

University Of Rwanda-Huye Campus

College of Business and Economics

School/Business - Department/BIT

Year 2 - Group 3 (Team 8)

Module Title: Advanced programming in java

ADVANCED PROGRAMMING IN JAVA PROJECT

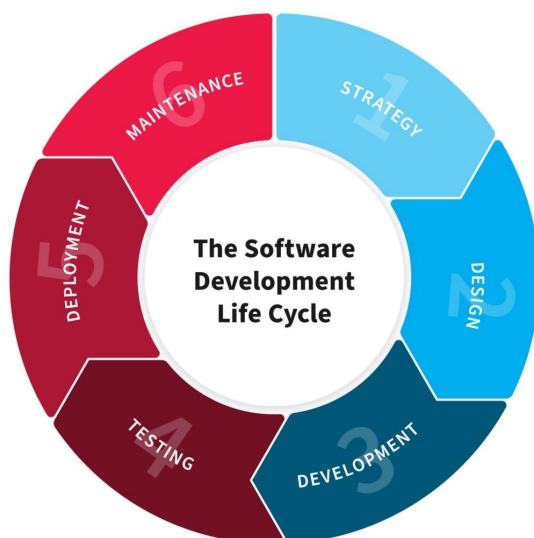
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*PROJECT NAME: Employee's Information
Management System*

PROJECT REPORT DESCRIPTION



1. PLANNING

The Employee's Information Management System is the project that will deal with receiving, managing and storing the employee's information like the registration and attendance information. System will allow the administrator to add, edit, delete and view the employee's information and the employees will be allowed to do attendance on their own. System will allow the admin also to print the information report.

Project goals and objectives:

- Making easy retrieve of employee's information
- Making online accessibility of the employee's information
- Increasing the employee's accountability
- Effective storing of employee's information

Problems the system needs to solve:

- Physical storing of the employee's information
- Difficulties of managing the employee's information
- Negligence and lack of accountability in employees

So, this system project is aiming to establish solutions to those problems.

2. DESIGN

The system is designed to be accessed by both administrator and registered employees.

System technical requirements:

- ★ Employee's productivity
- ★ System serviceability
- ★ System reliability
- ★ Human error detectability
- ★ High employee's information Privacy

System functional requirements:

- ❖ System Login
- ❖ Add, update, delete and view employees
- ❖ Print report
- ❖ Filling the attendance

Users interaction with the system:

Users must log in first to enter the system. There are two types of users (administrator and employee). The user credentials must match with the account information that is kept in the database in users table in order to enter into the system.

If an administrator logged in, will be directed to the system dashboard where he can view all the company's employees, he can also view the employee's attendance list and he can add, update, delete employees as well as printing the report.

If the employee is the one logged in will be directed to the attendance page where he/she can fill the attendance form and then submit it and information is kept into the database attendance table.

3. DEVELOPMENT

Development of the Employee's information Management System project was built using Java using Apache NetBeans IDE and MySQL database:

Database design and installation:

- We used MySQL as the database management system (DBMS).
- Creating database and data models that align with the system's functional requirements.
- Connecting to MySQL using the "mysql-connector-java-5.1.15" driver.
- Creating the users, attendance and employee's information tables and fields in the database using SQL.
- Defining relationships between tables.

Project development:

- Open Apache NetBeans IDE and create a new Java project.
- Develop the user interface design of the system using Palette Java Swing.
- Connecting application and the database.
- Coding all the pages as they're designed.
- Checking if the data is being stored and retrieved successfully.

4. TESTING

Testing Plan for the System project:

- Testing if the components of the system, such as the database and the user interface works correctly.
- Develop integration tests for the entire system to ensure that all the components are working together correctly.
- Testing the system as a whole to ensure that it is meeting the functional and technical requirements.
- Fix any defects or bugs that are identified during testing.
- Collect feedback from users and use it to make improvements to the system.

5. DEPLOYMENT

The project was uploaded to github for easy access and maintenance.

Link: <https://github.com/SUSURUKA/javaproject.git>

Installation, testing, and performance monitoring of the System on the local computer can be done as follows:

Installation:

- Download and install the necessary software, such as the Apache NetBeans IDE, MySQL and the Java Development Kit (JDK) if it is not yet installed on the local computer.
- Clone or download the project to your local machine from github.

- Download and configure the necessary settings for the system, such as setting up MySQL and mysql-java-connector driver.
- Open the project in the Apache NetBeans IDE and build the project to ensure that all dependencies are properly installed.
- Run the system on the local computer to ensure that it is working as expected.

6. MAINTENANCE

- ❖ Code functionality enhancements
- ❖ Usability changes
- ❖ Speed optimization
- ❖ Regression test

Conclusively, this Employee's information Management System is bringing up the solutions of modernizing the management and storage of the information.