Database for Towson Campus Recreational Gym

Database Management Systems
Project Prepared by:

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Towson University
Fall 2020

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Signature of Interviewee

Introduction of Towson Campus Rec Database

The development of this database project for Towson's Campus Recreation Gymnasium started in September of 2020. The purpose of this database is to help Campus Recreation keep track of all the records of students and alumni who use the gym as well as the staff who work there. It also helps keep track of all the gym users who swipe their OneCard to enter the gym and rent equipment while also keeping track of employees for each department. Currently, campus recreation does have its own database but we believe we can improve it and make it more efficient and user-friendly. The database will help in finding and tracking records easier to help save time for Campus Rec.

A team of 5 students is currently working on this project. The database will be a SQL database and made using what we are learning in class throughout the semester and is currently being done for the Database Management Systems Class.

Towson Campus Recreational Gymnasium Profile

Campus Recreation is a program within the gym that supports the Towson University community. The program offers great social and physical benefits along with a vast amount of student employment. Campus Rec is a department within the Division of Student Affairs that is dedicated to creating a healthy campus. Their vision is "Enhance student success and the pursuit of lifelong well-being." Their mission is to create opportunities that foster engagement and well being for the TU community through diverse programs, services, facilities, and employment. Their core values are education, civility, inclusion, fun, safety, leadership, and community. Campus Recreation is also active in the National Intramural-Recreation Sports Association (NIRSA).

Towson's Campus Recreation center was first built in 1942 and labeled Wiedefeld Gymnasium. It was the only facility where school athletics and student fitness were combined. In 1968 it was moved to make way for the current Albert S. Cook Library. The new location for the Campus Recreation center was located at Burdick Hall. In 2015, construction began for the new addition, adding 94,000 Sq Ft. which included five fitness studios, a functional trainer area, rubber floored activity courts, and more. This cost around $42.5 million.

January 27th, 2018 was the official opening of the new and improved Campus Recreation Center, called "Bigger, Better, Burdick." Altogether, the total Sq Ft. of Burdick is approximately 235,000. With the expansion, the number of services, sales, and target areas largely increased. For sales, the purpose of the gym is not to make money, but to offer a variety of opportunities to students, faculty, alumni, and guests. However, Campus Recreation does offer the sale of lockers for the year or semester, gear rental for outdoor trips, guest passes, CPR certifications, food and beverage, personal training services, and alumni memberships. Guest passes revenue is around $16,000 and alumni memberships are around $36 a month resulting in the range of $5,000-$10,000+ annually.

Beyond the services that provide revenue, Campus Recreation has even more to offer. The business offers eighteen different fitness classes, reservations of gyms, MAC courts, and studios, rentals of various equipment, personal training services, rock climbing, safety instructions lessons, and student employment.

Towson Campus Recreational Gymnasium Process Description

<u>How Campus Recreation works</u>

Campus Recreation has multiple areas in which members can operate. There are two basic groups, patrons who use the gym and people who are employed at the gym. These categories interlap, as most people who are employed, use the facility. You have to be at least 18 years old to be in either category.

For the people who attend the gym, this includes students, faculty, alumni, and guests (of said members). Alumni and guests are the only people who have to pay to access the gym. All who have access to the gym can use the pool, rock climbing wall, fitness studios, gymnasiums, and equipment on each floor. Guests have to stay with their hosts as long as they are in the facility.

In order to gain access to the many programs that Campus Rec offers they must first gain access. In order to gain access, a user must first walk into Burdick Hall and present their TU OneCard or user ID to be able to proceed to do anything from renting equipment to reserving the field or a room for an activity.

After access has been gained the user can access the three floors of Burdick Hall with other users. The user can also walk over the front desk to reserve equipment such as basketballs and tennis rackets after they swipe their TU OneCard or provide a user ID number. They can also rent rooms within Burdick Hall and on Burdick Fields for private or group use. Classes are also offered to members of the gym reservation in the class can also be placed with OneCard or user ID.

People who work at the gym are part of a much bigger system. Students, graduate students, and alumni can work at Campus Recreation. The higher up positions are filled by other professionals hired outside of that bubble. Students can work in several categories like facilities, fitness, aquatics, marketing, outdoor adventure center, and membership/guest services. Within those categories are positioned a student can fill as well. Under facilities, we have facility managers, operation supervisors, and welcome desk attendants, and for membership and guest services we have equipment room attendants and guest services, attendants. In aquatics we have safety instructors and lifeguards, for marketing, we have a graphic designer, and for the outdoor adventure center, we have belay attendants.

Graduate Students are usually placed as graduate assistants for the six main categories. They work under associate directors, assistant directions, and coordinators. Student workers are only allowed to work a maximum of 20 hours per week, the shifts sometimes range from 3-4 hours long. This does not include the event shifts that operation supervisors sometimes work. Those shifts can be 5 hours, sometimes more.

The Campus Recreation System has many elements for which it has to store information. Along with the personal information of patrons, we have the 300+ workers to consider as well. Using paper to document said information would be impossible to store and access efficiently. This is why an electronic database should be created for this system, so accessibility to all of the information is quick and easy.

User Requirements

Process Modeling Requirements

Towson Campus recreation database is split up into Staff and Gym users. Each gym user has information such as FName, LName, Phone #, DOB, SSN and Home address. Gym users can checkout equipment using their ID number. Each Gym user can also bring a maximum of 3 guests with them. Guests are optional and have their fName, LName and the ID Number of Gym User that brought them. Gym users can also be categorized into Faculty, Alumni, and Student. There is an overlap because a student can also be faculty. Each Faculty member has their department in the database. Each student also has their year and major in the database. Since alumni have to pay for a membership to use the gym their payment info is stored. Each Towson Campus Recreation Staff has information such as FName, LName, DOB, ID, Home address, Availability, SSN, if their CPR certified, and their start date. Staff can be split up into Director/Coordinator and other staff members. Directors and coordinators have their salaries stored in the database. All the other staff members belong to a department and can work for more than one. Department can be split up into 6 categories (facilities, fitness, aquatics, marketing, membership, and outdoor adventure center.

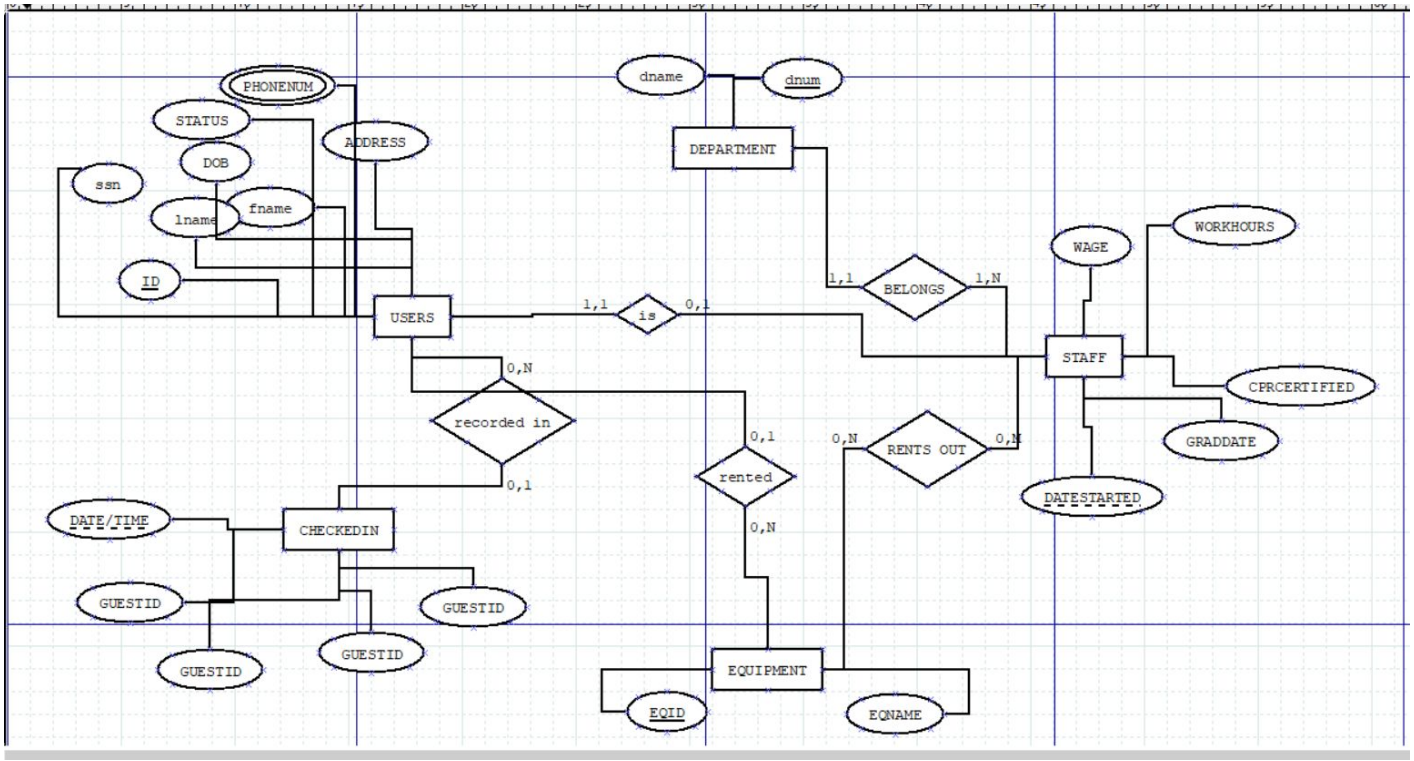
Data Modeling Requirements

- Allow staff to manually update information
- Allow staff to generate a list of staff and gym users
- Allow staff to rent out equipment to gym users
- Allow staff to check # of available equipment
- Allow staff to check who rented which equipment
- Allow lookup with ID number
- Allow staff scheduling
- Allow staff to access scheduling
- Allow staff to generate a list of staff that are also students

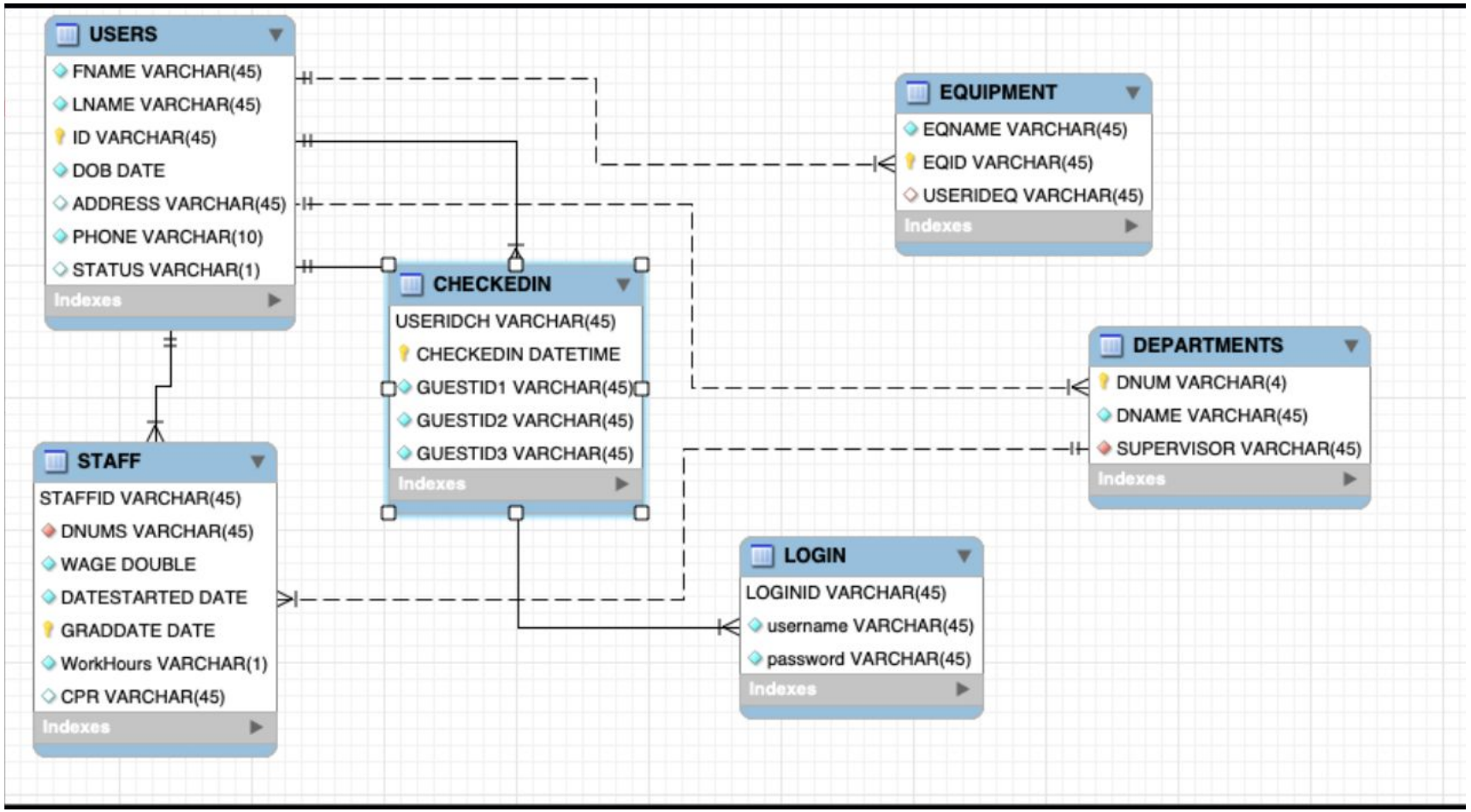
Expected Database Queries

- Find list of all returned equipment so far.
- Find list of people who have worked here more than 4 years
- Find list of staff about to graduate
- Find staff who works for more than 1 department
- Find list of staff cpr certified
- Find list of gym users with checkout equipment
- Find list of staff belonging to a specific department
- Find list of all gym users with at least 1 guest

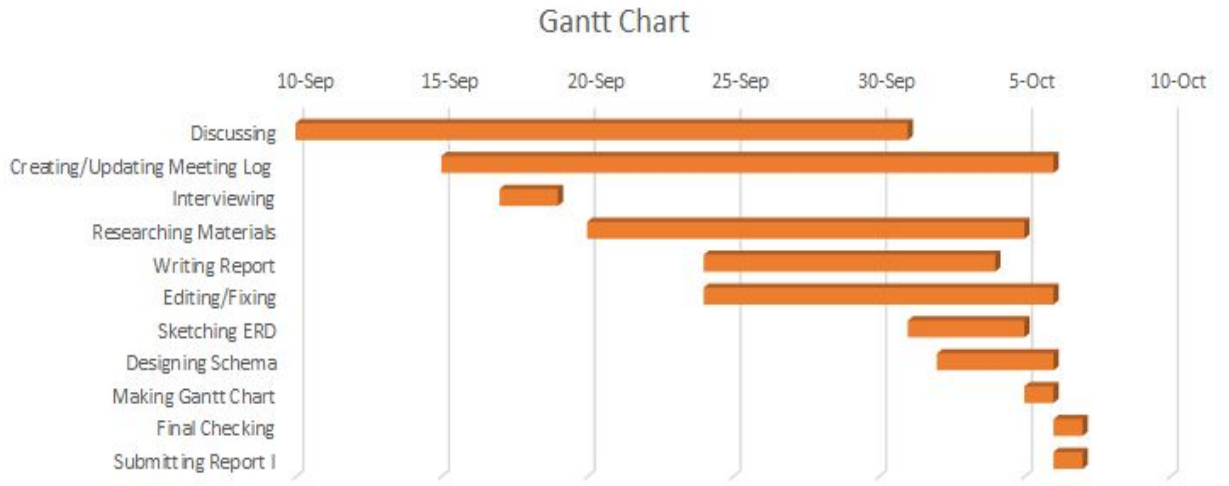
Entity Relationship Diagram



Schema


USERS
FNAME VARCHAR(45)
LNAME VARCHAR(45)
ID VARCHAR(45)
DOB DATE
ADDRESS VARCHAR(45)
PHONE VARCHAR(10)
STATUS VARCHAR(1)
Indexes
EQUIPMENT
EQNAME VARCHAR(45)
EQID VARCHAR(45)
USERIDEQ VARCHAR(45)
Indexes
CHECKEDIN
USERIDCH VARCHAR(45)
CHECKEDIN DATETIME
GUESTID1 VARCHAR(45)
GUESTID2 VARCHAR(45)
GUESTID3 VARCHAR(45)
Indexes
DEPARTMENTS
DNUM VARCHAR(4)
DNAME VARCHAR(45)
SUPERVISOR VARCHAR(45)
Indexes
STAFF
STAFFID VARCHAR(45)
DNUMS VARCHAR(45)
WAGE DOUBLE
DATESTARTED DATE
GRADDATE DATE
WorkHours VARCHAR(1)
CPR VARCHAR(45)
Indexes
LOGIN
LOGINID VARCHAR(45)
username VARCHAR(45)
password VARCHAR(45)
Indexes

Gantt Chart



	Submitting Report I	Final Checking	Making Gantt Chart	Designing Schema	Sketching ERD	Editing/Fixing	Writing Report	Researching Materials	Interviewing	Creating/Updating Meeting Log	Discussing
Start Date	6-Oct	6-Oct	5-Oct	2-Oct	1-Oct	24-Sep	24-Sep	20-Sep	17-Sep	15-Sep	10-Sep
Days to complete	1	1	1	4	4	12	10	15	2	21	21

Task List

Task Name	Duration	Start	Finish	Member Names
Discussion	21 days	9/10/2020	10/01/2020	All
Creating/Updating Meeting Log	21 days	9/15/2020	10/06/2020	Makafui Dzeze
Interviewing	2 days	9/17/2020	9/19/2020	Shania Foster & Kennedy Cyprain-Chiaha
Researching materials	15 days	9/20/2020	10/05/2020	All
Writing Report	10 days	9/24/2020	10/04/2020	All
Editing/Fixing	12 days	9/24/2020	10/06/2020	All
Sketching ERD	4 days	10/01/2020	10/05/2020	Tan Duong & Ehimare Uiyoshioria
Designing Schema	4 days	10/02/2020	10/06/2020	Tan Duong and Ehimare Uiyoshioria
Making Gantt Chart	1 day	10/04/2020	10/05/2020	Tan Duong
Final Checking	1 day	10/05/2020	10/06/2020	All
Submission of Report 1	1 day	10/05/2020	10/06/2020	Ehimare Uiyoshioria

Meeting Log 1

Group 4 Meeting Log	Minutes of the Meeting	Date	09/26/2020
Participants		Participants	Shania Foster, Makafui Dzeze, Kennedy Cyprain-Chiaha, Tan Duong, Ehimare Uiyoshioria
		Discussions	
Remarks		Deliverables	

Points Discussed		Remarks
	1	Set up meeting log
	2	Discussed business potentials (Staples, gym, non-profits, campus rec, etc..)
	3	Potentially asking professor for a business idea
	4	Challenges of completing the project
	5	Gantt Chart (Tan Duong)
	6	What should the interview contain?

Points Agreed		Remarks	Responsible	Completion Date
	1	Format of the meeting log	Makafui	9/26/2020

Meeting Log 2

Group 4 Meeting Log	Minutes of the Meeting	Date	10/03/2020
Participants		Participants	Shania Foster, Makafui Dzeze, Kennedy Cyprian-Chiaha, Tan Duong, Ehimare Uiyoshioria
		Discussions	
Remarks		Deliverables	

Points Discussed		Remarks
	1	Who is doing what?
	2	Shania will the interview and provide her signature
	3	Parts of the database and the positions includes

Points Agreed		Remarks	Responsible	Completion Date
	1	What everyone will do to contribute towards the completion of the project		
	2	Introduction/Table of contents	Ehimare	10/01/2020
	3	Target Business	Shania & Kennedy	9/25/2020
	4	Business process	Shania & Kennedy	9/25/2020

	5	User Requirements	Shania & Kennedy	9/25/2020
	6	ERD & Schema	Tan & Ehimare	10/06/2020
	7	Gantt chart	Tan	10/06/2020
	8	Task List	Makafui	10/06/2020
	9	Meeting Log	Makafui	10/06/2020