CARRIER DOME TICKETING SYSTEM

PROJECT IMPLEMENTATION REPORT

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CONTENTS

PROJECT SUMMARY

'Carrier Dome Ticketing System' is an online system developed to digitalize the various processes involved in booking a match ticket. The booking process also involves booking a meal plan, reserving a parking spot. The purpose of this project is to make the experience of buying a game ticket more user-friendly. It combines all the previously mentioned processes in one system in the form of booking specifications and stores the customer data in a database.

The current system does not allow customers to book the meal plan, parking spot and seats of their choice before-hand. They need to reach the dome well before the game starts to select their preferred choices. The problem with this is that it creates a lot of chaos before the game. There is a huge queue on the counter for selecting meals. Parking slots are manually allotted on first come first basis and creates a havoc as the parking space gets occupied at its full potential. If people do not find a slot they need to make other arrangements for their vehicles. All this occupies a lot of time and efforts unnecessarily. These major drawbacks would be overcome by the new online ticketing system using a database.

The new online ticketing system for the Carrier Dome comes with a series of options to choose while booking the game ticket. This is designed such that it would reduce the waiting time of the customers, the chaos at the counters and the inconvenience caused to the customers. It would allow the user to select a meal plan which they would just be collecting from the food services at the Dome providing their Order ID. Next, users would get an option to reserve a parking spot online during booking. In the situation where there is no parking spot left, the system would notify the same during the booking process. This allows the users to find an alternative way to commute to the Dome. This database would help the employees at the Dome to have a better-managed event and reduce the difficulties arising due to last minute chaos. A potential feature which can be added is a Kiosk System which can be installed outside the Dome for customers to book a ticket just before the event.

This online ticketing system helps the Dome Management as well in a number of ways. The availability of all the data in one place makes it easy to manage the bookings and the finances of the Dome. The staff required for event management is reduced which saves the labor cost. Furthermore, the availability of a database for the customers gives scope for analytics. Trends in the reservations of the tickets can be observed and this can be used to improve the services, give promotional offers and anticipate the revenue from a potential game event.

The proposed project is for the following personnel

1. Employees at the Dome: these guys would be needing the system to manage the event better, arrange for the necessary services, track the sales and revenue more systematically than before
2. Customers buying a ticket: the customers would be able to make better reservations. They would be able to view the information about the available seats, parking slots, meal plans from these systems while booking which makes the process easier and more user-friendly.

BUSINESS RULES

1. A customer can make only one order per game
2. One order can contain a maximum of 5 tickets
3. If an order has more than one tickets and that order is cancelled, all the tickets get cancelled
4. In case of cancellations, refund would be initiated if cancelled 24 hours prior to the game time
5. A Syracuse University student gets 20% discount on the original price of the ticket
6. A premium ticket holder gets a complimentary parking spot along with the ticket
7. A VIP ticket holder gets a complimentary parking spot and meal plan along with the ticket
8. A person can update his ticket specifications until 5 hours prior to the game time

ENTITY AND ATTRIBUTE TABLES

1. CUSTOMER – This entity captures information about the customers who are making a reservation to a game ticket.

ENTITY NAME: CUSTOMER	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Customer_ID	Varchar(10)	NOT NULL	Unique identifier of the customer
	First_Name	Varchar(10)	NOT NULL	First name of the customer
	Last_Name	Varchar(10)	NOT NULL	Last name of the customer
	Email	Varchar(20)	NOT NULL	Email address of the customer
	City	Varchar(10)	NOT NULL	The city in which the customer lives
	Age	Int	NOT NULL	Age of the customer
	Student	Varchar(3)	NOT NULL	Customer is a Syracuse University student? Yes/No

2. MATCH – This entity captures information about the game event that is taking place in the carrier dome

ENTITY NAME: MATCH	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Match_ID	Varchar(10)	NOT NULL	Unique identifier of the Match
	Team1	Varchar(10)	NOT NULL	The name of the first team
	Team2	Varchar(10)	NOT NULL	The name of the second team
	Game_Date	Date	NOT NULL	Date on which event is scheduled

	Game_Time	Varchar(20)	NOT NULL	Time when the game starts

3. CUSTORDER – This entity contains the orderline of the customers

ENTITY NAME: CUSTORDER	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
Foreign Key	Customer_ID	Varchar(10)	NOT NULL	Unique identifier of the Customer
Foreign Key	Match_ID	Varchar(10)	NOT NULL	Unique identifier of the Match
	No_of_tickets	int	NOT NULL	No of tickets ordered
	Order_Date	Date	NOT NULL	Date on which ticket booked
	Order_Time	Varchar(20)	NOT NULL	Time stamp of the booking

4. TICKET – This entity stores the data for tickets order by a customer

ENTITY NAME: TICKET	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Ticket_ID	Varchar(10)	NOT NULL	Unique identifier of the Ticket
Primary Key, Foreign Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
	Class	Varchar(20)	NOT NULL	The type of ticket purchased: VIP, Premium, Economy

5. SEAT – This entity stores the information

ENTITY NAME: SEAT	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Seat_Zone	Varchar(5)	NOT NULL	The zone in the carrier dome
Primary Key	Seat_Number	int	NOT NULL	The seat number in a particular zone
Foreign Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
Foreign Key	Ticket_ID	Varchar(10)	NOT NULL	Unique identifier of the Ticket

6. MEAL – This stores the data about the meal plan ordered by the customers

ENTITY NAME: MEAL	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Meal_ID	Varchar(10)	NOT NULL	Unique identifier of the Meal
Foreign Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
Foreign Key	Ticket_ID	Varchar(10)	NOT NULL	Unique identifier of the Ticket
	Meal_Type	Varchar(5)	NOT NULL	The type of the meal

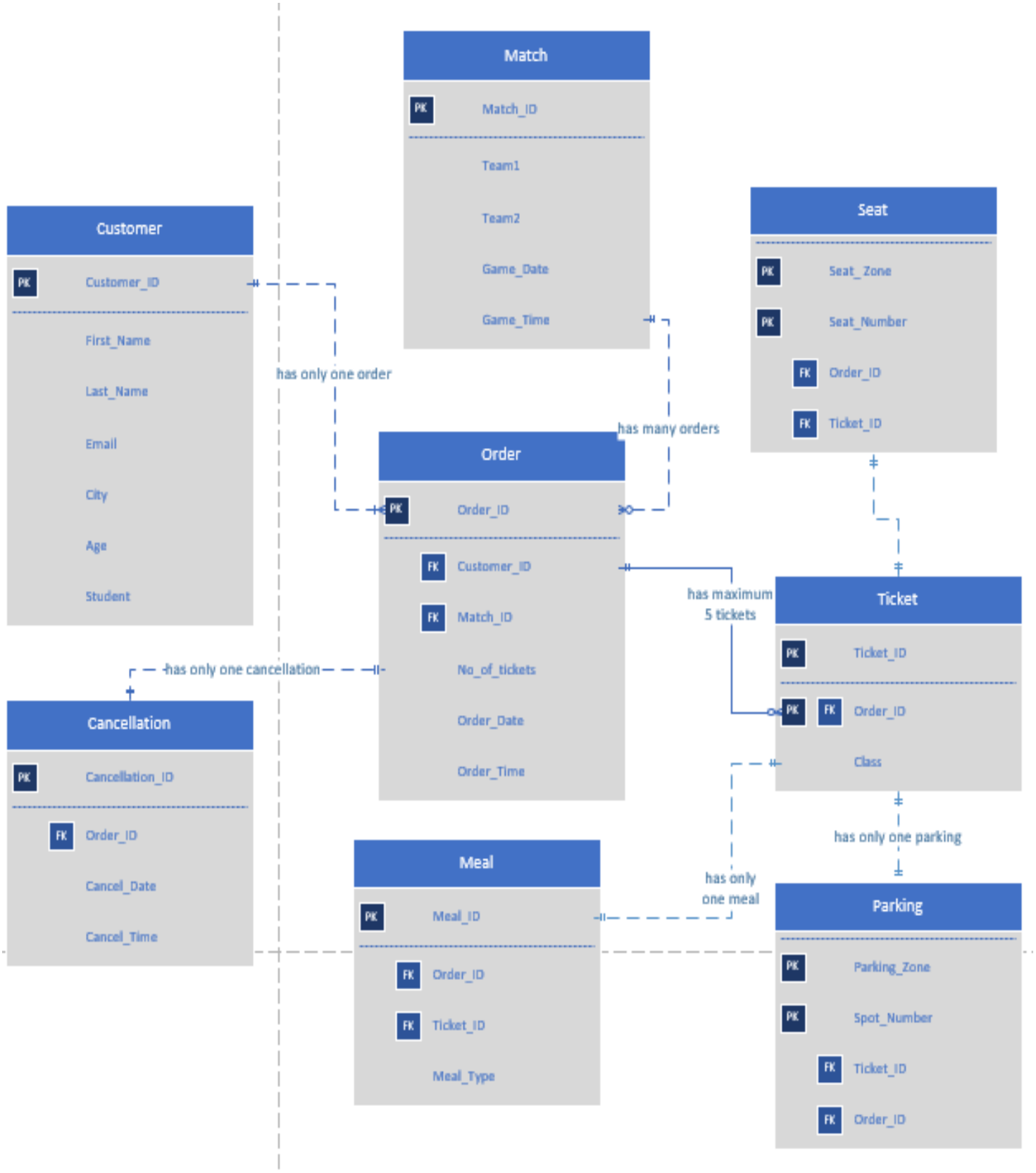
7. PARKING – This stores the data about the parking lots

ENTITY NAME: PARKING	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Parking_zone	Varchar(5)	NOT NULL	The zone of the parking
Primary Key	Spot_Number	int	NOT NULL	The spot in a particular zone
Foreign Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
Foreign Key	Ticket_ID	Varchar(10)	NOT NULL	Unique identifier of the Ticket

8. CANCELLATION – This stores the entries of any ticket cancellations made by the customer

ENTITY NAME: PARKING	**ATTRIBUTE NAME**	**FIELD TYPE**	**NULL/ NOT NULL**	**DESCRIPTION**
Primary Key	Cancellation_ID	Varchar(10)	NOT NULL	Unique identifier of the Cancellation
Foreign Key	Order_ID	Varchar(10)	NOT NULL	Unique identifier of the Order
	Cancel_Date	Date	NOT NULL	The date of cancellation
	Cance_Time	Varchar(5)	NOT NULL	The time stamp of cancellation

ENTITY RELATIONSHIP DIAGRAM



DATABASE SYSTEM INFRASTRUCTURE

In this project, the tools used by us are the SQL Server Management Studio and Microsoft Access. This is because it is very convenient to work with these softwares and they are covered throughout the course.

MS Access gives the freedom to customize and add in new entries to various tables with ease, while the SQL server helps us in prioritizing which attributes or tables should come first while creating a database.

In the SQL server we have used various functions like the Create Table function as well as created our main objective using the Create View function. We also used functions like Inner join and conditions to ensure that the correct data was getting filtered.

In Microsoft Access, we used forms and reports to create interfaces and these help us in easier data entry to the data base.

We created a link between the SQL Server and MS Acces to form direct tables in Access.

CREATION OF TABLES AND DATA INSERTION

Below is the SQL query for creating all the entities for the above system

```
/* Creating the tables */

/* Customer */
drop table Customer;
create table Customer(
Customer_ID Varchar(10) not null,
First_Name Varchar(10) not null,
Last_Name Varchar(10) not null,
Email Varchar(20) not null,
City Varchar(10) not null,
Age    Int not null,
Student       Varchar(3) not null,

constraint custID_pk primary key (Customer_ID)
);

/* Match */

drop table Match;
create table Match(
Match_ID Varchar(10) NOT NULL,
Team1 Varchar(30) NOT NULL,
Team2 Varchar(30) NOT NULL,
Game_Date Date       NOT NULL,
Game_Time Varchar(20) NOT NULL,

constraint match_pk primary key (Match_ID)
);
```

```
/* Order */

drop table CustOrder;
create table CustOrder(
Order_ID Varchar(10) NOT NULL primary key,
Customer_ID   Varchar(10)   NOT NULL foreign key references Customer(Customer_ID),
Match_ID Varchar(10) NOT NULL foreign key references Match(Match_ID),
No_of_tickets int NOT NULL,
Order_Date Date      NOT NULL,
Order_Time Varchar(20) NOT NULL
);

/* Ticket */

drop table Ticket;
create table Ticket(
Ticket_ID Varchar(10) NOT NULL,
Order_ID Varchar(10) NOT NULL foreign key references CustOrder(Order_ID),
Class Varchar(20) NOT NULL,

constraint ticket_pk primary key (Ticket_ID, Order_ID),
constraint Id_cons check (Ticket_ID in ('1', '2', '3', '4', '5'))
);

/* Seat */

drop table Seat;

create table Seat(
Seat_ID Varchar(10)  NOT NULL,
Order_ID Varchar(10) NOT NULL ,
Ticket_ID Varchar(10) NOT NULL ,
Seat_Zone Varchar(5) NOT NULL,
Seat_Number   int    NOT NULL,

constraint key_cons primary key (Seat_ID, Seat_Zone, Seat_Number),
constraint fk_seat foreign key (Ticket_ID, Order_ID) references Ticket(Ticket_ID, Order_ID)
);

/* Meal */

drop table Meal;
create table Meal(
Meal_ID Varchar(10)  NOT NULL primary key,
Order_ID Varchar(10) NOT NULL,
Ticket_ID Varchar(10) NOT NULL,
Meal_Type Varchar(5) NOT NULL,

constraint fk_meal foreign key (Ticket_ID, Order_ID) references Ticket(Ticket_ID, Order_ID)
);
```

```
/* Parking */

drop table Parking;
create table Parking(
Parking_ID Varchar(10) NOT NULL,
Order_ID Varchar(10) NOT NULL,
Ticket_ID Varchar(10) NOT NULL,
Parking_zone Varchar(5)     NOT NULL,
Spot_Number   int    NOT NULL,

constraint parking_pk primary key (Parking_zone, Spot_Number),
constraint fk_parking foreign key (Ticket_ID, Order_ID) references Ticket(Ticket_ID, Order_ID)
);

/* Cancellation */

drop table Cancellation;
create table Cancellation(
Cancellation_ID Varchar(10) NOT NULL primary key,
Order_ID Varchar(10) NOT NULL foreign key references CustOrder(Order_ID),
Cancel_Date   Date NOT NULL,
Cance_Time Varchar(5) NOT NULL
);
```

Below is the query to insert data into the tables created in the above step.

Please note the below assumptions made in the database:

- The Seating zones are divided as A,B,C,D and the seat numbers in each zone are 1 to 20
- The types of meal are Rice Bowl, Burrito & Chips, Sandwich, Pizza
- There are 4 parking zones: East, West, North, South and each zone has parking lots numbered 1 to 30

```
/* Inserting data into the tables */

/* Customer */

insert into Customer values ('1', 'Vidisha', 'Badhe', 'vsbadhe@syr.edu', 'Syracuse', '24',
'Yes');
insert into Customer values ('2', 'Mayuri', 'Amrutkar', 'mayu.a@gmail.com', 'Houston', '24',
'No');
insert into Customer values ('3', 'Gaurav', 'Salvi', 'gssalvi@syr.edu', 'Manhattan', '25',
'Yes');
insert into Customer values ('4', 'Ankita', 'Singh', 'ankita@syr.edu', 'Syracuse', '22', 'Yes');
insert into Customer values ('5', 'Isha', 'Havaldar', 'ishavald@syr.edu', 'Washington', '24',
'No');
insert into Customer values ('6', 'Shubham', 'Kasture', 'shubham.k@syr.edu', 'Syracuse', '24',
'Yes');
select * from Customer;
```

```
insert into Customer values ('1', 'Vidisha', 'Badhe', 'vsbadhe@syr.edu', 'Syracuse', '24', 'Yes');
insert into Customer values ('2', 'Mayuri', 'Amrutkar', 'mayu.a@gmail.com', 'Houston', '24', 'No');
insert into Customer values ('3', 'Gaurav', 'Salvi', 'gssalvi@syr.edu', 'Manhattan', '25', 'Yes');
insert into Customer values ('4', 'Ankita', 'Singh', 'ankita@syr.edu', 'Syracuse', '22', 'Yes');
insert into Customer values ('5', 'Isha', 'Havaldar', 'ishavald@syr.edu', 'Washington', '24', 'No');
insert into Customer values ('6', 'Shubham', 'Kasture', 'shubham.k@syr.edu', 'Syracuse', '24', 'Yes');
select * from Customer;
```

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Results | Messages

	Customer_ID	First_Name	Last_Name	Email	City	Age	Student
1	1	Vidisha	Badhe	vsbadhe@syr.edu	Syracuse	24	Yes
2	2	Mayuri	Amrutkar	mayu.a@gmail.com	Houston	24	No
3	3	Gaurav	Salvi	gssalvi@syr.edu	Manhattan	25	Yes
4	4	Ankita	Singh	ankita@syr.edu	Syracuse	22	Yes
5	5	Isha	Havaldar	ishavald@syr.edu	Washington	24	No
6	6	Shubham	Kasture	shubham.k@syr.edu	Syracuse	24	Yes

Query executed successfully. | ist-s-students.syr.edu (12.... | AD\vsbadhe (95) | IST659_M002_vsbadhe | 00:00:00 | 6 rows

```
/* Match */

insert into Match values ('1', 'Virginia Cavaliers', 'Duke Blue Devils', '2018-05-12',
'13:00:00');
insert into Match values ('2', 'North Karolina TarHeels', 'Kansas Jayhawks', '2018-07-01',
'12:30:00');
insert into Match values ('3', 'Duke Blue Devils', 'Syracuse Orange', '2019-01-17', '18:00:00');
insert into Match values ('4', 'Syracuse Orange', 'NC State Wolfpack', '2018-12-25',
'16:45:00');
insert into Match values ('5', 'Wisconsin Badgers', 'Michigan State Spartans', '2019-02-09',
'18:00:00');
insert into Match values ('6', 'North Karolina TarHeels', 'Cincinnati Bearcats', '2019-03-07',
'13:15:00');
insert into Match values ('7', 'NC State Wolfpack', 'Cincinnati Bearcats', '2018-11-22',
'15:30:00');
select * from Match;
```

Results | Messages

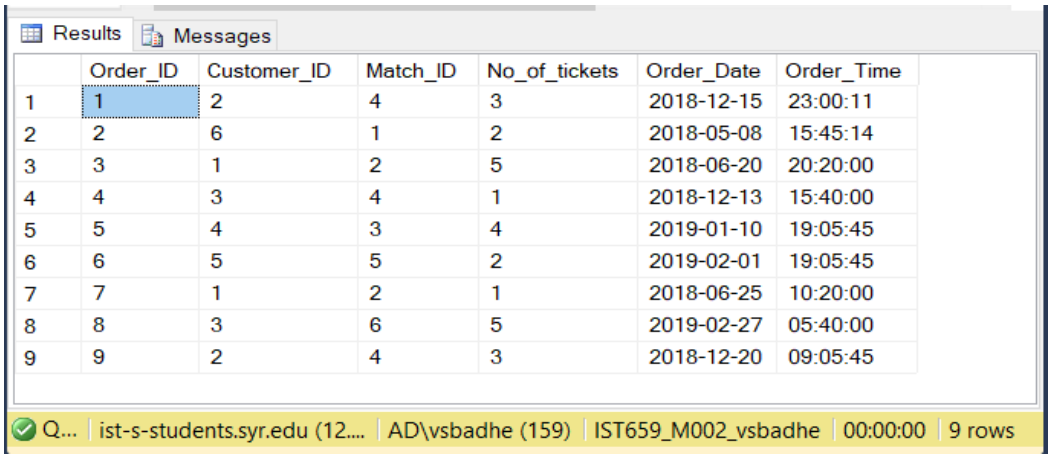
	Match_ID	Team1	Team2	Game_Date	Game_Time
1	1	Virginia Cavaliers	Duke Blue Devils	2018-05-12	13:00:00
2	2	North Karolina TarHeels	Kansas Jayhawks	2018-07-01	12:30:00
3	3	Duke Blue Devils	Syracuse Orange	2019-01-17	18:00:00
4	4	Syracuse Orange	NC State Wolfpack	2018-12-25	16:45:00
5	5	Wisconsin Badgers	Michigan State Spartans	2019-02-09	18:00:00
6	6	North Karolina TarHeels	Cincinnati Bearcats	2019-03-07	13:15:00
7	7	NC State Wolfpack	Cincinnati Bearcats	2018-11-22	15:30:00

Query exe... | ist-s-students.syr.edu (12.... | AD\vsbadhe (159) | IST659_M002_vsbadhe | 00:00:00 | 7 rows

```
/* CustOrder */

insert into CustOrder values ('1', '2', '4', '3', '2018-12-15', '23:00:11');
insert into CustOrder values ('2', '6', '1', '2', '2018-05-08', '15:45:14');
insert into CustOrder values ('3', '1', '2', '5', '2018-06-20', '20:20:00');
insert into CustOrder values ('4', '3', '4', '1', '2018-12-13', '15:40:00');
insert into CustOrder values ('5', '4', '3', '4', '2019-01-10', '19:05:45');
insert into CustOrder values ('6', '5', '5', '2', '2019-02-01', '19:05:45');
insert into CustOrder values ('7', '1', '2', '1', '2018-06-25', '10:20:00');
insert into CustOrder values ('8', '3', '6', '5', '2019-02-27', '05:40:00');
```

```
insert into CustOrder values ('9', '2', '4', '3', '2018-12-20', '09:05:45');
select * from CustOrder;
```



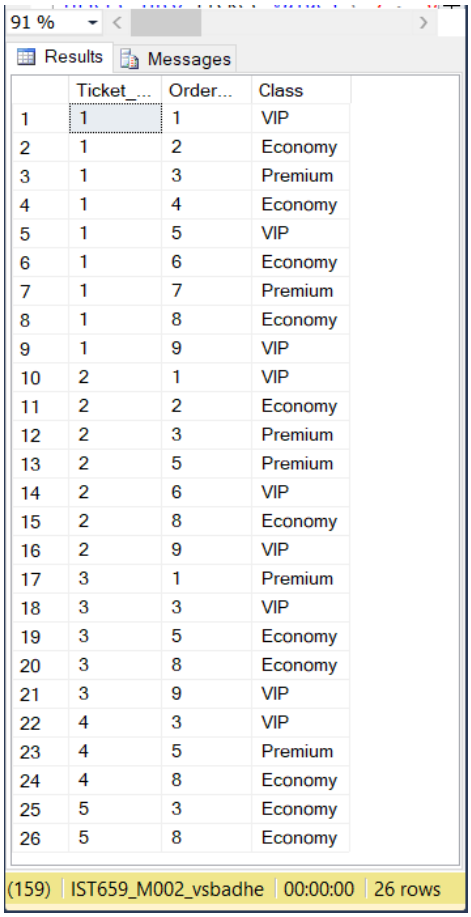
Results | Messages

	Order_ID	Customer_ID	Match_ID	No_of_tickets	Order_Date	Order_Time
1	1	2	4	3	2018-12-15	23:00:11
2	2	6	1	2	2018-05-08	15:45:14
3	3	1	2	5	2018-06-20	20:20:00
4	4	3	4	1	2018-12-13	15:40:00
5	5	4	3	4	2019-01-10	19:05:45
6	6	5	5	2	2019-02-01	19:05:45
7	7	1	2	1	2018-06-25	10:20:00
8	8	3	6	5	2019-02-27	05:40:00
9	9	2	4	3	2018-12-20	09:05:45

Q... | ist-s-students.syr.edu (12.... | AD\vsbadhe (159) | IST659_M002_vsbadhe | 00:00:00 | 9 rows

```
/* Ticket */

insert into Ticket values ('1', '1', 'VIP');
insert into Ticket values ('2', '1', 'VIP');
insert into Ticket values ('3', '1', 'Premium');
insert into Ticket values ('1', '2', 'Economy');
insert into Ticket values ('2', '2', 'Economy');
insert into Ticket values ('1', '3', 'Premium');
insert into Ticket values ('2', '3', 'Premium');
insert into Ticket values ('3', '3', 'VIP');
insert into Ticket values ('4', '3', 'VIP');
insert into Ticket values ('5', '3', 'Economy');
insert into Ticket values ('1', '4', 'Economy');
insert into Ticket values ('1', '5', 'VIP');
insert into Ticket values ('2', '5', 'Premium');
insert into Ticket values ('3', '5', 'Economy');
insert into Ticket values ('4', '5', 'Premium');
insert into Ticket values ('1', '6', 'Economy');
insert into Ticket values ('2', '6', 'VIP');
insert into Ticket values ('1', '7', 'Premium');
insert into Ticket values ('1', '8', 'Economy');
insert into Ticket values ('2', '8', 'Economy');
insert into Ticket values ('3', '8', 'Economy');
insert into Ticket values ('4', '8', 'Economy');
insert into Ticket values ('5', '8', 'Economy');
insert into Ticket values ('1', '9', 'VIP');
insert into Ticket values ('2', '9', 'VIP');
insert into Ticket values ('3', '9', 'VIP');
select * from Ticket;
```



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Results | Messages

	Ticket_...	Order...	Class
1	1	1	VIP
2	1	2	Economy
3	1	3	Premium
4	1	4	Economy
5	1	5	VIP
6	1	6	Economy
7	1	7	Premium
8	1	8	Economy
9	1	9	VIP
10	2	1	VIP
11	2	2	Economy
12	2	3	Premium
13	2	5	Premium
14	2	6	VIP
15	2	8	Economy
16	2	9	VIP
17	3	1	Premium
18	3	3	VIP
19	3	5	Economy
20	3	8	Economy
21	3	9	VIP
22	4	3	VIP
23	4	5	Premium
24	4	8	Economy
25	5	3	Economy
26	5	8	Economy

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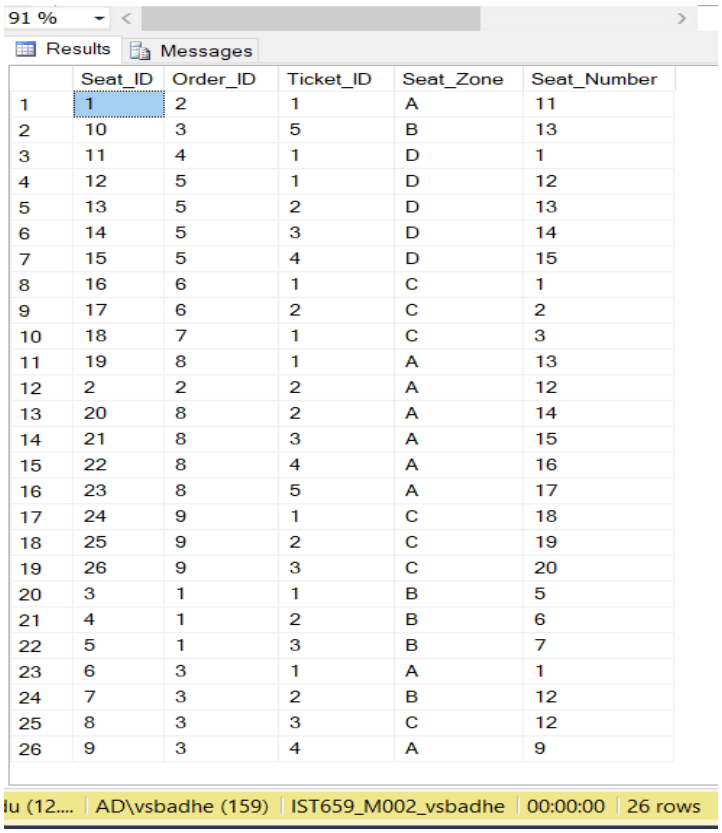
```
/* Seat */

insert into Seat values ('1', '2', '1', 'A', '11');
insert into Seat values ('2', '2', '2', 'A', '12');
insert into Seat values ('3', '1', '1', 'B', '05');
insert into Seat values ('4', '1', '2', 'B', '06');
insert into Seat values ('5', '1', '3', 'B', '07');
insert into Seat values ('6', '3', '1', 'A', '01');
insert into Seat values ('7', '3', '2', 'B', '12');
insert into Seat values ('8', '3', '3', 'C', '12');
insert into Seat values ('9', '3', '4', 'A', '09');
insert into Seat values ('10', '3', '5', 'B', '13');
insert into Seat values ('11', '4', '1', 'D', '01');
insert into Seat values ('12', '5', '1', 'D', '12');
insert into Seat values ('13', '5', '2', 'D', '13');
insert into Seat values ('14', '5', '3', 'D', '14');
insert into Seat values ('15', '5', '4', 'D', '15');
insert into Seat values ('16', '6', '1', 'C', '01');
insert into Seat values ('17', '6', '2', 'C', '02');
insert into Seat values ('18', '7', '1', 'C', '03');
insert into Seat values ('19', '8', '1', 'A', '13');
insert into Seat values ('20', '8', '2', 'A', '14');
insert into Seat values ('21', '8', '3', 'A', '15');
insert into Seat values ('22', '8', '4', 'A', '16');
insert into Seat values ('23', '8', '5', 'A', '17');
insert into Seat values ('24', '9', '1', 'C', '18');
insert into Seat values ('25', '9', '2', 'C', '19');
insert into Seat values ('26', '9', '3', 'C', '20');
select * from Seat;
```



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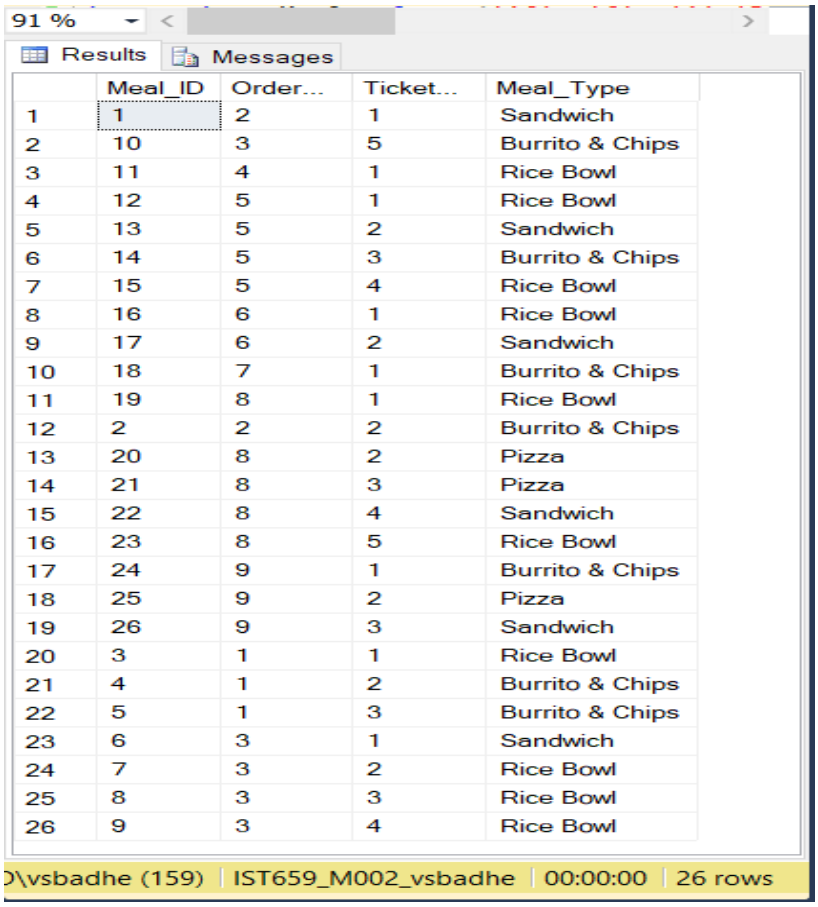
Results | Messages

	Seat_ID	Order_ID	Ticket_ID	Seat_Zone	Seat_Number
1	1	2	1	A	11
2	10	3	5	B	13
3	11	4	1	D	1
4	12	5	1	D	12
5	13	5	2	D	13
6	14	5	3	D	14
7	15	5	4	D	15
8	16	6	1	C	1
9	17	6	2	C	2
10	18	7	1	C	3
11	19	8	1	A	13
12	2	2	2	A	12
13	20	8	2	A	14
14	21	8	3	A	15
15	22	8	4	A	16
16	23	8	5	A	17
17	24	9	1	C	18
18	25	9	2	C	19
19	26	9	3	C	20
20	3	1	1	B	5
21	4	1	2	B	6
22	5	1	3	B	7
23	6	3	1	A	1
24	7	3	2	B	12
25	8	3	3	C	12
26	9	3	4	A	9

lu (12.... | AD\vsbadhe (159) | IST659_M002_vsbadhe | 00:00:00 | 26 rows

```
/* Meal */

insert into Meal values ('1', '2', '1', 'Sandwich');
insert into Meal values ('2', '2', '2', 'Burrito & Chips');
insert into Meal values ('3', '1', '1', 'Rice Bowl');
insert into Meal values ('4', '1', '2', 'Burrito & Chips');
insert into Meal values ('5', '1', '3', 'Burrito & Chips');
insert into Meal values ('6', '3', '1', 'Sandwich');
insert into Meal values ('7', '3', '2', 'Rice Bowl');
insert into Meal values ('8', '3', '3', 'Rice Bowl');
insert into Meal values ('9', '3', '4', 'Rice Bowl');
insert into Meal values ('10', '3', '5','Burrito & Chips');
insert into Meal values ('11', '4', '1','Rice Bowl');
insert into Meal values ('12', '5', '1','Rice Bowl');
insert into Meal values ('13', '5', '2','Sandwich');
insert into Meal values ('14', '5', '3','Burrito & Chips');
insert into Meal values ('15', '5', '4','Rice Bowl');
insert into Meal values ('16', '6', '1','Rice Bowl');
insert into Meal values ('17', '6', '2','Sandwich');
insert into Meal values ('18', '7', '1','Burrito & Chips');
insert into Meal values ('19', '8', '1','Rice Bowl');
insert into Meal values ('20', '8', '2', 'Pizza');
insert into Meal values ('21', '8', '3','Pizza');
insert into Meal values ('22', '8', '4','Sandwich');
insert into Meal values ('23', '8', '5','Rice Bowl');
insert into Meal values ('24', '9', '1','Burrito & Chips');
insert into Meal values ('25', '9', '2','Pizza');
insert into Meal values ('26', '9', '3','Sandwich');

select * from Meal;
```



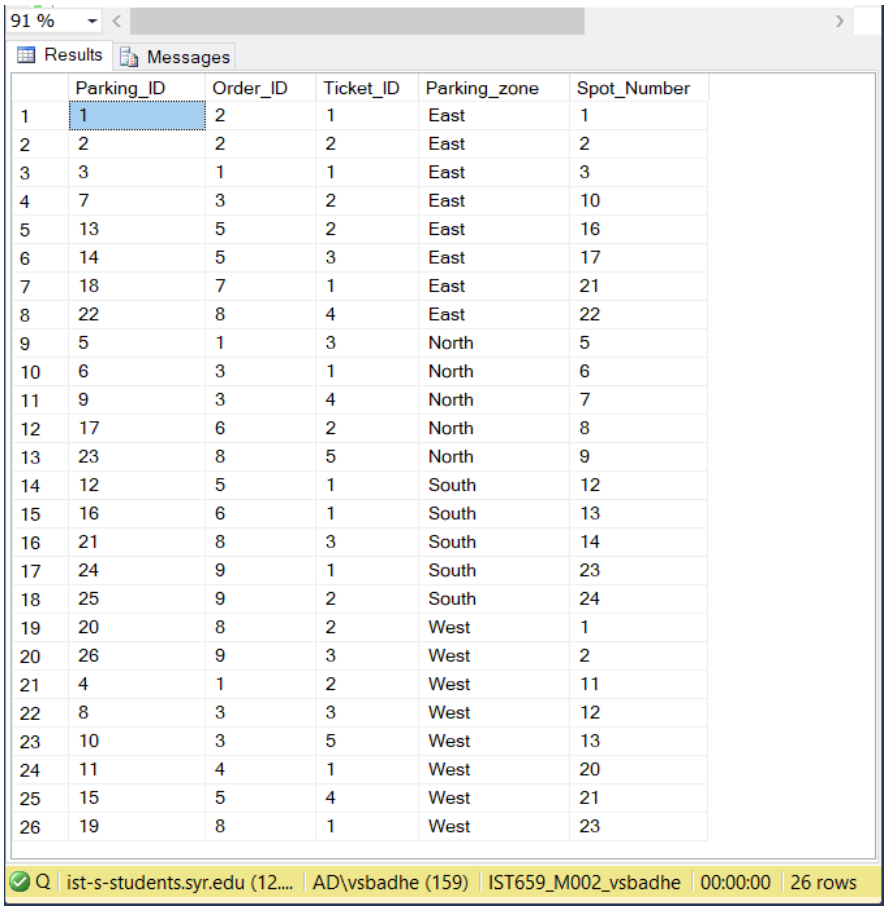
91 %

Results | Messages

	Meal_ID	Order...	Ticket...	Meal_Type
1	1	2	1	Sandwich
2	10	3	5	Burrito & Chips
3	11	4	1	Rice Bowl
4	12	5	1	Rice Bowl
5	13	5	2	Sandwich
6	14	5	3	Burrito & Chips
7	15	5	4	Rice Bowl
8	16	6	1	Rice Bowl
9	17	6	2	Sandwich
10	18	7	1	Burrito & Chips
11	19	8	1	Rice Bowl
12	2	2	2	Burrito & Chips
13	20	8	2	Pizza
14	21	8	3	Pizza
15	22	8	4	Sandwich
16	23	8	5	Rice Bowl
17	24	9	1	Burrito & Chips
18	25	9	2	Pizza
19	26	9	3	Sandwich
20	3	1	1	Rice Bowl
21	4	1	2	Burrito & Chips
22	5	1	3	Burrito & Chips
23	6	3	1	Sandwich
24	7	3	2	Rice Bowl
25	8	3	3	Rice Bowl
26	9	3	4	Rice Bowl

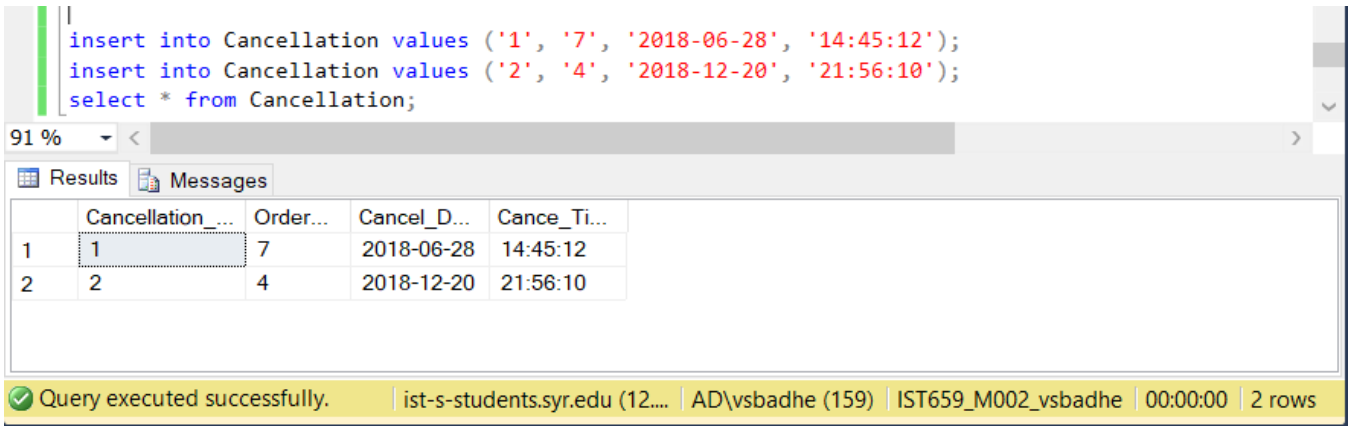
)\vsbadhe (159) | IST659_M002_vsbadhe | 00:00:00 | 26 rows

```
/*Parking*/

insert into Parking values ('1', '2', '1', 'East', '01');
insert into Parking values ('2', '2', '2', 'East', '02');
insert into Parking values ('3', '1', '1', 'East', '03');
insert into Parking values ('4', '1', '2', 'West', '11');
insert into Parking values ('5', '1', '3', 'North', '05');
insert into Parking values ('6', '3', '1', 'North', '06');
insert into Parking values ('7', '3', '2', 'East', '10');
insert into Parking values ('8', '3', '3', 'West', '12');
insert into Parking values ('9', '3', '4', 'North', '07');
insert into Parking values ('10', '3', '5', 'West', '13');
insert into Parking values ('11', '4', '1', 'West', '20');
insert into Parking values ('12', '5', '1', 'South', '12');
insert into Parking values ('13', '5', '2', 'East', '16');
insert into Parking values ('14', '5', '3', 'East', '17');
insert into Parking values ('15', '5', '4', 'West', '21');
insert into Parking values ('16', '6', '1', 'South', '13');
insert into Parking values ('17', '6', '2', 'North', '08');
insert into Parking values ('18', '7', '1', 'East', '21');
insert into Parking values ('19', '8', '1', 'West', '23');
insert into Parking values ('20', '8', '2', 'West', '01');
insert into Parking values ('21', '8', '3', 'South', '14');
insert into Parking values ('22', '8', '4', 'East', '22');
insert into Parking values ('23', '8', '5', 'North', '09');
insert into Parking values ('24', '9', '1', 'South', '23');
insert into Parking values ('25', '9', '2', 'South', '24');
insert into Parking values ('26', '9', '3', 'West', '02');
select * from Parking;
```



	Parking_ID	Order_ID	Ticket_ID	Parking_zone	Spot_Number
1	1	2	1	East	1
2	2	2	2	East	2
3	3	1	1	East	3
4	7	3	2	East	10
5	13	5	2	East	16
6	14	5	3	East	17
7	18	7	1	East	21
8	22	8	4	East	22
9	5	1	3	North	5
10	6	3	1	North	6
11	9	3	4	North	7
12	17	6	2	North	8
13	23	8	5	North	9
14	12	5	1	South	12
15	16	6	1	South	13
16	21	8	3	South	14
17	24	9	1	South	23
18	25	9	2	South	24
19	20	8	2	West	1
20	26	9	3	West	2
21	4	1	2	West	11
22	8	3	3	West	12
23	10	3	5	West	13
24	11	4	1	West	20
25	15	5	4	West	21
26	19	8	1	West	23


```
/* Cancellation */

insert into Cancellation values ('1', '7', '2018-06-28', '14:45:12');
insert into Cancellation values ('2', '4', '2018-12-20', '21:56:10');
```



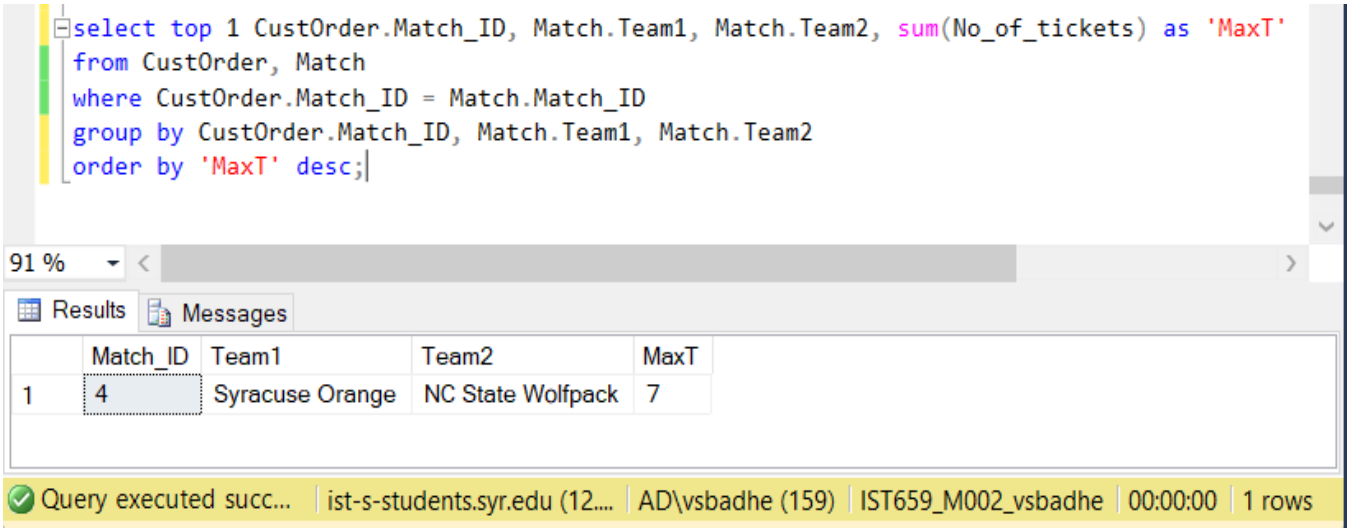
```
insert into Cancellation values ('1', '7', '2018-06-28', '14:45:12');
insert into Cancellation values ('2', '4', '2018-12-20', '21:56:10');
select * from Cancellation;
```

	Cancellation_...	Order...	Cancel_D...	Cance_Ti...
1	1	7	2018-06-28	14:45:12
2	2	4	2018-12-20	21:56:10

MAJOR DATA QUESTIONS

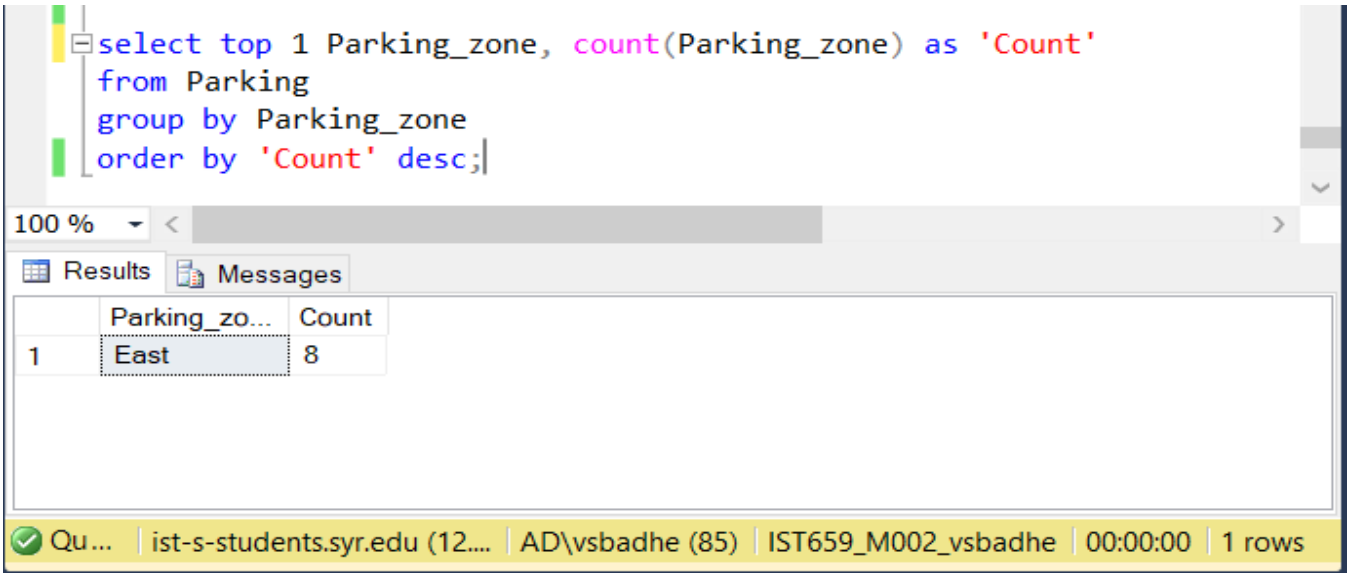
1. Which team has the highest number of bookings?

```
select top 1 CustOrder.Match_ID, Match.Team1, Match.Team2, sum(No_of_tickets) as 'MaxT'
from CustOrder, Match
where CustOrder.Match_ID = Match.Match_ID
group by CustOrder.Match_ID, Match.Team1, Match.Team2
order by 'MaxT' desc;
```



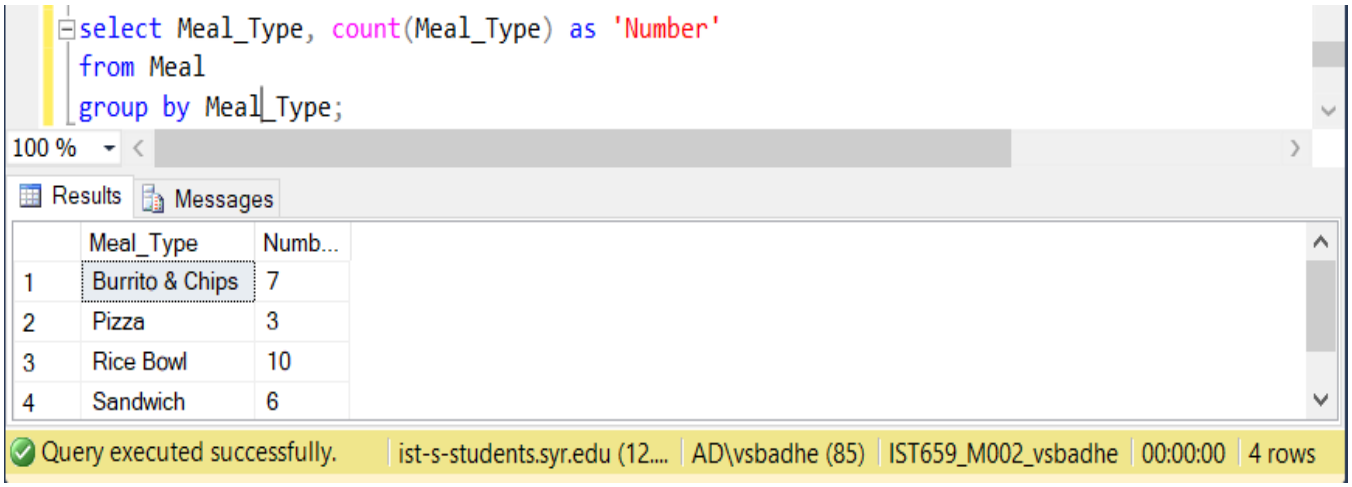
2. Which is the most preferred parking zone?

```
select top 1 Parking_zone, count(Parking_zone) as 'Count'
from Parking
group by Parking_zone
order by 'Count' desc;
```



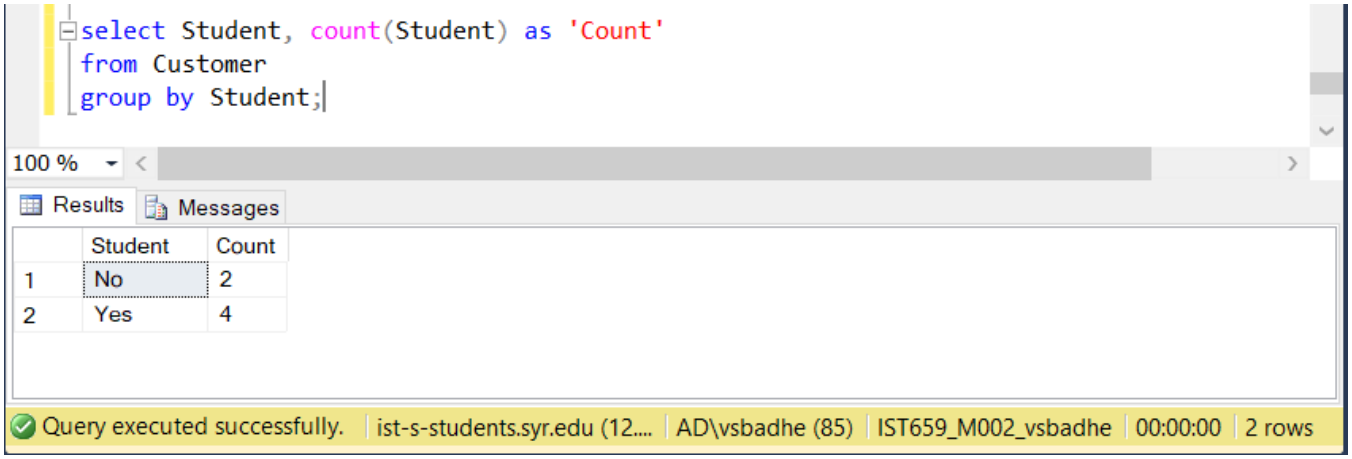
3. What is the distribution of meal type among the customers?

```
select Meal_Type, count(Meal_Type) as 'Number'
from Meal
group by Meal_Type;
```



4. How many students visit the match compared to the locals?

```
select Student, count(Student) as 'Count'
from Customer
group by Student;
```



5. What is the percentage of cancellations for any particular match?

```
drop view MatchOrders
CREATE VIEW MatchOrders AS
select CustOrder.Match_ID, Match.Team1, Match.Team2, count(Order_ID) as 'OrderCount'
from CustOrder, Match
where CustOrder.Match_ID = Match.Match_ID
group by CustOrder.Match_ID, Match.Team1, Match.Team2

drop view Cancel
create view Cancel as
select Co.Match_ID, Ca.Order_ID, count(Ca.Order_ID) as 'CancelledOrders'
from CustOrder Co inner join Cancellation Ca on Co.Order_ID = Ca.Order_ID
group by Co.Match_ID, Ca.Order_ID

select Cancel.Match_ID, MatchOrders.Team1, MatchOrders.Team2, ((Cancel.CancelledOrders * 100)
/MatchOrders.OrderCount) as 'PercentCancelled'
from MatchOrders, Cancel
where MatchOrders.Match_ID = Cancel.Match_ID;
```

100 %

Results | Messages

	Match_ID	Team1	Team2	PercentCancelled
1	2	North Karolina TarHeels	Kansas Jayhawks	50
2	4	Syracuse Orange	NC State Wolfpack	33

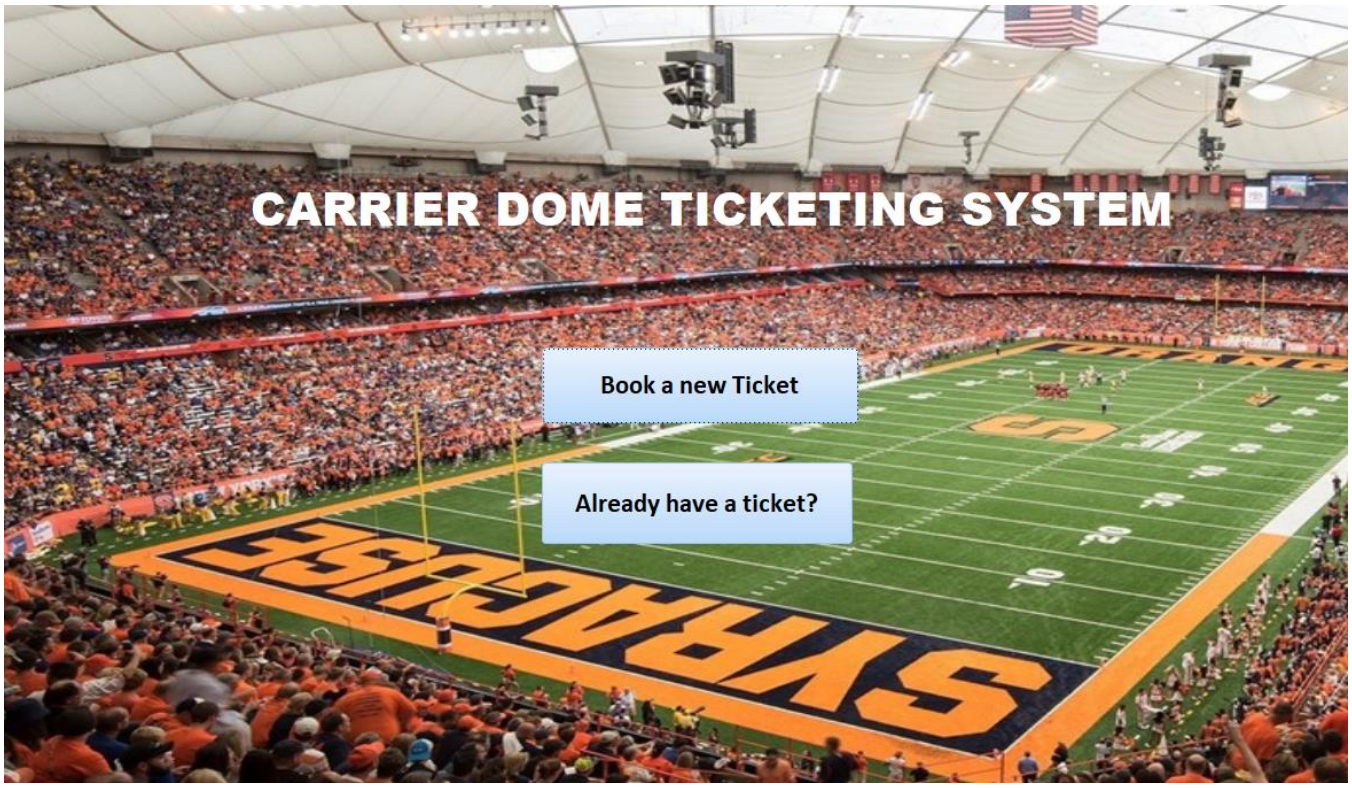
Query executed successfully. | ist-s-students.syr.edu (12.... | AD\vsbadhe (85) | IST659_M002_vsbadhe | 00:00:00 | 2 rows

INTERFACES

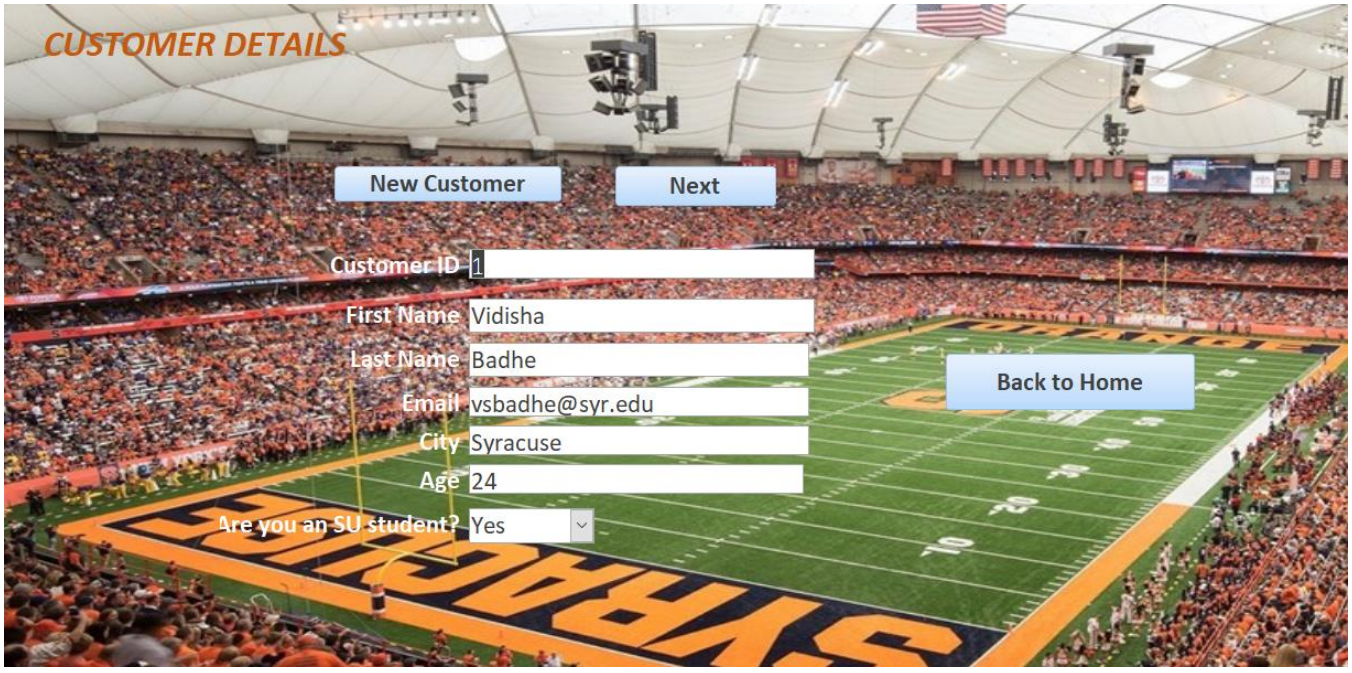
Forms

Below form is the home page for the ticketing system

It has options to either make a new booking or alter the details of your ticket

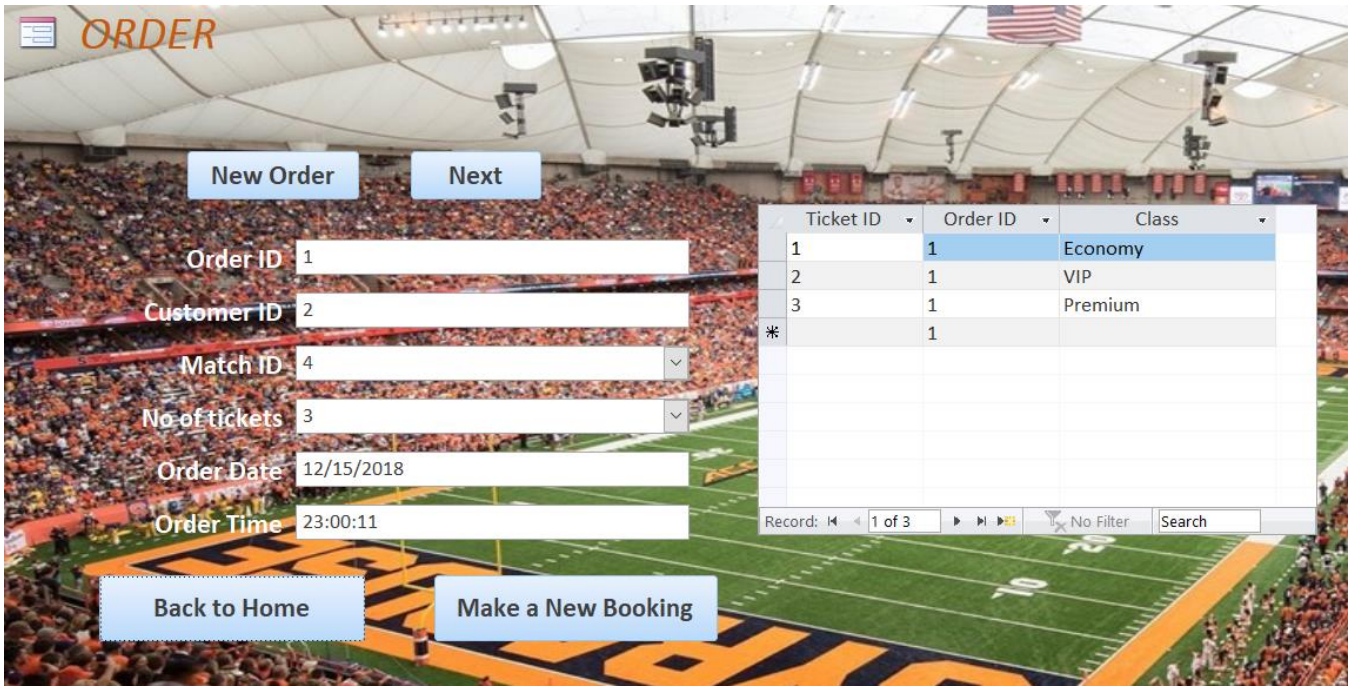


Option 1: Book a new Ticket



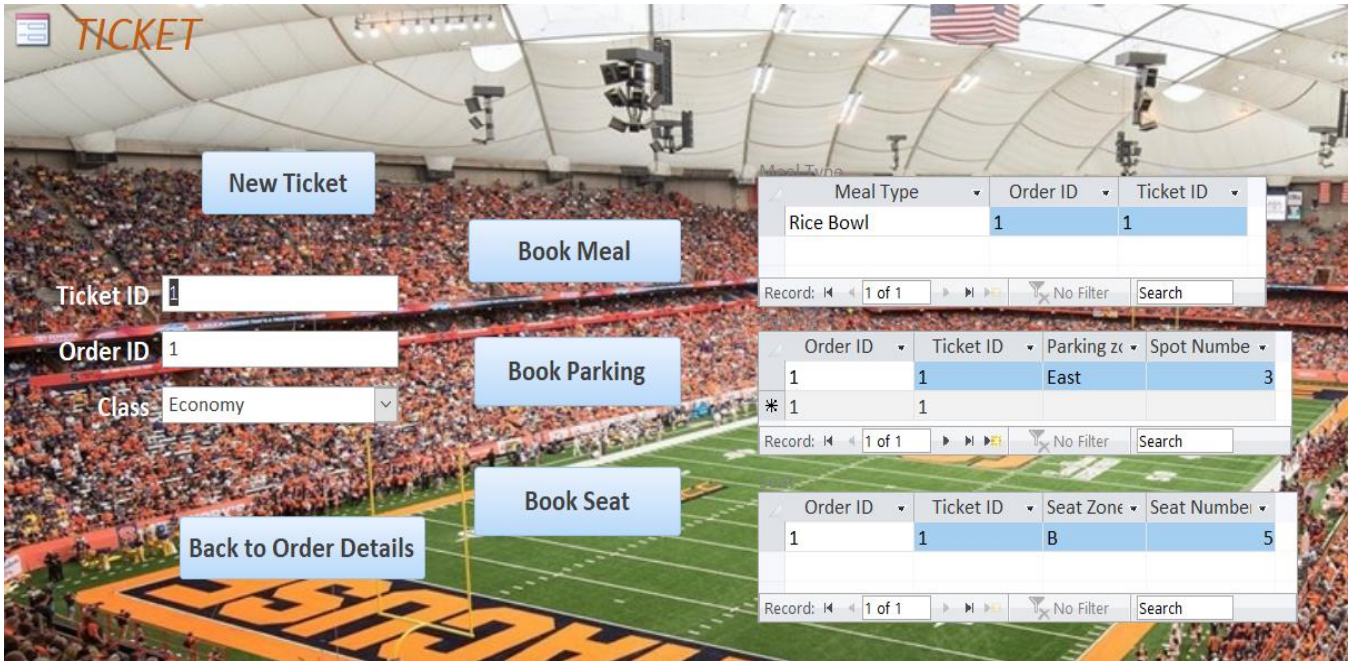
On clicking 'Next' you navigate to the Order details page.

It shows the order details along with the number of tickets and their class.

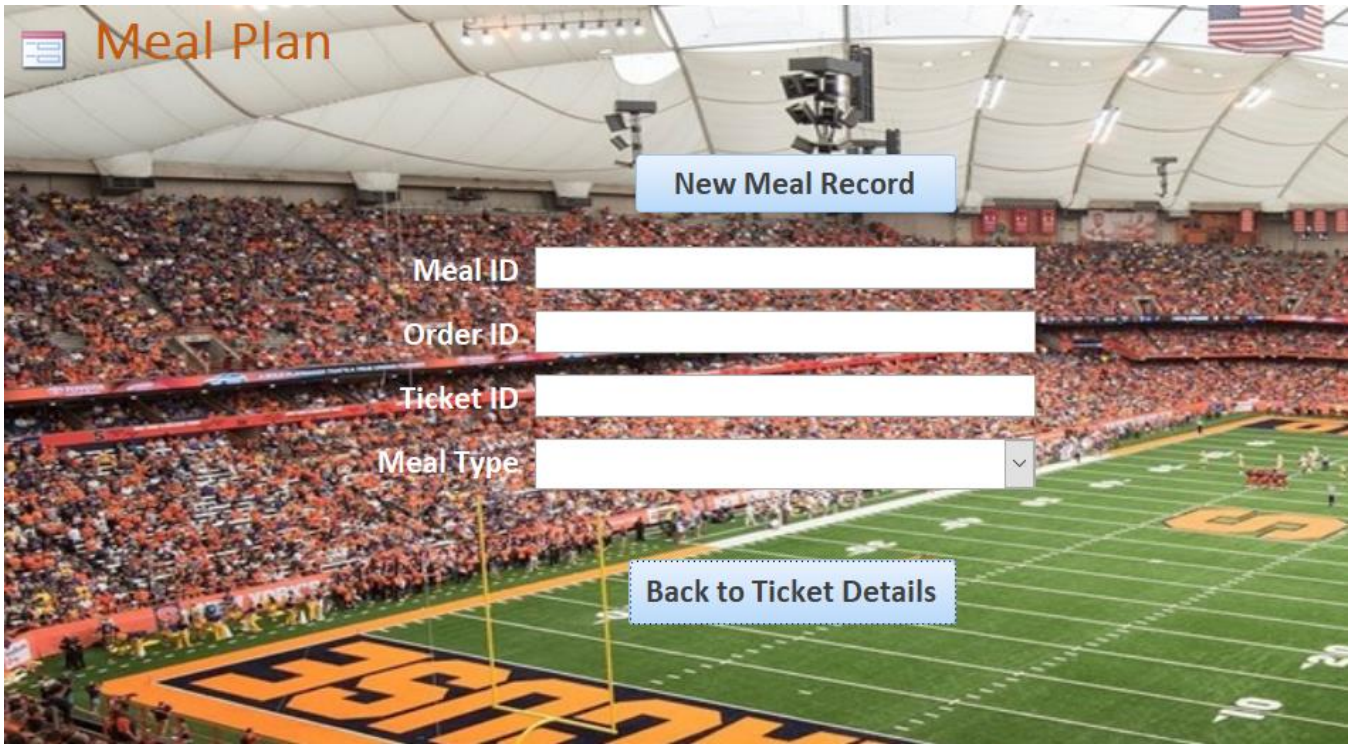


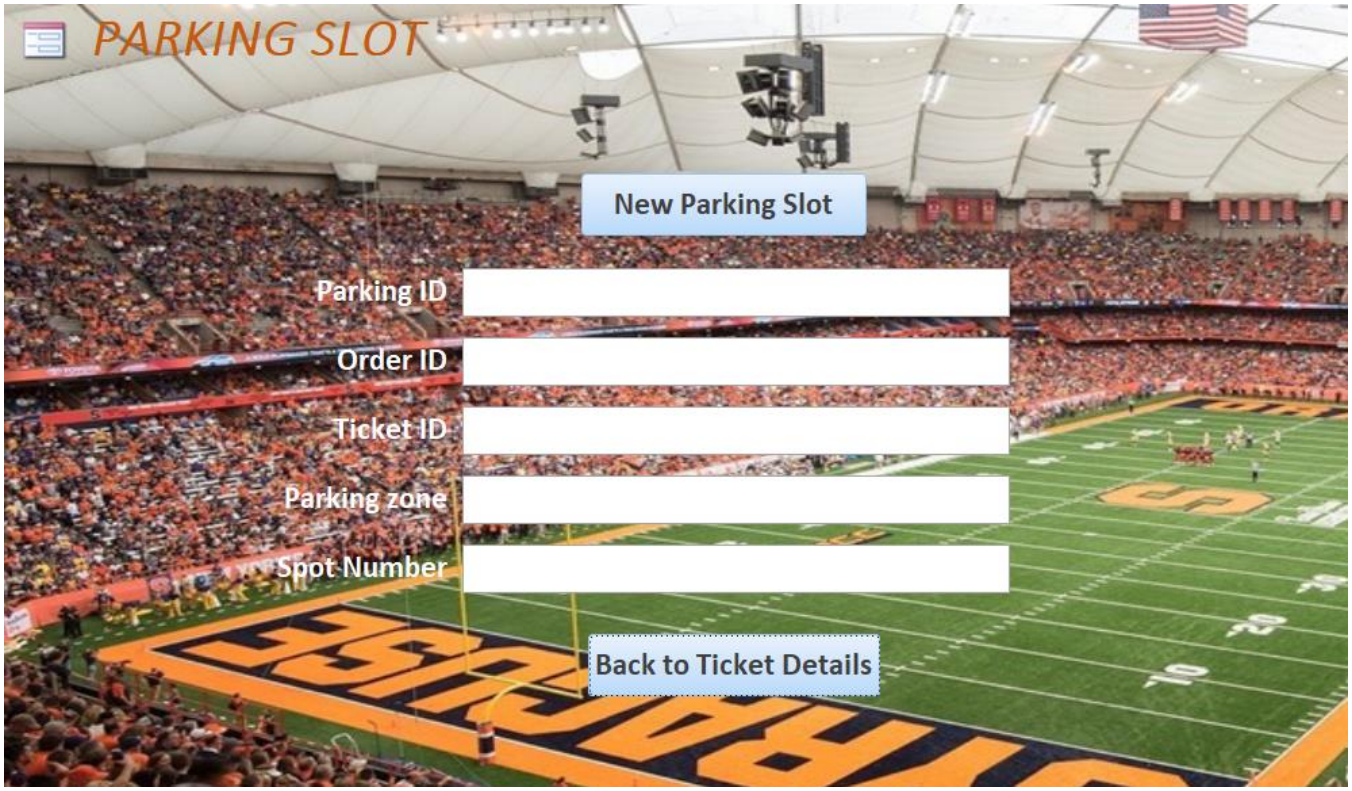
On clicking 'Next' you would reach the ticket details page.

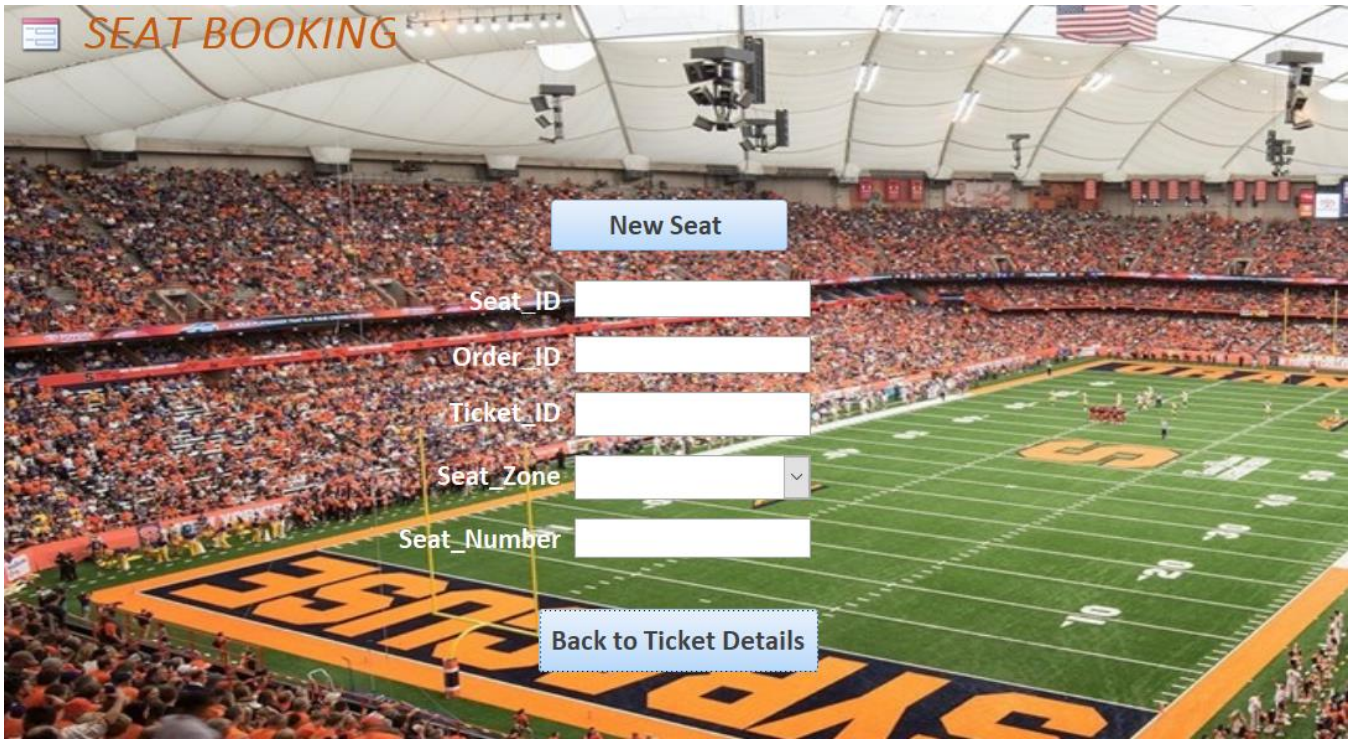
This displays the specifications of each ticket with respect to the type of meal, Parking details and Seating details for individual tickets.



You can further make bookings for Meal, Parking or Seat. Below are the forms for the same

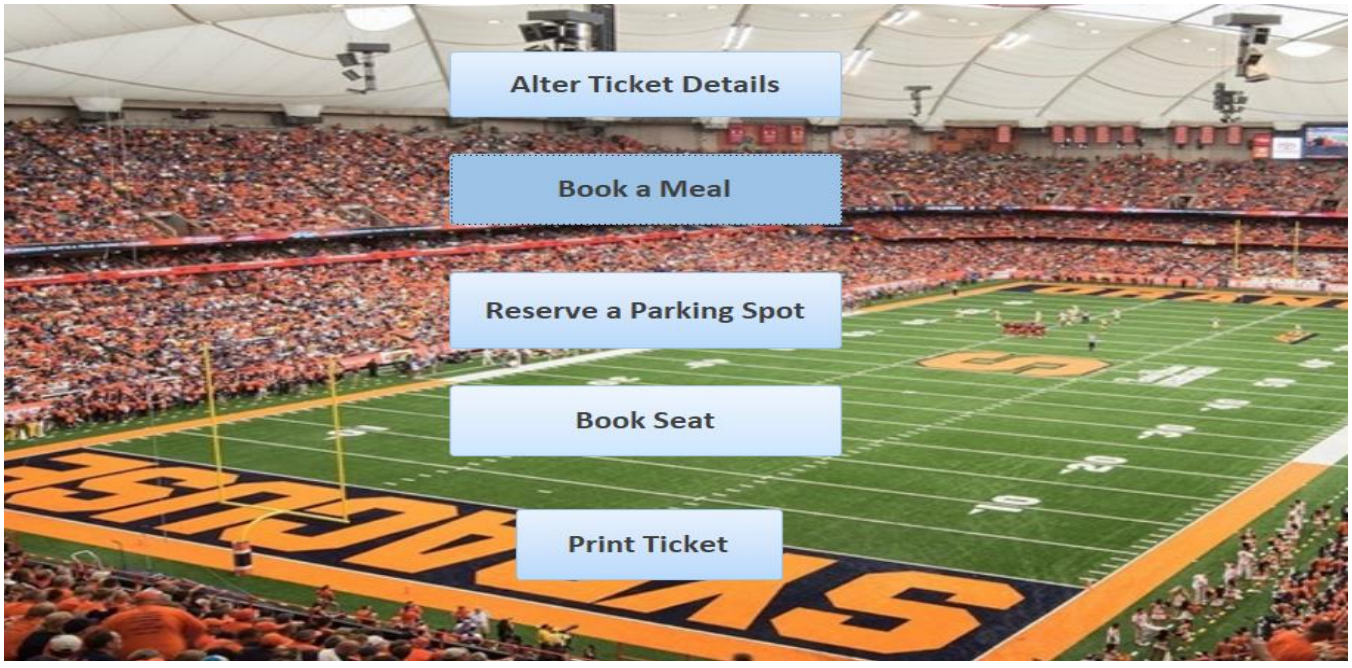

Meal Plan
New Meal Record
Meal ID
Order ID
Ticket ID
Meal Type
Back to Ticket Details


PARKING SLOT
New Parking Slot
Parking ID
Order ID
Ticket ID
Parking zone
Spot Number
Back to Ticket Details



Option 2: Already have a ticket?

Takes to the below interface



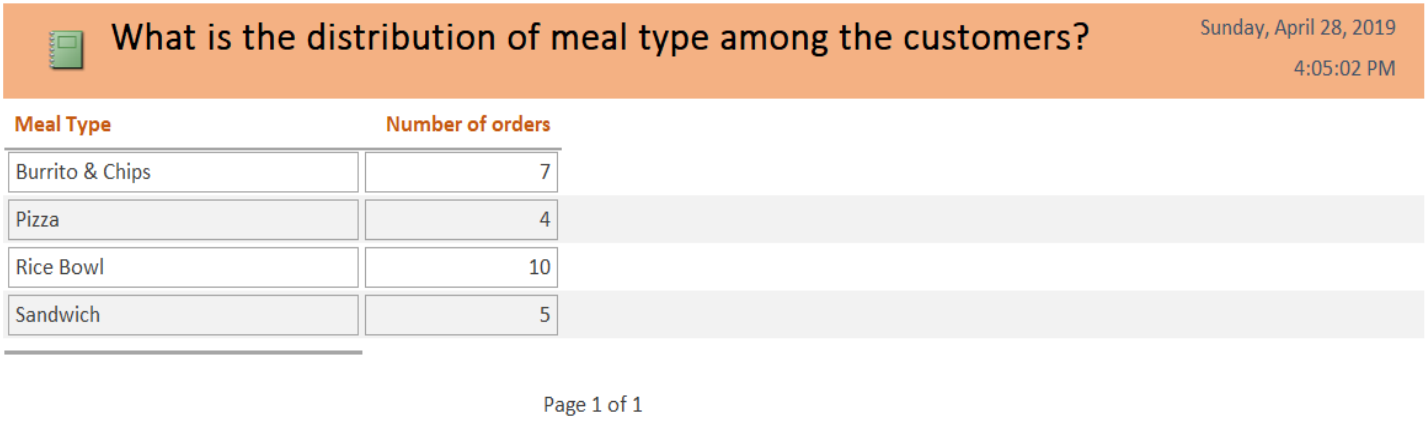
This would further take you to the respective forms for meal, ticket, parking, seat as above.

'Print Ticket' allows you to view the customer details in the form of a report.

REPORTS

Data Question answered using reports

What is the distribution of meal type among the customers?



What is the distribution of meal type among the customers?

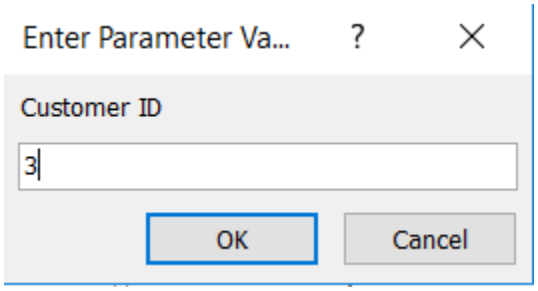
Sunday, April 28, 2019
4:05:02 PM

Meal Type	Number of orders
Burrito & Chips	7
Pizza	4
Rice Bowl	10
Sandwich	5

Page 1 of 1

Report of the Customer Booking Details

The below pop-up takes in the Customer ID value to print its corresponding booking details



It displays the corresponding details as follows

Customer Booking Details

Sunday, April 14, 2019
11:44:11 PM

Customer ID	First Name	Last Name
3	Gaurav	Salvi

Game Details

Team1	Team2	Game Date	Game Time
North Karolina TarHeels	Cincinnati Bearcats	3/7/2019	13:15:00

Preferences

Meal	Parking zone	Spot Number	Seat Zone	Seat Number
Sandwich	East	22	A	16

Class
Economy

Order details for all the customers

Customer Orders

Sunday, April 28, 2019
4:21:24 PM

Customer ID	Order ID	Match ID	No of tickets	Order Date	Order Time
1	7	2	1	6/25/2018	10:20:00
1	3	2	5	6/20/2018	20:20:00
2	9	4	3	12/20/2018	09:05:45
2	1	4	3	12/15/2018	23:00:11
3	8	6	5	2/27/2019	05:40:00
3	4	4	1	12/13/2018	15:40:00
4	5	3	4	1/10/2019	19:05:45
5	6	5	2	2/1/2019	19:05:45
6	2	1	2	5/8/2018	15:45:14
7	10	2	1	4/22/2019	10:44
				Total	10