Abstract

The purpose of this project is to reduce the complexity of working on a firm where various types of Employees works.
Using this, it will be easy for a firm to manage it's employees.
They will be able to add/remove an employee, pay their salaries by one click as well as to update their date.
This will lead to a paperless working enviornment for the firm, although complete removal paper is not possible but it will help to minimize them.
Also, using this an Employee will be able to check his/her various details as well as update them if allowed.
Using this, work of both of them will be easier.

Project Aims And Objectives

In, today's modern world where data comes flooded, it is very difficult to manage paperwork for all that data.
Even if we need to change the salary of an Employee, we have to search all the data files and than have to update it.
That takes a lot of time.

This project aims to resolve that problem for a firm.
Using this, any firm will be able to manage there employees data in a well mannerd way which will be available to them by one click only.
They don't have to go through all that frustrating process.

Main advantage of this system/project is that firms will be able to pay their Employees with minimum processing and paperwork.
Also, firm will be able to manage them like add new employee or remove existing one.
Update salary or method of payment of an employee will be done by some clicks only.

Using this, any employee will be able to see his/her details any time.
Also, he/she will be able to update his/her details if allowed.
He/she will be able to update his/her password or change method of payment as per his/her need.
An employee will be able to add sale reciepts.
If he is an hourly paid then he will be able to add time cards.
Also, he will be able to join/leave Employee Union if he wants.

Using this project, all of this can be done with minimum efforts.

Design Role and Responsibilities

This describes typical roles and responsibilities for projects and programs. Roles may be assigned to one or more individuals. Conversely, individuals may play one or more roles.

Project Team Lead / ScrumMaster

- Assigned full or part time to participate in project team activities
- Responsible for contributing to overall project objectives and specific team deliverables
- Manages specific project plan activities and contributes to project plan development in collaboration with project manager
- Coordinates documentation, testing, and training efforts related to project plan

Technology Supprort

- Mysql database : This project stores and retrives data from mysql database. So your system must have mysql installed and running.
- This project is written in java 11.0.5, so your system must have java8 or above to support this.
- This project uses JDBC mysql connector to connect from database, so your system must have it to use this.

Key User

- Provides source information to the team
- Provides expert business understanding of the organization
- Represents the users area in identifying current or future procedures
- Reviews and confirms major SDLC work products for the project
- Participates as required in User Acceptance Testing Activities

Application Developer

- Designs systems from a user perspective.
- Designs human factors (windowing, ease-of-use)
- Designs externals (screens, reports, forms)
- Designs usability of the application
- Designs application software components, including programs, modules, and run units
- Prototypes, develops, and unit tests application software components or fragments.
- Participates with Business Analysts in application documentation[i]

Design Choices and Your Preferences with Reasoning

Currently, there's no user interface provided. All commands should be given on terminal/command-prompt.
This is done due to lack of time in designing an user interface.

All control of system is given to admin. Admin can add/remove employees as well as can change there salary and other details.
Admin has an unique id and password using which he can login and do changes he wants to do.
Only admin can run Payroll.
All of this is done for security purpose because not any normal user should be able to add new employees or remove existing one. Also, payroll should be done by one of authorities in the firm.

All employees has an unique id and password. Using id they can be identified individually.
This is done to remove ambiguity of data in system.
Employees would be able to change there method of payment, password.
This is done to reduce workload on the admin as well as for security purpose.

Initially, when en employee will be added, an unique id and password will be generated automatically for him/her.
This id can't be changed but employee can change his/her password as per his/her wish.
This is done so that there will be no ambiguity in system as well as for security of employee.

Also, employee will be able to add Time-Cards if hourly paid and Sale-Reciepts and they will be paid accordingly.
Both of these has unique numbers for each entry so that there can't be any duplicate entry in system.

Future Design Improvements

There are many improvements possible in current product in future.

- A user interface can be added for better user experience which is currently a command-prompt.
- Password hashing can be done before storing in database. Currently storing them without hashing.
- Admin previlages can be modified i.e. admin may be able to change his id and password so that no security threats will be there.
- Can make payroll run automatically daily on a given time. Currently admin needs to run it.
- In payroll, various payments for union charges should be done which is not happening in current product.
- Employee should be able to leave union any time he/she wants and should be charged accordingly, currently being charged fully.
- Employee should be able to rejoin union if also previous dues are remaining.
- Fired employees data should be stored seperately for any future concerns which is being removed after all payments to that user done.

Assumptions

- System control will be in hand of admin(only). Admin will be able to add/remove an employee as well as do other updates in his/her data.
- Remove data related to all fired workers after there dues are cleared.
- Employee should not be able to rejoin Union until previos dues are cleared.
- Storing Admin data into Employee table but he/she will not be treated as employee.
- It's admin's responsibility to run Payroll everyday.
- Every time-card will have an card number which will be unique for all, so no duplicate entry will be in system.
- Same for Sale Reciepts.
- Employee working status will be true in Employee table if he is working i.e. not been fired by admin.
- Every employee will be identified with a unique employee id.
- Employee id and initial password will be generated automatically while he is being added. This id will be his unique id.
- Password can be changed later.