**Online Payroll Management System**

**ABSTRACT**

The project deals with the analysis, design and implementation of Online Employee Payroll Management System for certain firms. “Online Payroll Management System” is a web-based management system which allows any firms or organizations to manage employee records and manage their payroll.

Manual Payroll Management System have multiple drawbacks such as inaccessibility, lower quality data, limited flexibility, lengthy process. Maintenance of the traditional system is also very difficult and takes lot of time and effort. Online Payroll Management System is crucial to eliminate these errors existing in manual payroll management system. This System is efficient, fast and reliable.

The Online Payroll Management System can create employee, manage the information and schedule, manage overtime, cash deductions, advance payments and can generate a pay slip which reduces the huge burden of managing the payment of employee in an organization, company or firms.

This project is very efficient and it comes handy to every company or organization. This project has Attendance for employees, admin login, dashboard and schedules, overtime, deductions, advance pay can be managed easily. It also can generate pay slip and we can download it on PDF format.

**INTRODUCTION**

**Background:**

The current payment management system in Nepal is still in a transitional phase and is still not advanced. Nepalese Payroll Management System is far behind of payroll management system in developed countries. The advancement of technology in Nepal is gradually improving. Nepalese Payroll Management System still follows Traditional System of keeping records and management. This traditional system of payment management needs to be changed. Some of the companies in Nepal are starting to follow the online and technological approach of management of payroll system. Online Payroll Management System is secure, easy to use, reliable and accurate.

This system eliminates logistical hassles and drawbacks in the traditional mode of the payment management. The Online Payroll Management System adopts a fresh approach by shifting to a virtual platform. Companies can access related information, anywhere. Online Payroll Management System is needed to ensure management of every data in a payment related platform in a systematic and virtual way.

“Online Payroll Management System” assesses employees by arranging, conducting and managing in online way. This system enables companies to store and use all the information at ease. According to today’s requirement, Online Payroll Management System is significantly important to the companies to manage the attendance, saving the time and effort that is required to check the physical records and all the lengthy and irritating process. This system helps companies to monitor their employees and keep eyes on them. It allows administrators to create employees, update them, add their overtime, manage deductions.

**Problem Statement:**

The existing system of managing payroll is manual. Most of the companies and other organizations in Nepal make the use of manual payroll management system. This system of manual payroll management has multiple drawbacks such as time consuming, results are not accurate since calculations are done manually, the chance of data being inaccurate is higher, checking of attendance is time consuming since it is done manually. The existing errors in manual payroll management system can be eliminated with the proper utilization and development of Information Technology.

**Objectives:**

Following are some of the specific objectives of this Online Payroll Management System.

* To provide a user-friendly and responsive interface through which employees can do attendance by checking in and checking out.
* To manage payroll virtually, efficiently and reduce administrative burden.
* To reduce time, cost and manpower consumed when management of payroll is conducted manually.

**Scope and Limitation:**

Scope of this project is very broad in terms of other manual payroll management system. Few of them are:

* This system can be used in any kind of companies.
* Can be used anywhere anytime as it is a web-based application.
* Employees, Administrators can have separate roles and the flow of information between them is efficient.
* Cost effective and time saving.

The limitations of this system are:

* Due to nature of an Online Payroll Management System, security issues might occur and loss of control may be felt.
* The implementation of an Online Payroll Management System necessitates a period of familiarization on part of all employees and admins.
* Infrastructural barriers such as internet connectivity, electrical connection etc. might interfere with how an Online Payroll Management System will work.

**Report Organization:**

This project work report consists of seven chapters altogether. The report has been organized in the order given as below.

**Chapter-1 Introduction:**

Background, Problem Statement, Objectives, Scope and Limitation and Report Organization

**Chapter-2 Related Work / Literature Review:**

Current state of art in our area or works people have done that is relevant to our project.

**Chapter-3 System Analysis:**

System Requirements and Studying Feasibility.

**Chapter-4 System Design:**

Architectural, Database and Interface Design

**Chapter-5 Implementation:**

Implementation tools and details

**Chapter-6 Testing:**

Test case design and execution

**Chapter-7 Conclusion and Future Enhancement:**

Conclusions as a result of doing this project and any future plan to extend this work. References and Appendices have been listed at the end of report under separate sections.

**Related Work:**

With the spread of the Internet and electronic devices, the use of online payroll systems in Nepalese companies is increasing. Most companies in Nepal still choose to manage their payroll manually due to their limited technical infrastructure. Once used only by top companies, online payroll systems are now being used by others as well. Some of the widely used system are:

**e-Payroll - Online Payroll Management System (MIS)** is a is online Payroll management system that enhances the process of your business organization with power of Integration, Simplicity.

**PIE Human Capital Management** is a most trusted HR software in Nepal. Also ranked as a result proven Payroll Software in Nepal for SMBs.

**HR and Payroll • Rigo Technologies** is a Premium Human Resources and Accounting Software development company in Nepal.

**Mero Network** in Nepal with payroll software for human resource management and payroll management of any organization with a simplified HR System.

**Nimble Infosys** is a leading HR software provider company in Nepal working in the market since 2010. Nimble HRMS is widely used by many reputed and leading companies of Nepal.

**Nepal Realistic Solutions** is boutique management and technology consulting firm based in Kathmandu, Nepal. They offer their clients practical and creative solutions to their complex business challenges.

**Danfebooks** is an online Hybrid HRM software that combines payroll having a free and premium feature for businesses in Nepal.

The major dissimilarity between above mentioned system and this project is that “OPMS” only focuses on payroll management and it has a lot more features that these integrated systems.

**System Analysis**

**Requirements Identification:**

**Functional Requirements:**

A functional requirement is a requirement specifically requested by an end user as a basic function that the system should provide. Integrating all these functions into the system is essential. This online payroll management system must meet the following requirements:

* **Administrator Aspect**

1. Create/Edit/Delete admin and employee’s account.
2. Adding Deductions
3. Creating/Editing/Deleting positions
4. Generate pay slip
5. Adding attendance
6. Taking backup of the database

* **Employee Aspect**

1. Logging into the system for attendance
2. Check time in
3. Check time out

* **Analysis**

1. Authenticating employees based on employee id.
2. Keeping track of employee.
3. Keeping history of employee’s working hours.

**Non-Functional Requirements**

Non-Functional Requirements are the quality constraints that the system must satisfy according to the project contract. The non-functional requirements for this system are:

* Performance Requirements

The database shall be able to accommodate multiple records of employees. The system shall support use of multiple employees at a time. There are no other specific performance requirements that will affect development

* Safety Requirements

The database may get crashed at any time due to virus or operating system failure. Therefore, it is required to take the database backup.

* Security Requirements

Some of the factors that are identified to protect the system from accidental or malicious access, use, modification, destruction or disclosure are described below.

1. Keep specific log or history data sets.
2. Assign certain functions to different modules.
3. Restrict communications between some areas of the program.
4. Check data integrity for critical variables.
5. Incorporate encryption techniques in the user/license authentication process.
6. Communication needs to be restricted when the application is validating the user or license.

**Feasibility Study**

A feasibility study is an analysis that takes all of a project’s relevant factors into account including economic, legal, technical and scheduling considerations to ascertain the likelihood of completing the project successfully. There are several types of feasibility depending on the aspect of the project. Some important types of feasibility study for this system are:

* **Economic Feasibility**

Economic Analysis is used for evaluation of the effectiveness of the system. It is also known as cost/benefit analysis which is the procedure to determine the benefit and saving that are excepted from a system and compare them with costs, decisions is made to design and implement the system. OPMS is economically feasible as existing tools and software are being used to develop it. And the organization implementing this system need not require any additional hardware resources.

* **Technical Feasibility**

Technical feasibility means whether available hardware, software and technical resources capable of meeting the needs of a system. It centers on the existing system and to what extent it can support the proposed system. Online Payroll Management System doesn’t require high end technologies for its operability. The system offers greater levels of user friendliness. The cost of maintenance is also low. Therefore, this system is technically feasible.

* **Operational Feasibility**

Operational feasibility is concerned with whether the organization’s needs can be met by completing the project. It also examines how a project plan satisfies the requirements identified in the requirements analysis phase of system development. Online Payroll Management System is operationally feasible as it is easy to understand and implement with existing infrastructure. Operational activities are very fast so the module can be developed in minimum time with fewer efforts.