

Online Concert Reservation

Created By

Mooping

Group Members

Jednipit Tantaletong 60070503411

Janejira Saichamchan 60070503412

Sippanon Utakaruda 60070503476

Tanespol Assavachaiporn 60070503485

Present To

Prof.Phond Phunchong

Prof.Khajonpong Akkarajitsakul

King Mongkut's University of Technology Thonburi

CPE231 Database systems, Faculty of Computer Engineering

Project Scope and Definition

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Definition

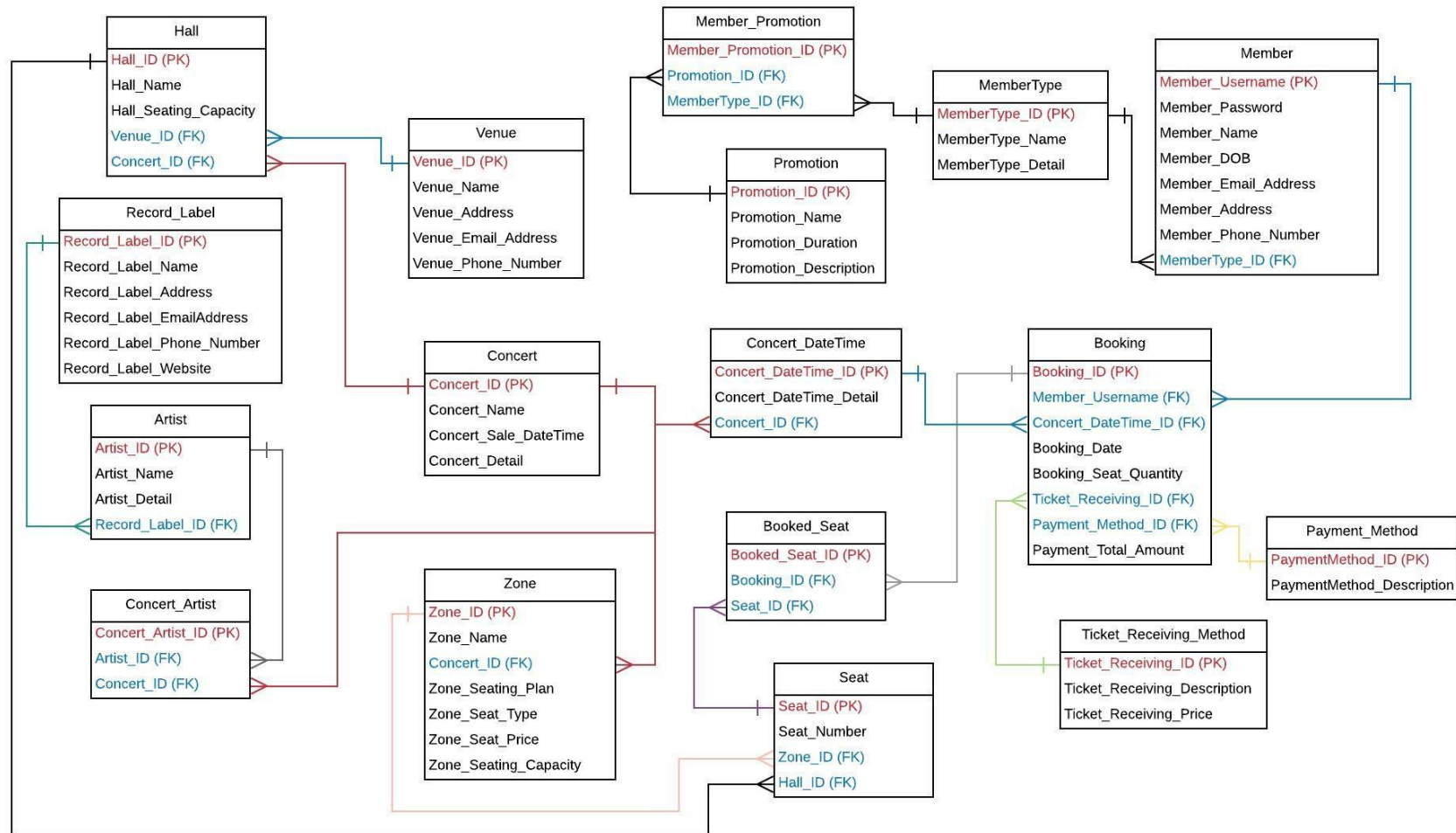
Our project is to design the database for online concert reservation in Thailand. Anyone can visit our website and look for details of artists, their record labels, venues, concerts, concerts' zones and seats. People who want to book for concerts' seats have to register and login to our website first. Then, they can select the concert, concert's date and time their preferred zone and seats to book a seat for their concert.

Scope

Member can do many bookings and each booking can book many seats. One member type can be applied to many members and can have many member promotions. One promotion can be applied to many member promotion. One venue has many halls. One concert can have many concert artists, show times and zones. Each zone and halls can have many seats. Each seat can also be booked many times. One record label can have many artists and one artists can be in many concert artists. One payment and ticket receiving method can apply to many bookings.

ER-Diagram

ER-Diagram



User Role and Access to Entities

User Roles and Access to Entities

✦ **Admin**

Employees who are responsible for manage the overall system and website. They control the access to data and feature of both guests and members. They have the right to add the information of artists, record labels, venues, concerts, dates and times of concerts, concerts' zones, concerts' seats, ticket receiving method, payment method and new promotions to the website. Admin have a right permission to access, control, edit and remove any data at any time.

Access to Entities

- Able to access, view, add, delete, and edit every entity in the database.

✦ **Members**

People who are already registered and can login to our website. Members can view and edit their own personal information. They can also look for details of artists, record labels, concerts, concerts' zones, seats and promotions. Lastly, they can book for concerts' seats and choose method of ticket receiving and payment.

Access to Entities

- Member

View and Edit: Every Attribute

-MemberType

View only: Every Attribute

-Member_Promotion

View only: Every Attribute

-Promotion

View only: Every Attribute

-Booking

View and Edit: Every Attribute

-Ticket_Receiving_Method

View only: Every Attribute

-Payment_Method

View only: Every Attribute

-Artist

View only: Every Attribute

-Concert_Artist

View only: Every Attribute

-Record_Label

View only: Every Attribute

-Venue

View only: Every Attribute

-Concert

View only: Every Attribute

-Concert_DateTime

View only: Every Attribute

-Concert_Artist

View only: Every Attribute

-Zone

View only: Every Attribute

-Seat

View only: Every Attribute

-Booked_Seat

View and Edit: Every Attribute

✦ **Guests**

People who visit our website but aren't our members.

Guests can look for details of artists, record labels, concerts, concerts' zones and seats, but they can't book for concerts' seats.

Access to Entities

-Artist

View only: Every Attribute

-Concert_Artist

View only: Every Attribute

-Record_Label

View only: Every Attribute

-Venue

View only: Every Attribute

-Concert

View only: Every Attribute

- Concert_DateTime

View only: Every Attribute

-Zone

View only: Every Attribute

-Seat

View only: Every Attribute

Data Dictionary

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
Member		Stores each member information				
	Member_Username	PK	Varchar	N	Member' identification to verify member before booking	
	Member_Password		Varchar	N	A confidential word or phrase used to allow authorization to the website	
	Member_Name		Varchar	N	Member's name that match with identification card	
	Member_DOB		Date	N	Member's date of birth	
	Member_Email_Address		Varchar	N	Member's Email address	
	Member_Address		Varchar	N	Member's Address	
	Member_Phone_Number		Varchar	N	Member's phone number	
	Member_Type_ID		Varchar	N	Surrogate for member type identification	MemberType
Booking		Stores each booking information				
	Booking_ID	PK	Varchar	N	Surrogate key for booking identification	
	Member_Username	FK	Varchar	N	Member' identification	Member

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	Concert_DateTime_ID	FK	Varchar	N	Surrogate key for identify date and time of concert	Concert_Date Time
	Booking_Date		Date	N	Date of booking	
	Booking_Seat_Quantity		Int	N	Quantity of booking seats	
	Ticket_Receiving_Method_ID	FK	Varchar	N	Surrogate key for shipping method identification	Ticket_Receiving_Method
	Payment_Method_ID	FK	Varchar	N	Surrogate key for payment method identification	Payment_Method
	Payment_Total_Amount		Float	N	Total price of the booking	
Payment_Method		Stores each payment method information				
	PaymentMethod_ID	PK	Varchar	N	Surrogate key for payment method identification	
	PaymentMethod_Description		Varchar	Y	Detail of payment method	
Ticket_Receiving_Method		Stores each ticket receiving method information				
	Ticket_Receiving_ID	PK	Varchar	N	Surrogate key that show the ticket receiving method identification	

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	<i>Ticket_Receiving_Description</i>		<i>Varchar</i>	<i>Y</i>	<i>Detail of ticket receiving method</i>	
	<i>Ticket_Receiving_Price</i>		<i>Float</i>	<i>Y</i>	<i>Price of this ticket receiving method</i>	
Record_Label		Stores each record label information				
	<i>Record_Label_ID</i>	<i>PK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key of record label identification</i>	
	<i>Record_Label_Name</i>		<i>Varchar</i>	<i>N</i>	<i>Name of the record label</i>	
	<i>Record_Label_Address</i>		<i>Varchar</i>	<i>N</i>	<i>Record label's address</i>	
	<i>Record_Label_Email_Address</i>		<i>Varchar</i>	<i>N</i>	<i>Record label's email address</i>	
	<i>Record_Label_Phone_Number</i>		<i>Varchar</i>	<i>N</i>	<i>Record label's phone number</i>	
	<i>Record_Label_Website</i>		<i>Varchar</i>	<i>Y</i>	<i>Record label's website</i>	
Artist		Stores each artist information				
	<i>Artist_ID</i>	<i>PK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for artist identification</i>	
	<i>Artist_Name</i>		<i>Varchar</i>	<i>N</i>	<i>Name of artist</i>	
	<i>Artist_Detail</i>		<i>Varchar</i>	<i>Y</i>	<i>Detail of artist</i>	
	<i>Record_Label_ID</i>	<i>FK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key of record label identification</i>	<i>Record_Label</i>
Concert		Stores each concert information				
	<i>Concert_ID</i>	<i>PK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for concert identification</i>	
	<i>Concert_Name</i>		<i>Varchar</i>	<i>N</i>	<i>Name of the concert</i>	

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	Concert_Sale_DateTime		DateTime	N	Date and Time of ticket sales	
	Concert_Detail		Varchar	Y	Detail of the concert	
Venue		Store each venue information				
	Venue_ID	PK	Varchar	N	Surrogate key for venue identification	
	Venue_Name		Varchar	N	Venue's name	
	Venue_Email_Address		Varchar	N	Venue's email address	
	Venue_Address		Varchar	N	Venue's address	
	Venue_Phone_Number		Varchar	N	Venue's phone number	
Zone		Store zone information of each concert				
	Zone_ID	PK	Varchar	N	Surrogate key for zone identification	
	Zone_Name		Varchar	N	Zone's name	
	Concert_ID	FK	Varchar	N	Surrogate key for concert identification	Concert
	Zone_Seating_Plan		Image	N	Picture show seat plan of this zone	
	Zone_Seat_Type		Varchar	N	Type of seating in this zone	
	Zone_Seat_Price		Int	N	Price of seats in this zone	
	Zone_Seating_Capacity		Int	N	Seating capacity of this zone	
Seat		Stores seat information for each zone				

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	Seat_ID	PK	Varchar	N	Surrogate key for seat identification	
	Seat_Number		Varchar	Y	Seat Number	
	Zone_ID	FK	Varchar	N	Surrogate key for zone identification	Zone
	Hall_ID	FK	Varchar	N	Surrogate key for hall identification	Hall
Concert_DateTime		Stores date and time information of each concert				
	Concert_DateTime_ID	PK	Varchar	N	Surrogate key for identify show in concert	
	Concert_DateTime_Detail		DateTime	N	Date and time of concert which will be showed	
	Concert_ID	FK	Varchar	N	Surrogate key for concert identification	Concert
Booked_Seat		Stores seat selection of each booking				
	Booked_Seat_ID	PK	Varchar	N	Surrogate key for identify the booked seat in concert	
	Booking_ID	FK	Varchar	N	Surrogate key for booking identification	Booking

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	Seat_ID	FK	Varchar	N	Surrogate key for seat identification	Seat
Concert_Artist		Stores artists that will perform in each concert				
	Concert_Artist_ID	PK	Varchar	N	Surrogate key for identify artist that will perform in the concert	
	Artist_ID	FK	Varchar	N	Surrogate key for artist identification	Artist
	Concert_ID	FK	Varchar	N	Surrogate key for concert identification	Concert
Hall		Store each hall information				
	Hall_ID	PK	Varchar	N	Surrogate key for hall identification	
	Hall_Name		Varchar	N	Hall's name	
	Hall_Seating_Capacity		Int	N	Hall's seating capacity	
	Venue_ID	FK	Varchar	N	Surrogate key for venue identification	
	Concert_ID	FK	Varchar	N	Surrogate key for concert identification	
MemberType		Store each member type information				
	MemberType_ID	PK	Varchar	N	Surrogate key for member type identification	

Entity Name	Field Name	Key	Data Type	NULL (Y/N)	Description	Reference
	<i>MemberType_Name</i>		<i>Varchar</i>	<i>N</i>	<i>Member type's name</i>	
	<i>MemberType_Description</i>		<i>Varchar</i>	<i>N</i>	<i>Member type's detail</i>	
Promotion		Store each promotion information				
	<i>Promotion_ID</i>	<i>PK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for promotion identification</i>	
	<i>Promotion_Name</i>		<i>Varchar</i>	<i>N</i>	<i>Promotion's name</i>	
	<i>Promotion_Duration</i>		<i>Varchar</i>	<i>N</i>	<i>Promotion's duration</i>	
	<i>Promotion_Detail</i>		<i>Varchar</i>	<i>N</i>	<i>Promotion's detail</i>	
Member_Promotion		Store promotion information for each member type				
	<i>Member_Promotion_ID</i>	<i>PK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for member promotion identification</i>	
	<i>Promotion_ID</i>	<i>FK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for promotion identification</i>	<i>Promotion</i>
	<i>MemberType_ID</i>	<i>FK</i>	<i>Varchar</i>	<i>N</i>	<i>Surrogate key for member type identification</i>	<i>Membertype</i>

Complex Form

Concert Register Form

Concert Registration Form

Concert ID : 0340023

Concert name : Tiger Bieber World Tour 2020

Concert date and time : 13 Feb 2020

14 Feb 2020

Add

Concert venue : Royal Paragon Hall

Venue hall : Hall 1

Add

Concert sale ticket date : 10 Jan 2020

Concert sale ticket time : 10:00

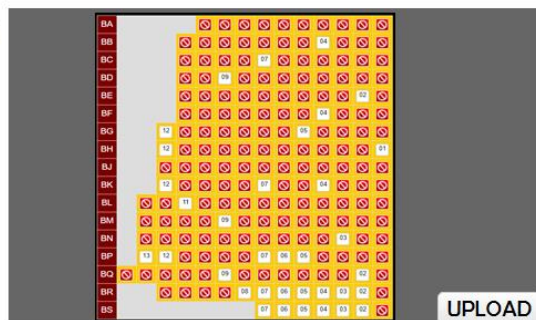
Concert detail : Both previous Bangkok shows by Tiger Bieber in 2011 and 2015 were fast sell outs. Now he returns with his new World Tour and a new show that is sure to delight old and new fans alike.

NEXT

Zone Management Form

Zone : B Price : 2500

Seating plan :



Seat ID : BB_04 BC_07 BC_09 ... BS_02

Seat count : 35

SUBMIT

Booking Form

Booking Form

Name : Tiger ZG

Booking ID : 112345678

Concert name : Blackpink world tour

Concert venue : Royal paragon hall Hall : C

Concert show date : 13 Jan 2019 Concert show time : 17:00 - 23:00

Concert seat plan :



Zone : A

Seat number : A-01 A-02 Seat quantity : 2

Ticket receiving method : EMS

Payment method : Credit card

Total : 10,000 Booking Date : 10 Dec 2018

SUBMIT

Concert Artist Management

Concert Artist Management

Concert Artist ID : 0000001

Concert ID : 0340023

Concert Name : Tiger Bieber World Tour 2020

Artist :

Artist	Artist ID
Tlger Bieber	0000001
Jui Watsingha	0000002
<input type="button" value="Add Artist"/>	

Member Promotion Management

Concert Artist Management

Promotion Manage ID : 0000001

Promotion ID : 0340023

Promotion Name : Summer Music Festival Discount

Member type :

Member type	Membertype ID
Bronze	1000000
Silver	1100000
<input type="button" value="Add Artist"/>	

Data Analysis

The Biggest Concert in 2018

Concert Name	Artist	Capacity
Rod Stewart Concert	Tiger Bieber	100,000
New York Phikharmonic Concert	Lalisa Lisa	70,000
Garth Brooks Concert	Jenie Kim	64,000
Steve Wozniak's Concert	Steve Gerrard	51,000
Summer Jam Concert	Jam Strawberry	48,000
Isle of Wright Concert	Toon Ativara	45,000
Simon & Garfunkel	Salmon Oni	30,000
Toronto SARS	Fuji Aka	28,000
Woodstock Concert	Stock Oodman	27,000
Blockbuster RockFest	Blaster Mangirl	26,500

Top 5 Concert That Have Most Booking

<i>Concert</i>	<i>Number of Booking</i>
<i>Tiger Bieber World Tour</i>	<i>10023</i>
<i>BlackPink World Tour</i>	<i>9820</i>
<i>Bodyslam in BKK</i>	<i>8900</i>
<i>Taylor in BKK</i>	<i>8503</i>
<i>Kamikaze World Tour</i>	<i>8231</i>

Top 10 Biggest Venue in Thailand

Name	Capacity
Rajamangala Stadium	50,000
AKTIV Square	40,000
Bangkok Arena	12,000
Impact Arena	12,000
Indoor Stadium Huamark	10,000
Chiang Mai International Exhibition & Convention Center	10,000
Bangkok International Trade & Exhibition Center	9,600
Chanchai Acadium	6,000
Korat Chatchai Hall	5,000
MCC Hall at The Mall Nakhon Ratchasima	4,000

Top 10 Most Expensive Concert Seat Price

Concert	Artist	Most expensive seat price
STONE HEDGE TOUR	THE ROLLING STONES	6240 BAHT
ONE STAR TOUR	ONE DIRECTION	4,200 BAHT
SUGAR TOUR	MAROON 5	3,640 BAHT
BIRD TOUR	EAGLES	3,540 BAHT
JUSTIN WORLD TOUR	JUSTIN TIMBERLAKE	3,390 BAHT
WATER TOUR	ROGER WATER	3,140 BAHT
NANI TOUR	BEYONCE	2,820 BAHT
MAC WORLD TOUR	FLETWOOD MAC	2,820 BAHT
PINK AT BKK	PINK	2,700 BAHT
BEATLE WORLD TOUR	PAUL MCCARTNEY/ THE BEATLES	2,410 BAHT

Most popular payment method

Payment method	Percent of people who choose this method
Credit Card	40.3%
Mobile Banking	23.5%
Counter Service	18.2%
Banking	13.8%
Other	4.2%

Record Label That Has the Most Artists

<i>Record label</i>	<i>Number of Artist</i>
<i>Small room</i>	<i>100</i>
<i>GMM Record</i>	<i>80</i>
<i>We</i>	<i>78</i>
<i>YG Entertainment</i>	<i>67</i>
<i>Kamikaze</i>	<i>56</i>
<i>R siam</i>	<i>50</i>
<i>SM</i>	<i>48</i>
<i>JYP Entertainment</i>	<i>43</i>
<i>What the Duck</i>	<i>40</i>
<i>Vivo</i>	<i>39</i>

Concert That Has the Most Artists

Concert's Name	Number of Artist
Coachhella	127
Tomorrowland	118
Bonnaroo	93
MAYA Music	87
Big mountain	85
SM Town Concert	73
YG Family Concert	71
Overcoat	65
Isle of Wright	61
Sonar	59
Glastonbury	53

Top 10 Most Expensive Booking

Member's Name	Concert	Price
Tiger ZG	BlackPink World tour	100,000
Alice ZG	Bodyslam in BKK	98,000
Nani ZG	ED Sheeran World tour	97,000
Jingjo ZG	Kamikaze World tour	89,000
Kingkong	Loso World tour	86,000
Billy Joel	Taylor in BKK	75,000
Micheal Jackson	Oni in BKK	70,000
Elton John	Sukiyaki World tour	68,000
Pink Floyd	Nobita in BKK	63,000
Sunny Sunnun	Irene in BKK	60,000

Most Popular Shipping Method

<i>Shipping Method</i>	<i>Percent</i>
<i>EMS</i>	<i>78%</i>
<i>Receive at Counter</i>	<i>9%</i>
<i>Receive at BTS</i>	<i>13%</i>

Artist That Has Most Concerts in 2018

Artist	Number of concerts
Celine Dion	20
Kenny Chesney	19
Dave Matthew Band	18
Elton John	18
Bruce Springsteen	17
The Rolling Stone	16
U2	14
Madonna	14
Britney spear	13
CHER	12

Top 5 Members That Have Most Bookings in 2018

<i>Member's Name</i>	<i>Number of Booking</i>
<i>Tiger ZG</i>	<i>19999</i>
<i>Pong Prajuab</i>	<i>19800</i>
<i>Pleum JingJo</i>	<i>8000</i>
<i>Music AongAng</i>	<i>7653</i>
<i>Aomsin Kormadi</i>	<i>4123</i>

Venue That Held the Most Concert in 2018

<i>Name</i>	<i>Concert</i>
<i>Rajamangala Stadium</i>	<i>78</i>
<i>AKTIV Square</i>	<i>64</i>
<i>Bangkok Arena</i>	<i>42</i>
<i>Impact Arena</i>	<i>38</i>
<i>Indoor Stadium Huamark</i>	<i>31</i>
<i>Chiang Mai International Exhibition & Convention Center</i>	<i>28</i>
<i>Bangkok International Trade & Exhibition Center</i>	<i>24</i>
<i>Chanchai Acadium</i>	<i>21</i>
<i>Korat Chatchai Hall</i>	<i>18</i>
<i>MCC Hall at The Mall Nakhon Ratchasima</i>	<i>11</i>