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CIS 245 Final Project

CIS245OSI Database Management Sys. /SQL

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# Subset 1

|  |  |
| --- | --- |
| Name of Company | Giant Food Market |
| Location | Chalfont, PA |
| URL of website | https://giantfood.com/ |
| What line of business? (restaurant, retail shop, online retail, medical facility, etc.) | Supermarket |
| How big is the organization (number of employees) | 186 Stores, 35,000 employees |
| What is your association with the company (customer, employee, owner, etc) | Employee |
| Problem description  (be specific – tell the problem from the end-users point of view) | The problem is for the employees of the supermarket. The clocking in and out system is an old time clock where employees had issues of clocking out/ clocking in on time. One of the main issues was that if an employee forgot to clock out, it would still count his hours until the next time he clocked in which would count as a clock out. That issue lead to an assortment of problems where employees had problems where if they were trying to clock in, it would say clock out instead or vice versa. |
| Business Problem to be solved  (losing customers because…, wasting money because…, wasting employee time because…., etc.)  REMEMBER: lack of a database is not, in itself, a business problem. The business problem is what happens because there is a lack of access to good data. | The problem to be solved is the waste of time and money for both the company and employees. It wasted the employees time because they had to go get it fixed everytime it happened which would take around 10-15 minutes of figuring out what happened and 5-10 minutes of figuring out the correct hours he worked. It would save the company money because the employees hour times wouldn’t be construed to an abnormal amount of hours. |

The name of the company that has a business problem to be solved is Giant Food Market. It is located at Chalfont, PA and is a supermarket with 185 stores in the US with over 35,000 employees. My association with the company is a Deli Employee. The problem with the supermarket is that the clocking in and out system is out of date and had many issues that needed to be solved. One of the main issues was that if an employee forgot to clock out, the time clock would continue until the next time he clocked in. When the employee comes back the next day to clock in, however, it would count as a “clock out” because he never actually clocked out. That issue lead to a variety of problems such as waste of time and money for both the employees and the company. When an employee encountered this situation, the managers would need to take their own time to fix it which always took around 10-15 minutes. Solving this problem would save the company money because the employees wouldn’t be wasting their time trying to fix this problem. What needs to be solved is the clocking systems gathering and categorization of data. Setting up specific hour times for each employee type, and/or creating a specific data table that is dedicated to organizing each employee hours and creating a time table that requires input from the employee clocking in to set a specific number of hours that they are working at the start of the shift. Therefore, if the employee forgets to clock out in time, the hours specified at the beginning of the shift would become the time that the employee clocked out at.

# Subset 2

Graphical user interface

Description automatically generated with medium confidence

## Subset 2 Business Rules

* Only one employee ID but can have many shifts
* Many employees can have the same position ID
* Only one Shift Num for every scheduled shift.

# Subset 3

Table

Description automatically generated with low confidence

Graphical user interface, text, application

Description automatically generated

Text

Description automatically generated

Table

Description automatically generated

# Subset 4

The database that I designed can be used to solve the identified business problem because it allows for the database to have information on each employee and their clock outs and in. It allows for each employees scheduled time and actual clock in/out time to be compared and looked at. In the initial problem, the system was an outdated time clock where both the employer and employee had no information on the other and what time was the correct time. This way, the information can be used and looked over by both employer and employee to see what the correct time was. The database would mainly be used by the managers and employers to organize and compile all the data on the clock ins/outs of the employees. The benefit that they would obtain from using this database is the saving of time wasted by the company to figure out what times the employee ended work at and what time he was supposed to clock out at. It would create a seamless operation every time an employee forgot to clock out/in. The complex query in the following picture:

Table

Description automatically generated allows for the employer to be able to compare both time totals and see which one to use. I joined the tables FINL\_TIME\_TABLE and FINL\_SCHEDULED\_SHIFT using the primary key SHIFT\_NUM in FINL\_TIME\_TABLE and the foreign key shift\_num in FINL\_SCHEDULED\_SHIFT. Let’s say that a person forgot to clock out, there would be a null value in the time\_total column, therefore the employer would be able to use the sched\_time\_total column to accurately depict what the amount of hours the employee worked. Instead of the employer wasting time to go around asking to see what the employees hours were, he can use this complex query to figure that out. Also, instead of executing this query every time you can create it into a view and execute the view any time you need it. That way it becomes a less tedious/complex task. Graphical user interface, text, application

Description automatically generatedGraphical user interface, application

Description automatically generated

Another complex query that would be used is this one: Table

Description automatically generated with low confidence

This complex query would create a result of the employees information and phone number for each shift. This makes it easier for the employer/manager to be able to locate/ get in contact with the employee himself. This will save time and hard work for the employer/manager as well as the employee. The needed security for this database would be for the database administrator to GRANT priveleges to all managers in the building as well as the employer to everything in the database. The database administrator can then GRANT priveleges for the employees to be able to see the FINL\_TIME\_TABLE and the FINL\_SCHEDULED\_SHIFT. They can then make it so that the employee can only see their times on those tables. In this database, I also added a trigger for both the FINL\_SCHEDULED\_SHIFT and FINL\_TIME\_TABLE tables. Graphical user interface, text, application, email

Description automatically generatedGraphical user interface, text, application

Description automatically generated

What those triggers do is actually create a total hours time worked in that specific row/shift. If one time column is null and the other isnt or both are null, the result comes out as null and the employer would be able to see that there was a problem immediately. That way, the employer can then use the scheduled time shift table to appropriately deduce what the time worked from the employee that shift was.