Assignment-5

Create Venue, Event, Customer and Booking class

Customers:

```
class customer:
    def __init__(self_firstname_lastname, email_phone_number_address):
        self.firstname_firstname
        self.lastname = lastname
        self.email_email
        self.phone_number_phone_number
        self.address=address

#getters
@property
def getfirstname(self):
    return self.customer_name

@property
def getlastname(self):
    return self.lastname

@property
def getemail(self):
    return self.email

@property
def getphone_number(self):
    return self.phone_number
```

```
@property
def getaddress(self):
    return self.address
#setters
@getfirstname.setter
def set_customer_name(self_firstname):
    self.firstname_firstname
@getlastname.setter
def setlastname(self, lastname):
    self.lastname = lastname
def set_email(self_email):
def set_phone_number(self_phone_number):
    self.phone_number=phone_number
@getaddress.setter
def setaddress(self, address):
    self.address = address
```

Event:

```
@property
def get_event_time(self):
    return self.event_time
@property
def get_venue_name(self):
    return self.venue_name
@property
def get_total_seats(self):
    return self.total_seats
@property
def get_avaliable_seats(self):
    return self.avaliable_seats
@property
def get_ticket_price(self):
    return self.ticket_price
@property
def get_event_type(self):
    return self.event_type
```

```
def set_event_name(self_event_name):
    self.event_name=event_name
def set_event_date(self_tevent_date):
   self.event_date_event_date
def set_event_time(self_event_time):
@get_venue_name.setter
def set_venue_name(self,venue_name):
    self.venue_name=venue_name
@get_total_seats.setter
def set_total_seats(self_total_seats):
   self.total_seats=total_seats
def set_avaliable_seats(self,avaliable_seats):
   self.avaliable_seats=avaliable_seats
def set_ticket_price(self_ticket_price):
    self.ticket_price_ticket_price
def set_event_type(self_event_type):
```

```
def print_event_info(self):
    print("event name: "_self.event_name)
    print("event_date: ", self.event_date)
    print("event_time: ", self.event_time)
    print("venue_name: ", self.venue_name)
    print("total_seats: ", self.total_seats)
    print("avaliable_seats: ", self.avaliable_seats)
    print("ticket_price: ", self.ticket_price)
    print("event_type: ", self.event_type)
```

Venue:

```
class venue:
    def __init__(self_venue_name_address):
        self.venue_name_venue_name
        self.address_address
   def print_venue_details(self):
        print("venue name: "_self.venue_name)
        print("address: "_self.address)
    # getters
    @property
   def get_venue_name(self):
        return self.venue_name
    @property
    def get_address(self):
        return self.address
    # setters
    @get_venue_name.setter
    def set_venue_name(self, venue_name):
        self.venue_name = venue_name
    @get_address.setter
    def set_address(self, address):
       self.address = address
```

Bookings:

```
class bookings:
   def __int__(self_event_id_num_tickets_total_cost_booking_date):
        self.event_id=event_id
        self.num_tickets=num_tickets
        self.total_cost=total_cost
        self.booking_date_booking_date
   @property
   def getevent_id(self):
        return self.event_id
   @property
   def getnum_tickets(self):
       return self.num_tickets
   @property
   def total_cost(self):
       return self.total_cost
   @property
   def booking_date(self):
       return self.booking_date
   @getevent_id.setter
   def setevent_id(self,event_id):
       self.event_id=event_id
   @getnum_tickets.setter
   def setnum_tickets(self,num_tickets):
       self.num_tickets=num_tickets
```

```
@total_cost.setter
def settotal_cost(self,total_cost):
    self.total_cost = total_cost

@booking_date.setter
def setbooking_date(self,booking_date):
    self.booking_date = booking_date
```

Exception:

throw the exception whenever needed and Handle in main method,

- 1. EventNotFoundException throw this exception when user try to book the tickets for Event not listed in the menu.
- 2. InvalidBookingIDException throw this exception when user entered the invalid bookingId when he tries to view the booking or cancel the booking.

```
class EventNotFoundException(Exception):
    pass

class TicketBookingSystem1():

def book_tickets_menu(self):
    try:
        eventname = input("Enter the event name: ")
        # Check if the event exists
        query1="select * from event where event_name=%s"
        cur.execute(query1_(eventname,))
        event=cur.fetchone()

if not event:
    raise EventNotFoundException(f"Event '{eventname}' not found in the menu.")

except EventNotFoundException as e:
    print(f"Error: {e}")
```

```
class InvalidBookingIDException(Exception):
    pass

def booking_details_menu(self):
    try:
        booking_id = input("Enter the booking ID: ")
        query1 = "select * from booking where booking_id=%s"
        cur.execute(query1_(booking_id,))
        booking = cur.fetchone()

    if not booking:
        raise InvalidBookingIDException(f"Invalid booking ID: {booking_id}")

    except InvalidBookingIDException as e:
        print(f"Error: {e}")

def event_exists(self, event_name):
    pass

def is_valid_booking_id(self, booking_id):
    pass
```

```
jif __name__ == "__main__":
    ticket = TicketBookingSystem1()
    ticket.book_tickets_menu()
    ticket.booking_details_menu()
```

Abstract method:

Create IBookingSystemRepository interface/abstract class which include following methods to interact with database.

- create_event(event_name: str, date:str, time:str, total_seats: int, ticket_price: float, event_type: str, venu: Venu): Create a new event with the specified details and event type (movie, sport or concert) and return event object and should store in database.
- getEventDetails(): return array of event details from the database.
- getAvailableNoOfTickets(): return the total available tickets from the database.
- calculate_booking_cost(num_tickets): Calculate and set the total cost of the booking.
- book_tickets(eventname:str, num_tickets, listOfCustomer): Book a specified number of tickets for an event. for each tickets customer object should be created and stored in array also should update the attributes of Booking class and stored in database.
- cancel_booking(booking_id): Cancel the booking and update the available seats and stored in database.
- get_booking_details(booking_id): get the booking details from database.

```
class IBookingSystemRepository:
    def create_event(self):
   def get_Event_Details(self):
   def get_avaliable_tickets(self):
    def book_tickets(self,num_tickets):
    def cancel_tickets(self):
class BookingSystemRepositoryImpl(IBookingSystemRepository):
    def create_event(self):
       return True
    def get_Event_Details(self):
    def get_avaliable_tickets(self):
    def book_tickets(self,num_tickets):
    def cancel_tickets(self):
       return True
```

DButil:

Create DBUtil class and add the following method.

• static getDBConn():Connection Establish a connection to the database and return Connection reference

Create TicketBookingSystem class and perform following operations:

• Create a simple user interface in a main method that allows users to interact with the ticket booking system by entering commands such as "create_event", "book_tickets", "cancel_tickets",

"get_available_seats,", "get_event_details," and "exit."

Ticket Booking System App:

```
class TicketBookingSystem:
   while True:
       print("1.create Event")
       print("6.exit")
       choice=input("select from above options: ")
       if choice=="1":
            b.create_event()
       elif choice=="2":
            num_tickets=input("enter the num_tickets")
            b.book_tickets(num_tickets)
       elif choice=="3":
            b.cancel_tickets()
       elif choice=="4":
            b.get_avaliable_tickets()
       elif choice=="5":
            b.get_event_details()
       elif choice=="6":
           break;
        else:
```

Create IBookingSystemRepository interface/abstract class which include following methods to interact with database.

- create_event(event_name: str, date:str, time:str, total_seats: int, ticket_price: float, event_type: str, venu: Venu): Create a new event with the specified details and event type (movie, sport or concert) and return event object and should store in database.
- getEventDetails(): return array of event details from the database.
- getAvailableNoOfTickets(): return the total available tickets from the database.
- calculate_booking_cost(num_tickets): Calculate and set the total cost of the booking.
- book_tickets(eventname:str, num_tickets, listOfCustomer): Book a specified number of tickets for an event. for each tickets customer object should be created and stored in array also should update the attributes of Booking class and stored in database.
- cancel_booking(booking_id): Cancel the booking and update the available seats and stored in database.
- get_booking_details(booking_id): get the booking details from database.

DataBase:

Create event:

```
class BookingSystemRepository(BookingSystemRepositoryImpl):
    def create_event(self):
        event_id=input("enter the id")
        event_name = input("Enter event name: ")
        date=self.get_current_date()
        time=self.get_current_time()
        total_seats = int(input("Enter total seats: "))
        ticket_price = float(input("Enter ticket price: "))
        event_type = input("Enter event type (movie, sport, concert): ")
        eve1={
            'event_id':event_id,
            'event_name': event_name,
            'event_date':date,
            'event_time':time,
            'total_Seats':total_seats,
            'ticket_price':ticket_price,
            'event_type':event_type
```

Output:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get available tickets
5.get event details
6.exit
select from above options: 1
enter the id12
Enter total seats: 500
Enter ticket price: 1500
Enter ticket price: 1500
Enter event type (movie, sport, concert): **sport**
(1, 'Bollywood Night Extravaganza', datetime.date(2024, 6, 17), datetime.timedelta(seconds=66600), 1, 59, 47, Decimal('250.00'), 'Concert', 101)
(2, 'Cricket Tournament Finals world cup', datetime.date(2024, 5, 20), datetime.timedelta(seconds=54000), 2, 15500, 15480, Decimal('2400.00'), 'Sports', 102)
(3, 'Classic Movie Marathon', datetime.date(2024, 7, 21), datetime.timedelta(seconds=6400), 4, 50, 45, Decimal('120.00'), 'Novie', 103)
(4, 'Live Stand-Up Comedy Show', datetime.date(2024, 5, 22), datetime.timedelta(seconds=6400), 4, 50, 45, Decimal('120.00'), 'Novie', 104)
(5, 'Football Championship', datetime.date(2024, 5, 13), datetime.timedelta(seconds=54000), 4, 50, 45, Decimal('120.00'), 'Novie', 104)
(6, 'Melodious Sufi Night', datetime.date(2024, 8, 10), datetime.timedelta(seconds=72000), 7, 50, 45, Decimal('120.00'), 'Concert', 105)
(7, 'Outdoor Movie Night', datetime.date(2024, 6, 25), datetime.timedelta(seconds=72000), 7, 50, 45, Decimal('160.00'), 'Novie', 106)
(8, 'Basketball Shomdom', datetime.date(2024, 7, 15), datetime.timedelta(seconds=6000), 8, 150, 145, Decimal('160.00'), 'Sports', 107)
(9, 'Folk Music Festival', datetime.date(2024, 9, 3), datetime.timedelta(seconds=61200), 9, 50, 47, Decimal('150.00'), 'Concert', 108)
(10, 'Tennis Championship asian cup', datetime.date(2024, 9, 11), datetime.timedelta(seconds=61200), 9, 50, 47, Decimal('150.00'), 'Concert', 108)
(11, 'cricket', datetime.date(2024, 2, 3), datetime.timedelta(seconds=61200), None, 500, No
```

Get event details:

```
def get_event_details(self):
    return self.all_events()

def all_events(self):
    query="select * from event"
    cur.execute(query)
    user = cur.fetchall()
    con.commit()
    for i in user:
        print(i)
```

Output:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get avaliable tickets
5.get event details
6.exit
select from above options:
(1, 'Bollywood Night Extravaganza', datetime.date(2024, 6, 17), datetime.timedelta(seconds=66600), 1, 50, 47, Decimal('250.00'), 'Concert', 101)
(2, 'Cricket Tournament Finals world cup', datetime.date(2024, 5, 20), datetime.timedelta(seconds=54000), 2, 15500, 15480, Decimal('2400.00'), 'Sports', 102)
(3, 'Classic Movie Marathon', datetime.date(2024, 7, 21), datetime.timedelta(seconds=68400), 3, 100, 95, Decimal('50.00'), 'Movie', 103)
(4, 'Live Stand-Up Comedy Show', datetime.date(2024, 5, 22), datetime.timedelta(seconds=68400), 4, 50, 45, Decimal('120.00'), 'Concert', 104)
(5, 'Football Championship', datetime.date(2024, 5, 1), datetime.timedelta(seconds=59400), 5, 100, 100, Decimal('80.00'), 'Sports', None)
(6, 'Melodious Sufi Night', datetime.date(2024, 8, 10), datetime.timedelta(seconds=72000), 7, 50, 45, Decimal('1200.00'), 'Concert', 105)
(7, 'Outdoor Movie Night', datetime.date(2024, 7, 15), datetime.timedelta(seconds=50400), 8, 150, 145, Decimal('150.00'), 'Movie', 106)
(8, 'Basketball Showdown', datetime.date(2024, 7, 15), datetime.timedelta(seconds=50400), 9, 50, 47, Decimal('150.00'), 'Sports', 107)
(9, 'Folk Music Festival', datetime.date(2024, 9, 3), datetime.timedelta(seconds=61200), 9, 50, 47, Decimal('150.00'), 'Concert', 108)
(10, 'Tennis Championship asian cup', datetime.date(2024, 9, 11), datetime.timedelta(seconds=45000), 10, 200, 190, Decimal('1000.00'), 'Sports', 109)
(11, 'ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=36553), None, 500, None, Decimal('1500.00'), 'sports', None)
```

Get available tickets:

```
def get_avaliable_tickets(self):
    return self.avaliable_tickets()
def avaliable_tickets(self):

    query="select avaliable_seats,event_name from event"
    cur.execute(query)
    user = cur.fetchall()
    con.commit()
    for i in user:
        print(i)
```

Output:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get avaliable tickets
5.get event details
6.exit
select from above options: 4
(47, 'Bollywood Night Extravaganza')
(15480, 'Cricket Tournament Finals world cup')
(95, 'Classic Movie Marathon')
(45, 'Live Stand-Up Comedy Show')
(100, 'Football Championship')
(49, 'Melodious Sufi Night')
(45, 'Outdoor Movie Night')
(145, 'Basketball Showdown')
(47, 'Folk Music Festival')
(190, 'Tennis Championship asian cup')
(None, 'ipl')
```

Create customers:

```
def get_all_customers(self):
    query="select * from customer"
    cur.execute(query)
    return cur.fetchall()

def unique_customer_id(self):
    return len(self.get_all_customers())+1
```

Book tickets:

```
def book_tickets(self,num_tickets:int):
   self.get_event_details()
    event_name = (input("enter the event name"))
       query="select event_name from event_where event_name=%s"
       cur.execute(query (event_name,))
       event=cur.fetchone()
       if not event:
           print(f"Error: {event_name} not found")
       self.create_customer()
       customer_id = self.unique_customer_id()
       event_id = input("enter the event id")
       num_ticket = num_tickets
       query = "select ticket_price from event where event_id=%s "
       cur.execute(query, (event_id,))
       res = cur.fetchone()
       res = res[0]
       total_cost = int(num_tickets) * res
       booking_date = self.get_current_date()
       booking_id = self.unique_booking_id()
```

```
def get_all_bookings(self):
    query = "select * from booking"
    cur.execute(query)
    return cur.fetchall()

def unique_booking_id(self):
    return len(self.get_all_bookings()) + 1
```

Output:

Book tickets:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get available tickets
5.get event details
6.exit
select from above options:
enter the num_tickets
(1, 'Bollywood Night Extravaganza', datetime.date(2024, 6, 17), datetime.timedelta(seconds=66600), 1, 50, 47, Decimal('250.00'), 'Concert', 101)
(2, 'Cricket Tournament Finals world cup', datetime.date(2024, 5, 20), datetime.timedelta(seconds=54000), 2, 15500, 15400, Decimal('2400.00'), 'Sports', 102)
(3, 'Classic Movie Marathon', datetime.date(2024, 7, 21), datetime.timedelta(seconds=6400), 4, 50, 45, Decimal('120.00'), 'Concert', 104)
(5, 'Football Championship', datetime.date(2024, 5, 2), datetime.timedelta(seconds=70200), 5, 100, 90, 50, 40, Decimal('120.00'), 'Concert', 104)
(6, 'Melodious Sufi Night', datetime.date(2024, 5, 1), datetime.timedelta(seconds=70200), 6, 50, 49, Decimal('120.00'), 'Goncert', 105)
(7, 'Outdoor Movie Night', datetime.date(2024, 6, 25), datetime.timedelta(seconds=70200), 7, 50, 45, Decimal('150.00'), 'Goncert', 106)
(8, 'Basketball Showdown', datetime.date(2024, 7, 15), datetime.timedelta(seconds=6400), 8, 150, 145, Decimal('150.00'), 'Sports', 107)
(9, 'Folk Music Festival', datetime.date(2024, 9, 3), datetime.timedelta(seconds=6400), 8, 150, 145, Decimal('150.00'), 'Sports', 107)
(10, 'Tennis Championship asian cup', datetime.date(2024, 9, 11), datetime.timedelta(seconds=6400), 10, 200, 190, Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=6400), 9, 50, 47, Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=6500), 10, 200, 190, Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=6500), 10, 200, 190, Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=6500), 10, 200, 190, Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date(2024, 2, 4), datetime.timedelta(seconds=65000), 'Decimal('1500.00'), 'Sports', 109)
(11, 'Ipl', datetime.date
```

Customer table:

```
(1, 'Aditya Verma', 'aditya@gmail.com', '1234567890', 101)
(2, 'Sneha Patel', 'sneha@gmail.com', '1234567891', 102)
(3, 'Aryan Singh', 'aryan@gmail.com', '1234567892', 103)
(4, 'Kavita Gupta', 'kavita@gmail.com', '1234567893', 104)
(5, 'Rahul Sharma', 'rahul@gmail.com', '1234567894', None)
(6, 'Priya Mishra', 'priya@gmail.com', '1234567895', 105)
(7, 'Vikram Malhotra', 'vikram@gmail.com', '1234567896', 106)
(8, 'Anjali sharma', 'anjali@gmail.com', '1234567000', 107)
(9, 'Neha Kapoor', 'neha@gmail.com', '1234567898', 108)
(10, 'Ravi Verma', 'ravi@gmail.com', '1134567000', 109)
(11, 'akash devaki', 'akash@gmail.com', '1478523691', None)
(12, 'sai teja', 'sai@gmail.com', '1478523692', None)
(13, 'ram', 'ram@gmail.com', '123457', 10)
(14, 'shiv', 'shiv@gmail.com', '125879', 11)
```

Booking Table:

```
(10, 13, 5, 5, Decimal('400.00'), datetime.date(2024, 2, 4))
(11, 14, 5, 5, Decimal('400.00'), datetime.date(2024, 2, 4))
(101, 1, 1, 3, Decimal('750.00'), datetime.date(2024, 1, 10))
(102, 2, 2, 20, Decimal('48000.00'), datetime.date(2024, 1, 12))
(103, 3, 3, 5, Decimal('250.00'), datetime.date(2024, 1, 15))
(104, 4, 4, 5, Decimal('600.00'), datetime.date(2024, 1, 17))
(105, 6, 6, 1, Decimal('200.00'), datetime.date(2024, 2, 20))
(106, 7, 7, 5, Decimal('375.00'), datetime.date(2024, 2, 25))
(107, 8, 8, 5, Decimal('300.00'), datetime.date(2024, 3, 5))
(108, 9, 9, 3, Decimal('450.00'), datetime.date(2024, 3, 7))
(109, 10, 10, 10, Decimal('10000.00'), datetime.date(2024, 3, 10))
```

cancel tickets:

```
def cancel_tickets(self):
       avaliable_seats=100
       booking_id=int(input("enter the booking_id"))
       query="select booking_id from booking where booking_id=%s"
       cur.execute(query (booking_id,))
       book=cur.fetchone()
       if not book:
           print(f"Error {booking_id} not found")
       cur.execute(sql, (booking_id,))
       num_tickets = cur.fetchone()
       num_tickets = num_tickets[0]
       query="delete from booking where booking_id=%s "
       cur.execute(query,(booking_id,))
       cur.execute(qu, (booking_id,))
       print(f"after canceling {num_tickets} the avaliable tickets are {avaliable_seats}")
       con.close()
```

Output:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get avaliable tickets
5.get event details
6.exit
select from above options: 3
enter the booking_id10
after canceling 5 the avaliable tickets are 105
```

Booking_table:

```
(11, 14, 5, 5, Decimal('400.00'), datetime.date(2024, 2, 4))
(101, 1, 1, 3, Decimal('750.00'), datetime.date(2024, 1, 10))
(102, 2, 2, 20, Decimal('48000.00'), datetime.date(2024, 1, 12))
(103, 3, 3, 5, Decimal('250.00'), datetime.date(2024, 1, 15))
(104, 4, 4, 5, Decimal('600.00'), datetime.date(2024, 1, 17))
(105, 6, 6, 1, Decimal('200.00'), datetime.date(2024, 2, 20))
(106, 7, 7, 5, Decimal('375.00'), datetime.date(2024, 2, 25))
(107, 8, 8, 5, Decimal('300.00'), datetime.date(2024, 3, 5))
(108, 9, 9, 3, Decimal('450.00'), datetime.date(2024, 3, 7))
(109, 10, 10, 10, Decimal('10000.00'), datetime.date(2024, 3, 10))
```

customer table:

```
(1, 'Aditya Verma', 'aditya@gmail.com', '1234567890', 101)
(2, 'Sneha Patel', 'sneha@gmail.com', '1234567891', 102)
(3, 'Aryan Singh', 'aryan@gmail.com', '1234567892', 103)
(4, 'Kavita Gupta', 'kavita@gmail.com', '1234567893', 104)
(5, 'Rahul Sharma', 'rahul@gmail.com', '1234567894', None)
(6, 'Priya Mishra', 'priya@gmail.com', '1234567895', 105)
(7, 'Vikram Malhotra', 'vikram@gmail.com', '1234567896', 106)
(8, 'Anjali sharma', 'anjali@gmail.com', '1234567000', 107)
(9, 'Neha Kapoor', 'neha@gmail.com', '1234567898', 108)
(10, 'Ravi Verma', 'ravi@gmail.com', '1134567000', 109)
(11, 'akash devaki', 'akash@gmail.com', '1478523691', None)
(12, 'sai teja', 'sai@gmail.com', '1478523692', None)
(14, 'shiv', 'shiv@gmail.com', '125879', 11)
```

Exit:

```
1.create Event
2.book_tickets
3.cancel tickets
4.get avaliable tickets
5.get event details
6.exit
select from above options: 6
exiting the system
Thank you
```

Submitted By: Devaki Akash