

## SYRACUSE UNIVERSITY DOME CONCESSIONS



Hitesh Chandrakumar Thadhani

Syracuse University

School of Information Studies

IST659 – Project Design Report

Dome Concessions Shift & Pay Portal

## Project Summary:

The project proposal is about designing a database for Syracuse University Dome Concessions Organization which hosts many matches during the entire year including football, basketball. The Dome when hosting matches needs employees to take care of hospitality for the customer coming in to watch the game like food, drinks etc. Here the project is to build a database to make the schedules for the employees working for a game online through the portal.

The database would store information about employees, their schedules, managers, games and their details. It will also have details of employees who dropped shifts and who picked shifts along with their payment, hours clocked-in and their feedback from managers/supervisors. This information can be used to find number of employees working, payments made for a particular game.

The main problem with the current system is that for each game separate mail is sent to all the employees and those who respond are scheduled for that particular game. There are many instances of double scheduling, a lot of manual work to make schedule for each game. There is no automation like a portal to handle all the scheduling of games, employee schedules and payment etc.

To avoid these issues, a database design is proposed which takes care of scheduling of games and the employees that work for the games. This system can be used by employees to pick the shifts and drop them as required. Manual time and effort is saved in creating schedules for the employees and keep their track. This will eliminate the mail usage for each individual to reply to pick up a shift and trail mails for all those who want to work. The managers can just enter the shifts required for a game and all employees can pick shifts after they are posted. The managers can find out the required employees from the past records stored in database and how much is the growth in customers coming to watch games every year looking at the historical numbers in database.

The report has sections which include Entities & Attributes which talks about the various entities involved their description, primary keys, foreign keys, ERD showing how the database is designed along with business rules and some major questions which can be answered by using this system in place rather than just manual records.

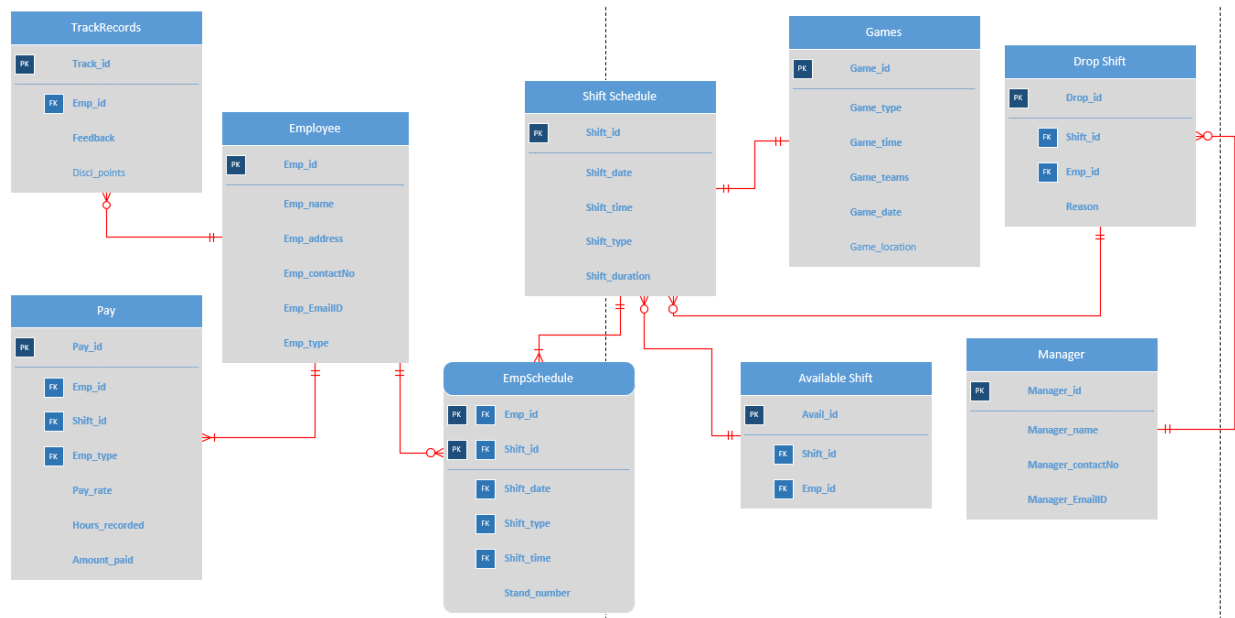
### Entities & Attributes:

Objects	Description
1. Employee	Employees working at Dome
a. Emp_id	Primary Key uniquely identifies Employee
b. Emp_name	Name of the employee
c. Emp_address	Address of the employee
d. Emp_contactNo	Contact Number of the employee
e. Emp_EmailID	Email ID of the employee
f. Emp_type	Type of the employee SU Student or Full Timer
2. Manager	Manager/Supervisor of Dome
a. Manager_id	Primary Key uniquely identifies Manager
b. Manager_name	Name of the Manager
c. Manager_contactNo	Contact Number of the Manager
d. Manager_EmailID	Email ID of the manager
3. Games	Schedule of the games to be played at Dome
a. Game_ID	Primary Key uniquely identifies the Game
b. Game_Type	Type of the Game like football, basketball etc.
c. Game_Time	Time of the Game Start
d. Game_Teams	Teams involved in the Game
e. Game_date	Date of the Game Played
f. Game_location	Location of the game to be played

4. Shift Schedule	<b>Shift Details</b>
a. Shift_id	Primary Key uniquely identifies the Shift
b. Shift_Date	Date of the shift
c. Shift_time	Timing of shift start
d. Shift_type	Type of the shift like Beer, Food, Portables
e. Shift_duration	Duration of the shift
5. EmpSchedule	Schedule of the Employee
a. Emp_id	Primary Key, Foreign Key uniquely identifies Employee
b. Shift_id	Primary Key, Foreign Key uniquely identifies Employee's Shift
c. Shift_Date	Foreign Key identifies Date of the shift
d. Shift_type	Foreign Key identifies Type of the shift
e. Shift_time	Foreign Key identifies Time of the shift start
f. Stand_number	Stand number where employee works in Dome
6. Available Shift	Shifts that are available or picked
a. Avail_id	Primary Key uniquely identifies the shifts available or picked up
b. Shift_id	Foreign Key identifies the shift
c. Emp_id	Foreign Key identifies the employee
7. Drop Shift	Shift Dropped by Employee
a. Drop_id	Primary Key uniquely identifies shift being dropped
b. Shift_id	Foreign Key uniquely identifies Shift
c. Emp_id	Foreign Key identifies the employee

d. Reason	Reason why the employee dropped the shift
8. Payment	Payment of employee
a. Pay_id	Payment ID uniquely identifies Payment
b. Emp_id	Foreign Key uniquely identifies Employee
c. Shift_id	Foreign Key uniquely identifies shift done
d. Emp_type	Foreign Key uniquely identifies employee type
e. Pay_rate	Pay rate per hour for different employee types
f. Hours_recorded	Hours recorded for the shift to be paid for that duration
g. Amount_paid	Amount to be paid to the employee
9. TrackRecords	Track records of the employee working at Dome
a. Track_id	Primary Key uniquely identifies Track Records
b. Emp_id	Foreign Key uniquely identifies employee
c. Feedback	Feedback given to the employee for their work
d. Disci_points	Disciplinary points given to the employee for not working properly or being late etc.

## ERD Diagram:



Project\_design\_ERD  
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## Business Rules:

1. A student cannot work for more than 20 hours a week.
2. Every person who wants to login needs to be logged in as manager, supervisor, student or Administrative Team.
3. Payment can be made in cheque or direct deposit only if configured in Myslice.
4. An employee cannot drop shift 8 hours prior to the start of the game.
5. Dropping the shift needs manager's approval so that employee can drop it and it is available for pick up by another employee.
6. Shift is available after manager approval in Available shift.
7. Employee has to take 2 shifts per semester in DOME to be considered active student.

### Major data questions:

The database design proposed would answer these major questions:

1. How many employees are sufficient for a particular game?
2. How many hours of manual work is saved in scheduling?
3. Which students pick shifts for the game and which do not? Active Students can be found out.
4. How Feedback can be used to track students work and their efficiency?
5. What is the average payment made for a particular game to employees?
6. What are the reasons given by employees to drop a shift?
7. What is the annual growth in terms of customers per game?