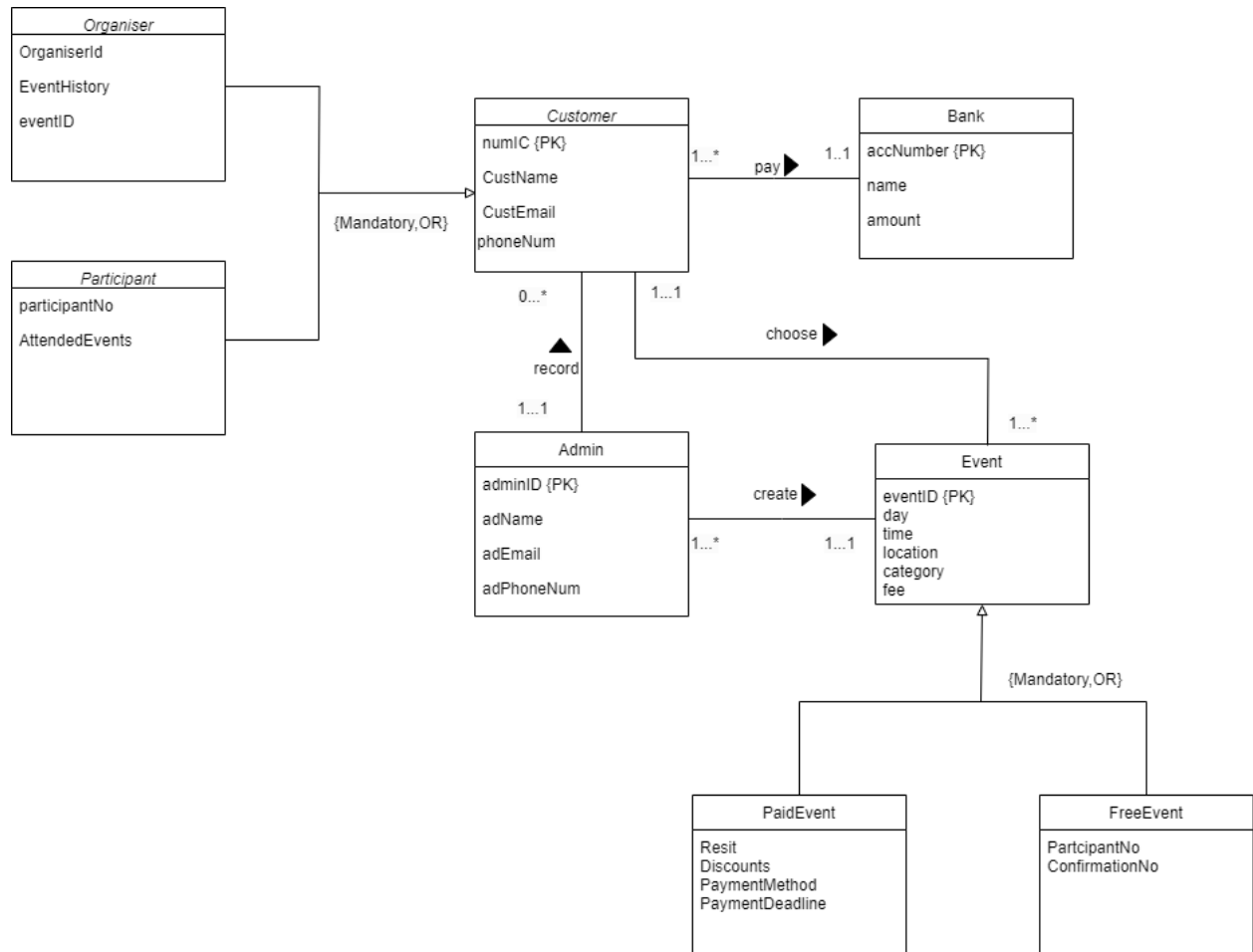
- List the details of the bank account
- List transactions history

## 4.0 Scope Of The Project

### 4.1 Conceptual ERD



## 4.2 Enhanced ERD (EERD)



## 5.0 Data Dictionary

Entity Name	Attributes	Description	Data Type & Length	Nullity
<b>Admin</b>	adminID {PK}	Unique ID for the admin	Varchar2 (5)	No
	adName	Name of the admin		
	firstName	Name of the admin	Varchar2 (20)	No
	lastName	Name of the admin	Varchar2 (10)	No
	adEmail	Admin's email	Varchar2 (20)	No
	adPhoneNum	Admin's phone number	Varchar2 (10)	No
<b>Customer</b>	numIC {PK}	Unique ID for the customer	Varchar2 (12)	No
	custName	Name of the customer	Varchar2 (20)	No
	custEmail	Customer's email	Varchar2 (20)	No
	phoneNum	Customer's phone number	Varchar2 (10)	No
<b>Event</b>	eventID {PK}	Unique ID for the event	Varchar2 (10)	No
	day	Day of the event	Varchar2 (10)	No
	location	Location of the event	Varchar2 (20)	No
	time	Time of the event	Date (10)	No
	category	Category of the event	Varchar2 (10)	No
	fee	Fee of the event	Number (10)	No
<b>Bank</b>	accNum {PK}	Unique ID for the bank	Varchar2 (15)	No
	name	Name of the cardholder	Varchar2 (20)	No
	amount	Price of the event	Number (10 , 2)	No

## **6.0 Summary**

The project aims to improve NexScholar by offering user-submitted event details for expedited approval and publication, hence addressing the issue of manual posting. In addition, a solution for streamlined registration and seat reservation with a user-friendly interface, secure payment integration, and increased administrative capabilities is proposed. The development of these solutions was guided by insights gained via virtual interviews with stakeholders. The requirement analysis includes customer and admin procedures, as well as functional and non-functional needs, with the goal of making NexScholar a more inclusive, user-friendly, and efficient platform for event planning and attendance.