OpenPayroll - DB Models

Overview

This is a small guide on the OpenPayroll database models. You will see how each schematic is constructed and the naming conventions of the data.

Priveleged Accounts

Priveleged Accounts are defined as Users who can:

- Run Reports
- Run Payroll
- Create/Access/Edit Personal Data
- Manage Clientelle
- Manage Priveleged Access

A priveleged account is any account that has sufficient permission to perform any of the aforementioned operations, there will be one designated "Super User" which will have permission to manage all User Access.

Schema Overview:

```
{
    _id: String (Unique ID given by Mongo Database),
    u_user_title: String,
    u_user_first_name: String,
    u_user_last_name: String,
    u_username: String,
    u_password: String (Encrypted),
    u_access_level: int (This is generated by adding the value of the Flags
given),
    u_access_flags: [
        "RUN_REPORTS",
        "RUN_PAYROLL",
        "PERSONAL_CREATE",
        "PERSONAL_DELETE",
        "PERSONAL_VIEW",
        "PERSONAL_EDIT",
        "CLIENTELLE_CREATE",
        "CLIENTELLE_DELETE",
        "CLIENTELLE_VIEW",
        "CLIENTELLE_EDIT",
        "VIEW_PRIVELEGED_ACCESS",
        "EDIT_PRIVELEGED_ACCESS",
        "DASHBOARD_ACCESS",
        "SUPER_USER"
    ]
}
```

Access Flags

Access Flags are used to determine a User's permission level, these are then weighted by level of importance to give an overall User Access Level (integer value), which will determine a hierarchy of Users. Access Flags will be added or removed as necessary to ensure the User has correct permissions to perform each operation in the software.

Flag Name	Description	Weight
RUN_REPORTS	Allow User to generate Reports	2
RUN_PAYROLL	Allow User to run Payroll	1
PERSONAL_CREATE	Add a new Employee	6
PERSONAL_DELETE	Remove an Employee	11
PERSONAL_VIEW	View Employee Information	5
PERSONAL_EDIT	Edit Employee Information	6
CLIENTELLE_CREATE	Add a new Company	8
CLIENTELLE_DELETE	Delete a Company	12
CLIENTELLE_VIEW	View Company Information	5
CLIENTELLE_EDIT	Edit Company Information	6
VIEW_PRIVELEGED_ACCESS	View Access Flags of User Accounts	20
EDIT_PRIVELEGED_ACCESS	Edit Access Flags of User Accounts, the user being administrated **MUST** be a lower access level than the acting Account	32
DASHBOARD_ACCESS	Allow User to access the Analytic Dashboard with their login	20
SUPER_USER	Delegated to one account only. No user will be able to perform any actions against this account	190

Analytics

Analytics will be used to produce a dashboard for priveleged users, this will allow them to track:

- Total Reports Generated
- Total Employee's Payroll ran
- Total Number of Users with Priveleged Access
- Total Number of Clients in System
- Total Number of Employees in System

Schema Overview:

```
{
    _id: String (Unique ID given by Mongo Database),
    a_reports_gen: int,
    a_payroll_ran: int,
    a_users: int,
    a_clients: int,
    a_employees: int
}
```