

COMSATS University Islamabad, Attock Campus



Payroll Management System

Registration No:	CIIT/FA17-BSE-012/ATK
Subject:	SQE
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1. Introduction

1.1 Purpose:

In larger organizations, it is a difficult task to calculate and then maintain the financial records of every employee every month on the bases of manual attendance, separate department is required. So, to get rid of this problem we decide to make an online payroll management system.

1.2 Intended Audience and Reading Suggestions:

This document is generally prepared for the business analyst, company manager, developer and for the people who want to reuse this documentation in their SRS. Business analyst and company manager should only have to read their summary of this document because they did not have enough time to read whole document. While developer had to read the main functionalities that should be implemented in the system through code by the developer himself.

1.3 Product Scope:

In large organizations, a problem occurs where you have to create a separate department for accounts in which you have to maintain the attendance and pay records of employees manually.

For this purpose, we are developing the project which takes attendance data from biometric device and calculate employee salary i.e. gross pay, net pay etc. and employee can receive all the details related to pay an attendance through sms service.

2. Overall Description

2.1 Product Perspective:

This product is sort of a replacement for certain existing systems which provides the functionalities that is provided by the previous system as well as some new functionalities also.

2.2 Product Functions:

This app basically deals with the financial details of an Employees including their salary calculation, maintain record of their attendance, telling about the description of salary etc. this is an online app, the purpose behind making an online app is that manually it is too difficult for the accounting department too handle large number of employees so, for this purpose we are developing an online app which deals with employee financial details. The second reason to make this app online is due to its availability, employee whenever he wants knows all the financial details about himself. Two main categories are there in this app i.e. Admin Section and Employee Section. The section is responsible for the functionalities like adding an employee, view employee records, update tax and allowance if needed. On the other hand, employee can access their own features like calculating salary, view salary description, get details through sms, view their own attendance and at the end ask for help if required. There are two categories for the help i.e. admin help where he should have to fill the online form including their name and id and description of their problem etc. and manual help where he can read manual for his difficulty for how to use the system.

2.3 User Classes and Characteristics:

Following are
the user classes in our project:

1. Admin:

- Login module.

- **Register Employee's**
- **View Employee Records**
- **Update taxes and allowances**

2. Employee:

- **Login Menu**
- **Calculate Salary**
- **Generate pay slips**
- **View Attendance Reports**
- **Balance Inquiry**
- **SMS Verification (Optional)**
- **Get Help (Optional)**

2.4 Operating Environment:

This product is only customized to be used in the organizations where there are larger proportions of employees working in the industry or organization in order to calculate their pays and salaries.

2.5 Design and Implementation Constraints:

- This product is a desktop application and also a mobile application in order to facilitate employee with services whatever they required.
- Two types of languages are used. First one is java for app development and Ide is basically Android Studio and second one is c sharp for desktop application and ide is visual studio 2013.

2.6 User Documentation:

Following are the things that are provided after deployment of software:

- Online help
- Personal Assistant for 3 months
- Manual /guide help.
- Warranty for one Year.

2.7 Assumptions and Dependencies

- Our Assumption is that our system is correctly fetching information form the biometric device which we use in our system.
- Our second Assumption is that system is calculating the bills of employees in accurate and less time.
- Our system is dependent on biometric device, because from this device we get attendance information of employees.

3. External Interface Requirements

3.1 User Interfaces:

Following are the controls that are used by our product:

- Splash Screen
- Buttons
- Labels
- Icons
- Wallpapers

3.2 Hardware Interfaces:

- Our product is compatible for the pc's which have window 7 or more.
- Different protocols are used to transfer the attendance data from biometric device to software.

3.3 Software Interfaces:

This product also requires software named as Sql Server to store data of employee attendance.

4. System Features

Our First actor is the administrator which can perform the following functions/use case

❖ Register Employee's:

For the first time its admin or supervisor duty is to register the employee data into our system in order to access employee financial details. So to get registered the new employee we use this functionality which simply registered a newly hired employee and give them a domain to which they access their details.

❖ View Employee Records:

From this Feature admin or supervisor can view the details of every employee working in the organization. He can also check that whether which is on leave so he called a substitute instead of this employee too make the flow of work balance. He can also check the monthly reports of their attendance, gross pay, net pay etc.

❖ Update taxes and allowances:

From this functionality admin can update the tax and allowances details. They are further categorized into two branches. The admin just enters the percentage of tax and this tax should deduct from every employee salary. This functionality also helps the admin to increase the allowance of every employee or if admin

think that this employee is doing a god job so he may give this employee bonus through this functionality by adding some amount to his pay.

Our second actor is the employee which can perform the following functions/use cases:

❖ **Calculate Salary:**

This module enables the employee to view the calculated salary because it is difficult for the admin to calculate the salary of every employee by checking their daily attendance report al large scale manually. So this use case helps to calculate your salary by taking the data of your attendance from biometric device connected to it, the tax which should be deducted from your salary and the addition of allowance if incremented to your amount. Both tax and allowances details should be taken from the update tax and allowance module.

❖ **Generate pay slips:**

This functionality generally prints the pay slips just like the ATM's which prints the slip of your balance inquiry. The salary which is calculated in the calculate salary module should be derived in this module and printed on the paper with the help of printer and generate pay slips for the employee.

❖ **View Attendance Reports:**

From this use case employee can check their daily attendance report because on the basics of that attendance report his salary should be calculated. If he found any doubt about his salary details he may cross check his attendance details.

5. Other Nonfunctional Requirements

Following are the requirements the main non-functional requirements achieved through the system:

- **Availability**
- **Throughput**
- **Robust**
- **User Friendly**
- **Secure**

❖ **Availability:**

As we know that our system is online, so you had an access to our system whenever you want with the access of an internet.

❖ **Throughput:**

This is one of the most required non-functional requirement that should be required by our system because manually it is difficult and time consuming whereas our system provides you efficient results in less time.

❖ **Robust:**

Our system also had a capability to deals with the run time error. For example: if a user enters wrong username or password, system displays a toast to the that invalid username or password.

❖ **User Friendly:**

Every user demands that the system which he uses should be user friendly, so by keeping in mind user's needs we develop a system that is easy to use.

❖ Secure:

Employee's bank details and financials details are there in our system so security is also one of the non-functional requirement that is required by our system. Our system provides security to employee's confidential data by hiding it from the others.