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DATABASE MANUAL

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\*\*The underline columns are the primary keys.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **AttendanceTime** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| Date | date | No | 0000-00-00 | The date the user clocked in. The format is YYYY-MM-DD |
| Clock In | time | No | 00:00:00 | The time the user clocked in. The format is hh:mm:ss |
| Clock Out | time | Yes | 00:00:00 | The time the user clocked out. The format is hh:mm:ss |
| Break | time | Yes | 00:00:00 | The time the user went for break.The format is hh:mm:ss |
| ReturnBreak | time | Yes | 00:00:00 | The time the user returned from break. The format is hh:mm:ss |
| Username | varchar(15) | No | None | The username of the user |
| BreakLength | int(50) | Yes | 0 | The total break length for each row |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Department** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| NumberDept | int(11) | No | None | The unique number of the department |
| NameDept | varchar(15) | No | None | The name of the department |
| CountryNum | int(11) | No | None | The unique country number |
| NumEmployees | int(11) | Yes | 0 | The total number of the employees of the department |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Leave** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| LeaveID | int(11) | No | None | The unique id for each leave request  (AUTO\_INCREMENT) |
| Reason | varchar(50) | Yes | “ “ | The reason the employee requests the leave. This should be a short description with maximum 50 characters |
| FromDate | date | Yes | 0000-00-00 | The date the requested leave starts. The format is YYYY-MM-DD |
| ToDate | date | Yes | 0000-00-00 | The date the requested leave ends. The format is YYYY-MM-DD |
| Username | varchar(15) | No | “ “ | The username of the employee who requests a leave |
| State | char(1) | No | p | The state of the leave request. The manager is the one that can change the state of the leave request. ‘p’ means pending, ‘a’ means accepted, ‘r’ means rejected |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Employee** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| Username | varchar(15) | No | None | The username of the user |
| ID | varchar(20) | No | None | The ID of the user |
| Name | char(35) | Yes | NULL | The name of the user |
| Surname | char(35) | Yes | NULL | The surname of the user |
| Password | char(255) | Yes | NULL | The hashed password of the user |
| Birthdate | date | Yes | 0000-00-00 | The date of birth of the user |
| Gender | char(1) | Yes | M | The gender of the user |
| Address | char(50) | Yes | NULL | The address of the user |
| Country | char(35) | Yes | NULL | The country of the user |
| Phone | varchar(35) | Yes | “ ” | The phone of the user |
| EmergencyPhone | varchar(35) | Yes | “ ” | An emergency phone of the user |
| Role | char(35) | Yes | NULL | The role of the user at the company  (e.g. IT, Programmer etc) |
| Salary | decimal(10,0) | Yes | 0 | The salary of the user |
| SalaryType | varchar(3) | Yes | “ ” | According how many hours and how often the user works, his/her salary type could be Fixed (‘F’), Fixed With Overtime(‘FO’) or Part time (‘P’) |
| SSN | int(11) | No | 0 | The SSN of the user |
| Email | varchar(35) | Yes | “ ” | The email of the user |
| AnnualLeaves | float | Yes | 0 | How many annual leaves the user can do |
| State | char(1) | Yes | o | The state of the user. According to which button the user clicks his/her state changes. If the user clicks the button Clock in or the button Return from break the state turns to ‘i’ or ‘I’. If the user clicks the button Clock out the state turns to ‘o’ or ‘O’. If the user clicks the button Break the state turns to ‘b’ or ‘B’ |
| NumDept | int(11) | Yes | 0 | The number of the department which the user belongs to |
| UsernameManager | varchar(15) | Yes | NULL | The username of manager’s user, which basically is the username of the manager that adds the user |
| CountryNumber | int(11) | Yes | 0 | The number of the country which the user works to |
| IsManager | int(1) | No | 0 | Defines if the user is a manager of a department. ‘1’ means that the user is a manager of a department and ‘0’ means that the user is not a manager of any department |
| CharactersPassword | int(11) | No | 6 | The length of the unhashed password of the user |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **DeletedEmployee** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| Username | varchar(15) | No | None | The username of the user |
| ID | varchar(20) | No | None | The ID of the user |
| Name | char(35) | Yes | NULL | The name of the user |
| Surname | char(35) | Yes | NULL | The surname of the user |
| Birthdate | date | Yes | 0000-00-00 | The date of birth of the user |
| Gender | char(1) | Yes | M | The gender of the user |
| Address | char(50) | Yes | NULL | The address of the user |
| Country | char(35) | Yes | NULL | The country of the user |
| Phone | varchar(35) | Yes | “ ” | The phone of the user |
| EmergencyPhone | varchar(35) | Yes | “ ” | An emergency phone of the user |
| Role | char(35) | Yes | NULL | The role of the user at the company  (e.g. IT, Programmer etc) |
| Salary | decimal(10,0) | Yes | 0 | The salary of the user |
| SalaryType | varchar(3) | Yes | “ ” | According how many hours and how often the user works, his/her salary type could be Fixed (‘F’), Fixed With Overtime(‘FO’) or Part time (‘P’) |
| SSN | int(11) | No | 0 | The SSN of the user |
| Email | varchar(35) | Yes | “ ” | The email of the user |
| NumDept | int(11) | Yes | 0 | The number of the department which the user belongs to |
| UsernameManager | varchar(15) | Yes | NULL | The username of manager’s user, which basically is the username of the manager that adds the user |
| CountryNumber | int(11) | Yes | 0 | The number of the country which the user works to |
| IsManager | int(1) | No | 0 | Defines if the user is a manager of a department. ‘1’ means that the user is a manager of a department and ‘0’ means that the user is not a manager of any department |
| CharactersPassword | int(11) | No | 6 | The length of the unhashed password of the user |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **CorporateHeadquarter** | | | | |
| **Column** | **Type** | **Null** | **Default** | **Description** |
| CountryNum | int(11) | No | None | Is auto-increment. Is the number of the country in which the company has department. |
| Name | varchar(35) | Yes | NULL | The name of the country in which the company has department. |

### **ENCRYPTION METHOD**

For the password encryption, for the Android Application we used the algorithm ‘Blowfish’ with default cost 10 and for the Webpage we used the algorithm ‘BCRYPT’. Specifically for the Webpage was used the ‘password\_hash’ method, and for the Android Application was used the ‘JBCrypt’ module.

### **REQUIRED MODIFICATIONS**

Mobile Application:

* Class: **ConnectDB**: you need to change the string variable *‘dbConnString’* with the right parameters for your MySQL database.
* Class: **ContactUs\_In**: you need to change the string variable *‘managerEmail’* with the right email; that will belong to the responsible person for responding to the ‘contact us’ emails, or with the manager that is declared in the database as ‘UsernameManager’ for that employee.
* Class: **ContactUs\_In**: you need to change the string variable *‘host’* with your outgoing mail server (SMTP) and also you need to change in the *‘properties.setProperty()’* method with your incoming mail server.
* Class: **ContactUs\_Out**: you need to change the string variable *‘managerEmail’* with the right email; that will belong to the responsible person for responding to the ‘contact us’ emails.
* Class: **ContactUs\_Out**: you need to change the string variable *‘host’* with your outgoing mail server (SMTP) and also you need to change in the *‘properties.setProperty()’* method with your incoming mail server.
* Class: **Forgot\_Password**: you need to change the string variable *‘host’* with your outgoing mail server (SMTP) and also you need to change in the *‘properties.setProperty()’* method with your incoming mail server.
* Class: **Payroll\_Report**: you need to change the string variable *‘managerEmail’* with the right email; that will belong to the responsible person for getting the XML or JSON reports.
* Class: **Payroll\_Report**: you need to change the string variable *‘host’* with your outgoing mail server (SMTP) and also you need to change in the *‘properties.setProperty()’* method with your incoming mail server.

Webpage:

* File: **db.php**:

*$conn = mysqli\_connect("localhost","stat","MKtYyjtfaEuFpaXv","stat");*

For the connection with the database you need to change “localhost” to your host name or your IP address. Also, you need to change “stat” to your MySQL username and “MKtYyjtfaEuFpaXv” to your MySQL password. Finally, you need to change “stat” to your MySQL database name.