

Database Project

Project Name: Arcade Game Center.

Project Idea:

Create a database to store a multi data for a place that contain game machines from different types.

Requirements:

1. Center data: The center's data is collected, which is the owner name - center's address - center's phone numbers - work days - number of employees - total expenses and imports since inception - number of machines.
2. Employees data: employees are divided according to the job and the data is recorded, name - date of birth - address - phone number - national number - work start date - identification number for each employee - job name - main salary - salary increase amount - final salary - employment status is temporary or permanent - employment contract status.
3. Employee salaries: Recorded the employee identification number - salary - additions - discounts - total salary - date of receipt.

4. Jobs: job title – job Id – job place.
 - Each employee falls under his job title.
5. Employees' working hours: They are divided into three periods, which are morning, day and evening periods, and each period contains employees – absence and attendance – attendance date – attendance and departure times.
6. Machines data: machine name - machine type - prizes if any - machine price - usage fees - number of times the machine was used - time of use - number of machines of the same type - identification number for each machine - number of prizes if any - date of entry into the service and date of upload from the service upon completion – Malfunctions, if any, the number of repairs, and the price of repairs.
 - Adding the data of the machines lifted from the service, which is the data of the previously mentioned machine, and adding to it the reason for lifting and the date of uploading.
 - Adding the data of the broken machines, the malfunction and the repair data which contains the data of the aforementioned machine, in addition to the reason for the malfunction, its repair and the cost of the repair.
7. Center corners: Each corner contains its own machines - type of games in the corner - employees - number of

visitors to the corner - entry dates for visitors - money received from it - corner number - entry conditions.

8. Machine prizes: The prize data for the machines is recorded, namely the name of the prize - the number of prizes remaining - the prize price - the timing of the draw.
9. Visitor data: name - age - gender - money paid - date and time of entry - prizes drawn - used machines and the number of times they were used.
10. Subscriptions: The center allows regular visitors to make fixed-term subscriptions for a certain price and for certain machines. It contains the subscription package, which contains the price, the permitted machines, the number of times of use and the duration of the subscription - the subscriber's name - his date of birth - phone number - address - subscriber identification number - Save the date of the first subscription and the last subscription - the status of the subscription continues or has been canceled.
11. Children's Corner: It is a corner dedicated to children who cannot play with the usual machines that come with families. This corner collects the following data: the guardian's name and identification number - the child's name and identification number - the price of entering the corner - registration of the child's presence inside the corner - the time of entry and exit of the child.

12. Competitions: The name of the competition - start and end date - joining fees - conditions of joining - competition games - competition stages, if any - contestants - winners - prizes.

- The contestant's data is the same as the participant's data, but the date of birth changes to the immediate age.
- The stages of the competition, if any, its data is recorded like the data of the regular competition and is inside the competition file.
- Winners whose data is stored, which is divided into basic data, which is the contestant's data - the winning data, which is related to the competitions he won and their data.

13. Visitor cards: in which data is stored about the cards and not what is inside the cards, and the data is as follows: the card number - the type of card, is it for a subscriber, a contestant or a visitor - the status of the card in terms of use - the state of loss - the date of loss.

An additional explanation of how the hardware for collecting visitor data works:

The visitor card: It is a card whose holder's data is stored while he is inside the center, which is used by the machines to pay the

playing fees and to verify the conditions set for entering a particular corner. The center and during the exit, it is received to update the data in the database, and then all the data on it is erased for re-use.

Terms and Conditions:

1. Data can only be recorded by the manager or the reception staff.
2. No one can change the employees' data, their jobs or work periods except the manager only.
3. It is not possible to repeat the game more than the number of times specified on each machine, especially if there are other visitors waiting.
4. A competitor cannot participate in more than one competition at the same time.
5. It is not possible to enter any corner of the center without fulfilling the conditions.
6. No child can be left inside the children's corner and his guardian must leave the center.
7. No child can be taken without the guardian's identification number confirmation.

Reports and inquiries:

Basic periodic reports: which are submitted in different periods of time, but the same thing as daily, monthly, and annual reports, etc. which are:

1. Cash Transactions Report: Its purpose is to know expenses and imports, from which gains are determined.
2. Reports on employees: The commitment of employees to attend on time is known.
3. Visitor reports: Knowing information about visitors, including the most visited ages of the center, as well as the most visited gender.
4. Visitor entry times: A report on the most visited times can be extracted.
5. Reports on machines: including the most commonly used machines are known, so they are developed and the least are removed, as well as knowledge of faults and repairs and the cost of repair.
6. Reports on the prizes: Knowing the number and types of prizes most obtained and their prices, and the category of winning those prizes.
7. Reports on the pillars of the center: including knowing the most popular pillars and knowing the employees' commitment to their pillars.

8. Comprehensive reports that contain everything related to visitors, including timings, cash transactions, etc.

Custom queries: which are requested to make a relationship between specific variables and examples of them:

1. The number of visitors in a specific period of a specific day.
2. Total gains in a specific month.
3. The machines used are of a specific age group.
4. The attendance of a particular employee in a certain period.
5. Comparison of monetary transactions between the age group.
6. Machine malfunctions in relation to the number of visitors on a specific day.

Examples abound for this.