# EMPLOYEE LEAVE MANAGEMENT IN SAP

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#### Abstract

The project for employee leave management system focuses on integrating a number of procedures and addressing a few issues with employee management. The project aims to automate and streamline the administration of employee data, leave requests, and leave grants. Employees must have a streamlined, automated system in place to handle leaves and manage work issues in preparation, as well as plan their extended breaks well in advance. It streamlines the working process and shows a strong work ethic. A good leave management system benefits the company as well as its employees. It enables them to prepare in advance for an employee's absence. Through this project implementation, employees may request leave, access their prior leave history, and the manager or HR can examine and approve requests for leave as well as monitor their current leave. We developed an application using Systems Applications & Products in Data Processing (SAP) technology which helps manager to view and manage their team. Real-time SAP reports can offer priceless insights that help organization to make better business choices. All levels of management can benefit from having a single, reliable view of the company information.

**Keywords**: leave application, leave management system, web-based application, automatic approval of leave, report generators.

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9	Leave Request Selection Screen
10	Leave Request Report
11	Tile of User account
12	Leave Request Screen

## List of Abbreviations

**ASAP** accelerated SAP methodology

**ERP** enterprise resource planning

**HCM** human capital management

**HOD** head of department

**HRMS** human resource management system

HR human resource

**IS** information systems

IT information technology

MNC multinational company

SAP system applications and products in data processing

SDLC system development life cycle

## 1 Introduction

One of the most crucial human resource procedures, leave management takes up a little but substantial amount of managerial time. It might be difficult for managers to approve leave requests since they sometimes have too many tasks on their plates and a desire for resources. On one hand, HR must make sure that the leave policy is followed and that there are enough resources available to maintain company continuity; on the other side, it must raise employee satisfaction. Most individuals have seen manager-employee disputes over leave concerns. As a result, managing leaves of absence becomes a crucial strategic challenge for the company [1]. Every business is information-driven, and employees are responsible for directing and carrying out daily operations. The department organises and trains the workforce to carry out these tasks efficiently. Human resource management and human capital management both include viewing people as assets. The organisation must deploy an HRMS or human resource management system, in order to manage and automate the HR Process and increase organisational efficiency. This module, which is a leave management system, is essential for Human Resource responsibilities and maintains a record of crucial data regarding working hours and leaves. In this module, the Head of Department (HOD) will have the authority to manage the data of all the department's faculty members. Through this tool, the HOD may check each employee's leave history and authorise leaves. This program may be used in colleges to lighten the workload associated with processing. A leave management tool will cut down on paperwork and keep track of leaves in a more organised and effective manner.

Compensation, hiring, performance management, organisation growth, safety, wellness, benefits, employee engagement, communication, administration, and training are just a few of the topics that human resource management addresses in the workplace. One of the most crucial HR procedures, leave the management takes up a little but substantial amount of managerial time. It might be difficult for managers to approve leave requests since they sometimes have too many tasks on their plates and a desire for resources. On the one hand, HR must make sure that the leave policy is followed and that there are enough resources available to maintain company continuity; on the other side, it must raise employee satisfaction. Most individuals have seen manager-employee disputes over leave concerns. As a result, managing leaves of absence becomes a crucial strategic challenge for the company [2]. Management of leaves makes ensuring that all leaves taken and leave requests are accurately recorded. Without the inconvenience or delay of going via the administrative personnel, employees may apply for, approve, and access leave records. They may also instantly check their availability for vacation (from any point in time) and submit an online leave request thanks to this technology. The system offers complete audit trails for the leave plans and balances for the employees. Leave permissions no longer entail mountains of documentation for the management. It may also be used to assess programs or policies, assist everyday operational issues, or help strategic decision-making.

By using a centralised database and reducing paperwork, our solution makes it possible to maintain accurate records and reduces the likelihood of data loss. It also makes it easier to get information about employees leave information. The majority of colleges and departments still use manual processes where faculty members input their leave information in a log book [3]. The Administration Department calculates each member's remaining leave at the end of each month, which is a time-consuming operation with a potential of data loss or record inaccuracies. We created this method to do away with human labour and the potential for data loss. The study will examine SAP's value in managing human resources. Because an information system may enhance a company's operations, it is important to guarantee the quality of the information systems (IS) services because doing so enhances the organization's services as a whole.

## 2 Objectives / Research Questions

The project's scope is restricted to a few processes, including handling employee leave applications, keeping track of leave balances, administering record management, adjusting load, and producing reports on leave trends for the organisation, employee availability, leave balance, leave rejection, and leave acceptance. The leave management system was created, developed, and put into use while distinguishing between different leave of absence regulations and sorts of leaves. The system was specifically created for the HR Department, Managers, and Employees Leave Records Section.

The goal of our implementation project is to handle more than ten thousands employees in no time and allow managers assign task to other employee based on the priority of the work.

The process of planning, organising, and budgeting the precise minutes people utilise to do their daily duties is known as time management. Time management techniques are used by productive employees to increase output. The SAP Time Management module oversees all HR procedures including the scheduling, logging, and evaluation of work completed by internal and external employees as well as absence times. Reporting discrepancies between scheduled and actual working hours is what SAP Time Management does as a result there may be overtime, short time, or an absent employee. A time management solution called the SAP Time Manager's Workplace offers an integrated user interface for maintaining attendance and absence records. Transactions related to time and leave management that the time administrator utilises to keep track of employee time. Before creating any Time Records for an Employee, the Manager must have an approved record that is authorised by him or her since the appropriate Time Administrator is not permitted to approve or authorise any Time Records [4].

## 3 Literature review

According to Schlichter & Kraemmergaard (2010) [34], Enterprise Resources Planning (ERP) is a system that combines information management by controlling the flow of data throughout the whole enterprise. Due to the ineffectiveness of institutional procedures, businesses typically purchase ERP systems. The use of an ERP system enhances an organization's effectiveness in day-to-day operations by automating business processes, improving operational efficiency, and facilitating information access. When an organisation has to deal with several complicated and interrelated business issues, ERP is frequently considered. The majority of these firms anticipate that the use of ERP will improve commerce. One of these advantages is achieving the financial objectives of the organisation through productivity and efficiency improvements brought on by business process automation. Another is to streamline a sizable business' management and operations, whether it has developed organically or via acquisitions. Such a firm may have several currencies, locations, or industry sectors. A new ERP acquisition may also improve or replace an old ERP system that is outmoded, unwelcome, or inefficient. This may entail better information management by encouraging access to information, cutting down on data duplication, and enhancing prediction capacities.

Numerous businesses have implemented new systems that will aid in modernising and managing their day-to-day corporate resources and operations, as well as connecting the various areas. A single, all-inclusive ERP system makes all of this feasible. There are several businesses that specialise in creating these systems; the most well-known is SAP.

The software has been improved by the firm until it is now a complete application for all divisions of a company, regardless of how big or little it is. It is currently among the biggest enterprises that offers useful solutions to businesses (Gargeya & Brady, 2005) [35]. Systems cost a lot of money, and the biggest corporations typically buy them. Its primary function is to create management programmes that assist organisations in bettering their operations and combine them into a single system to ensure coherence and efficiency without using multiple software platforms from various vendors.

#### 3.1 Administrators in Technical Universities in Ghana

By virtue of their mandate, technical institutions offer students educational services that assist the growth of the country's human resources. To fulfil the requirements of the expanding and varied student body, these services include teaching, research, academic assistance, industry liaison, career development, counselling, housing and resident services, among others. As a result, both teaching and non-teaching personnel work in Ghana's technical universities.

The usage of administrative or non-teaching employees in educational institutions

has grown dramatically in recent years, and their roles and responsibilities have been extensively discussed [5, 6]. By providing students with information, resources, assistance, and instruction, universities primarily seek to optimise the process of acclimating them to university life. Therefore, administrative staff members are frequently employed by colleges to aid in achieving their goals [7, 8].

The law that established universities provided them with their enabling documents, and it is this instrument that specifies the mandate, lays out the governance structure, and designates the principal/key executives. Technical universities have streamlined administrative structures that collaborate to accomplish the institution's ultimate goal. Systems and procedures must be put in place to direct its operations, some of which are managed, directed, and coordinated, including leave management, in order to have a smooth and effective technical university administration for the accomplishment of its purpose.

#### Leave Management

The process of requesting, approving, or rejecting a staff member's request for time off from work while taking into account the institution's impact is known as leave management [11, 12, 13]. As a mechanism for employees to accrue personal leave days, certain firms may provide paid leave.

Understanding a company's resource availability at any given time is important. It ensures that work is done effectively and continuously. As a result, an organization's productivity and/or performance have a direct correlation with its leave management method. As a type of employee benefit, leave is a vital instrument in human resource management that businesses may use to provide a safe and effective workplace [9, 14]. Giving employees time to relax allows them to maintain high levels of production, which is the major goal of leave [9, 15].

Organizations sometimes underrate the effect employee absence from work can have on productivity. As inferred by [16] and [17], the average cost of staff absenteeism is estimated at 36% of employees" salary, while absenteeism may give rise to 19% daily net lost in productivity. The indirect cost of employee absenteeism includes the interruption of work, overtime payments, engagement of temporary or casual workers, stakeholder's dissatisfaction, as well as employee turnover [18, 19, 22]. Most organizations do not have the tools to track accurate reports on leave and assume that staff take a few days" sick days annually [20, 21]. However, once they conduct even a manual report, they are stunned by the outcomes.

A few advantages of using an online leave management system might aid in deciding whether to make the switch:

- Precise and accurate information: With a functioning online leave system, one has access to reliable data on the number of leaves taken by each employee, the trends in leave usage, and the remaining leave balances.
- Transparency: The leave system is made more transparent by the availability

of all the information online to both employees and their supervisors. The manager has access to the same information as the employees do on their leave history and balance. As a result, leave acceptance or rejection is more obvious.

- Elimination of manual, paper-based processes: Spreadsheets and outdated time and attendance systems are limited in their capability compared to leave management software, which automates the fundamental processes of managing employee absences. All time and attendance-related operations are accessible through one common site to managers, employees, and HR. You can say goodbye to manual absence monitoring forever because time off requests and reporting take place in the cloud.
- Real-time leave monitoring You may access all employee leave data, including accruals, leave balances, and details on unique situations such when employees borrow against future accruals, using a leave management system.
  - Additionally, having real-time access to employee leave data enables you to monitor who is approaching their leave cap and who has yet to take any time off and may benefit from encouragement. Additionally, you may take action to set up shift coverage and temporary staff replacements when you have complete insight into which employees have upcoming time off booked.
- Automated notifications for more efficient leave management: You may set up customised notifications to inform you when workers seek time off, when those requests are authorised, and when employees are getting close to their time off limitations. The program may be set up to notify management when a pending request needs their attention. You may respond to requests and act quickly when there are exceptions that require immediate attention, rather than letting requests fall through the gaps or leaving them unattended for an excessive amount of time.
- Improved communication between managers and employees: Employees don't have to worry about finding their boss to seek time off when there is an easy-to-use portal for both those functions. Additionally, managers may take pleasure in a stress-free approach for handling upcoming planned leave requests thanks to instruments for leave bidding and the capability to put requests on hold. Managers can readily determine who is taking time off—and who isn't—because they have access to historical time off data for their workforce. Managers may use this information to have one-on-one conversations with employees about taking use of their vacation time and preventing burnout.

## 3.2 Similar systems

A literature review covers material that has been published in a certain field of study, and occasionally information that has been published during a specific time frame. Although a literature review might just be a list of the sources, it often follows an

organisational structure and incorporates summary and synthesis.

It takes time for managers to manage employee departures, process each employee's leave data, and guarantee that the company's leave policy is followed. Daily processing of leave requests always entails checking at the employee's leave history, or the leaves taken by the employee during a specific time period and the remaining leaves that are available.

#### 3.2.1 PlanMyLeave

A leave management solution that can readily expand from small and medium firms to huge corporations is PlanMyLeave [30]. PlanMyLeave gives businesses a rapid solution to deploy their HR and leave management system on the cloud and delivers fully featured flexible multi-location based options available in enterprise level programmes. As a consequence, the organization's production increases while saving time and money.

For every type of company with operations across several nations, online leave management with PlanMyLeave enables customization of leave types and creation of complicated leave policies. Automation of the leave clearance process helps reduce unjustified absences and keep HR costs in check. The self-service dashboard for PlanMyLeave provides a simple interface for applying and seeing the status and calendars of vacation requests. Administrators may quickly set up personnel details, leave kinds, and regulations using the online staff leave planner.

Employers and workers benefit from staff leave planning with PlanMyLeave because it provides an equitable and transparent approach for leave approval, and figure 1 shows a calendar view. On the dashboard, staff members may see their current leave balances, request leaves, and view their prior leave histories. Managers can also review and approve leave requests.

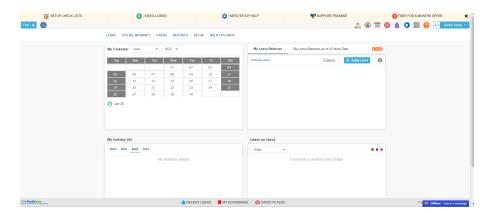


Figure 1: Dashboard of PlanMyLeave software

#### 3.2.2 Mitrefinch Leave Management System

A platform for the workforce that is completely integrated and has several built-in business applications. Productivity gains will help businesses more profitable as well. Managing a workforce It is an automated system that prevents human mistake and is ordered and reliable for maintaining control. Employees may manage and track time off requests using a user-friendly interface and it gives them the chance to plan ahead for leaves by giving them a broad perspective of the workplace [32].

Automated email alerts for leave requests help in the HR department. simple automated update submission and approval procedure. Present default codes for several paid time off categories, the ability to build a limitless number of customised time off codes, and simple absence recording and monitoring. Because the aforementioned methods do not adhere to norms and regulations, the newly implemented leave management system is not appropriate for web-based use.

## 3.3 Critical review of similar systems

User registration must be completed prior to system operation, and support and maintenance will be provided during system operation. Once all users have signed up for the system, leave will be processed successfully. Users will find it simpler as a result of the system's integration with a central human resource management system.

#### 3.3.1 Comparison with existing systems

Although PlanMyLeave and Mitrefinch [33] offer the ability to apply for leave, create superiors, remove leaves, alter a user's password, grant access depending on various locations, report individual leaves, and track absences, neither system can be configured to meet specific requirements. Because Table 1 only deals with land-based location units, neither system is appropriate.

## 4 ERP systems implementations

Over the past ten years, enterprise resource planning (ERP) systems have grown in popularity among contemporary corporate operations. These software systems have drawn the attention of several organisations and researchers because to the benefits they offer and the challenges they provide in realising those promises. This chapter gives a basic overview of what ERP is, as well as its main suppliers and characteristics. It also explains the benefits of using ERP and briefly examines the deployment process.

- What is ERP? Major vendors, characteristics
- Reasons for the companies to go ERP

Table 1: Comparison with existing systems

Requirement of the de-	PlanMyLeave	Mitrefinch
veloped applications		
Registering to the system	X	X
Applying leave	<b>✓</b>	<b>✓</b>
Sending alert	X	X
Selecting of duty	X	X
Creation of superiors for ap-	<b>✓</b>	X
prove queue		
Admin panel to delete	<b>✓</b>	<b>✓</b>
leaves		
Admin panel to change	<b>✓</b>	<b>✓</b>
password of any user		
Monitoring of own leave	X	X
Different location based ac-	<b>✓</b>	<b>✓</b>
cess		
Reporting facility of indi-	X	<b>✓</b>
vidual leaves		
Reporting facility to get a	X	X
report as a minute sheet		
Tracking of absences	<b>✓</b>	<b>✓</b>

- Benefits of ERP
- ERP implementation process (stages, approaches)

#### 4.1 What is ERP

Enterprise Resource Planning (ERP) is a computer-based system created to unify the three main business functions of planning, production, and customer service. An ERP system is a collection of software modules for managing fixed assets, handling financial accounting, manufacturing, managing human resources, planning and development, and other functions. Each module is tailored to a certain business process. Companies often choose one of the pre-made packages offered for their sector, but it is also typical to pick the modules that best suit their requirements. Although there are hundreds of ERP manufacturers on the market, J.D. Edwards, Baan, PeopleSoft, SAP, and Oracle mostly control this industry.

## 4.2 Reasons for the MNC to go ERP

Y2K compliance and the need to replace the outdated and subpar systems were initially key concerns for many businesses in the mid- and late 1990s. However, the main factors inducing businesses to select ERP are connected to enhancing productivity and decision-making, as well as lowering labour expenses, red tape, and

mistakes. Other factors include pressure from rivals, demands from partners seeking speedier service, integration between units, organisational uniformity across many locations, and the globalisation of enterprises. Companies are being compelled to adapt and work as a single system via acquisitions and mergers amongst the components. However, each firm has distinct reasons for putting ERP into place, and the order of those reasons relies on the kind of projects each company is working on.

Technology, business practises, strategic, and competitive are the four sorts of categories O'Leary (2000) [36] used to categorise the causes. Technical, operational, and strategic are the three key dimensions identified by Holland (1999) [38]. Some studies focus on even larger categories, such as technology advancements and corporate success. According to the literature, the main causes of the rapid increase in the usage of ERP systems may be summed up as follows:

#### • Technical

- a need for a common platform and replacement of an existing IT infrastructure
- an incompatibility of several information systems

#### • Operational

- process improvement
- data visibility
- operating cost reduction

#### • Strategic

- globalisation of business
- the growth of an enterprise and a focus on standardisation of processes
- the consideration of an enterprise to re-engineer its business processes
- improve customer responsiveness
- need for efficiencies and integration between the units and processes
- enhance firm's performance and decision making

Olson (2004) [37] reviews two studies that looked at the drivers behind ERP adoption. Two studies were conducted as shown in Table 2, one on Swedish businesses and the other on American industrial companies. Both studies listed system simplicity and uniformity as their main justifications for replacing outdated systems. Other high-ranking justifications included enhancing connections with consumers and suppliers, getting a competitive edge, supply-chain considerations, and connecting to global operations. Both surveys gave low ratings to the pressure to keep up with the competition, the simplicity of updating systems, and organisational reorganisation.

Table 2: Reasons for implementing ERP

Reason	United States	Sweden					
Replace legacy systems	4.06	4.11					
Simplify and standardize	3.85	3.67					
systems							
Improve interactions with	3.55	3.16					
suppliers and customers							
Gain strategic advantage	3.46	3.18					
Link global activities	3.17	2.85					
Solve the Y2K problem	3.08	2.48					
Pressure to keep up with	2.99	2.48					
competitors							
Ease of upgrading systems	2.91	2.96					
Restructure organization	2.58	2.70					

#### 4.3 Benefits of ERP

Implementing ERP systems has the following advantages for businesses:

- Increases firm performance.
- Removes wasteful manual processes provides integrated, enterprise-wide common tools and processes
- Decreases costs by increasing enterprise efficiency through computerization.
- Includes improvements in logistics, production scheduling, customer service, and customer responsiveness; and provides enterprise-wide data.

From a technology standpoint, the fundamental benefit of these systems is that they offer a standard, integrated software platform for business activities. Two key characteristics of these systems are that they enable a causal relationship between a visual model of business processes and the software implementation of those processes and that they guarantee a level of integration, data integrity, and security that is difficult to achieve with multiple software platforms.

ERP systems help improve coordination and cooperation across various departments and locations within a business. As fewer conflicts arise between the processes due to process standardisation throughout the units, collaboration benefits. Through the exchange of information, the single database system promotes communication across locations and functional units. With ERP systems, businesses employ a single database that multiple people may access concurrently, online, in real-time. The fact that almost every user has access to the same information enhances business planning and control procedures.

## 5 SAP Human Resource Management

Management of people inside a firm is the primary focus of human capital management (HCM) or human resource management (HRM). In order to handle payroll, benefits, career and succession planning, and other daily record keeping tasks for managers and staff, these procedures successfully automate and streamline the paper framework and structure. HCM aids in simplifying the processing, monitoring, and reporting of data pertaining to employees.

A long variety of standard reports that are a part of SAP ERP HCM are available for all SAP HR ERP HCM components. The components of SAP ERP HCM support several languages and provide capabilities relevant to each nation.

The SAP ERP HCM system has a number of different parts. These are a few of the essential elements of SAP ERP HCM.



Figure 2: SAP Human Resource Management

#### 5.1 Personnel Administrator

The SAP systems' Personnel Administration sub-module is crucial. It keeps track of important personnel data. It enables you to carry out a number of administrative duties, including staff recruiting, personnel information management, managing trip costs, payroll accounting, etc.

#### Important functions of Personnel Administration module are:

- Individual Infotype maintenance
- Contract Elements
- Monitoring of dates family/related person Education
- Other/previous Entity Relationship Cost distribution

## 5.2 Organizational Management

Organizational management effectively delivers a framework for complex, yet flexible authorisation in HCM processes and data, laying the groundwork for workflow processing. It offers the organisational framework that controls personnel placement inside the system and establishes the tasks, functions, and reporting structures within the company.

## 5.3 Time Management

All the procedures and information related to time data processing and time capture are dealt with in time management. Time entry, time approval, and time evolution features are all included in the SAP ERP HCM time management module. The main pieces of information in time management are the work schedule, attendances, absences, and time quotes. According to government or company regulations, entered time can be used to determine and subtract shifts, overtime, paid and unpaid absences, shift premiums, vacation days, and holiday pay. To accurately determine an employee's compensation, this data is entered into payroll.

## 5.4 Payroll And Benefits Administration

Payroll is responsible for handling employee payments in accordance with corporate rules and state and federal legislation. The payroll engine determines the gross to net payments based on the salary as well as regular payments and deductions, such as bonus payments, special payments, allowances, and benefit deductions. Attendance and absences are taken into consideration based on the type of job. Additionally, it efficiently aids in computing tax deductions depending on the unique tax regulations for each employee. Payroll processing at a firm includes the printing and distribution of pay stubs as well as the electronic transfer of funds. The administration of benefits is the other element. One of the most crucial payroll procedures is benefit enrollment, and there are many different types of benefit plans, including spending accounts, pension plans, health and welfare plans, and life insurance.

## 6 Methodology

ASAP Implementation Methodology for SAP The Accelerated SAP methodology, often known as the ASAP methodology, is one of the most potent and important technologies that SAP has created for better and advanced deployment. The various difficulties encountered during a full-scale deployment are successfully resolved by the ASAP technique. Additionally, it provides direction and aids in the completion of these processes as well as aids in identifying the project delivery steps. The software development life cycle refers to a collection of related approaches, including the ASAP methodology (SDLC). IT businesses utilise them as a road map for implementation initiatives. The ASAP approach aids in breaking down a project into manageable segments in an SDLC.

It also offers the fundamental building blocks. The main deliverable are identified using the ASAP technique, and they are also properly supported by templates and, in certain situations, by appropriate examples of required papers. The ASAP technique is a potent tool for overcoming potential time constraints that might appear during development. The ASAP technique calculates the relative timing of important deliveries within each phase. This approach shows the order of deliverable within a phase of a project, in case there is an extension, even when the project's duration is not indicated. This aids in the creation of each phase and the overall timeline, offering a framework within which tasks like project management, the construction of deliverable, or design creation may be carried out. The work streams and WBS components of the ASAP technique are separated into many groups. This aids in selecting the group that will carry out the required duties. The project's overall delivery flow is also organised by the work streams. The project's work stream parts are still in operation, and each phase has its own set of deliverable. Project management, organisational change management, training, business process management, data management, technical solution management, integration solution management, value management, cutover management, and application lifecycle management are examples of standard work streams in the SAP system. Regardless of the work stream, deliverable are identified and assigned to a given phase. All deliverable are identified and monitored for completion. Each deliverable will have one or more tasks that are aligned with it and have a hierarchy of sequential stages. If done correctly, the project team will have a clear understanding of the workload ahead and be able to assign tasks that differ according to project phase. We will go through each of the ASAP methodology's phases in the subsections that follow [31].

## 6.1 Phase 1: Project Preparation

The project is started and all subsequent stages are decided during the project preparation phase. For the project to be constructed successfully, there are a number of procedures that must be taken. The systems integration management stream includes a long list of outputs. The remainder are assigned to the job stream for

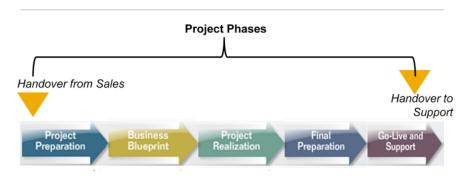


Figure 3: Methodology

training. The data needed for migration and the system where they now reside are determined by the data management work stream. The plan for streamlining business process adjustments is designed with the aid of the functional work stream.

## 6.2 Phase 2: Business Blueprint

The business blueprinting phase's deliverables differ from those of the preparatory phase. The functional business work stream is dominating during this stage. It offers the project team the business process expertise that has been assigned to them and is tied to and in line with the company's functional business organisation. All of the other work stream teams will be involved in this blueprinting phase in a proactive capacity. The technical solutions team will give insight into the development process that will be used to create bespoke objects while the training team deals with end user training development. The teams are trained to generate, evaluate, approve, and manage papers as part of the implementation process during this phase, which mostly focuses on documentation [31].

#### 6.3 Phase 3: Realization

The build phase, in which the configurations are finished and the custom objects are made and tested, and the test phase, in which it is decided whether the system is operating in accordance with the company's needs, make up the realisation phase. The build phase is under the control of the system integrator team. Configuration, construction of unique objects, definition, and testing are all part of this step. The end user training manuals and materials are also created by the system integrator team. The realisation phase includes several technical deliverables and is largely concerned with the mechanics of enabling the SAP ERP system to operate in accordance with the specified business requirements. The business should maintain a close check on the implementation's progress and the efficient allocation of manpower throughout this period. Monitoring the time management choices is also vital to ensure a continuous implementation. In order to ensure that everything is ready for the go-live phase, governance activities are crucial in the final phases of the

realisation phase. Regular reports on the performance schedule, expenses, and risk areas are also required [31].

#### 6.4 Phase 4: Final Presentation

The implementation project's last preparation phase, which occurs immediately before the go-live phase, is a brief but demanding stage. The actions required to transition from a project environment to a production environment are decided upon in this phase. Before making these available to the end user, all the crucial data, including the corporate data, settings, and custom objects, are transferred to the production environment to ensure correctness. End users should have the necessary training materials and ready access to the manual throughout this time. As the project management work stream team transfers control to the cutover management work stream, they play a crucial role in this phase. The final go-live approval is one of the most significant deliverables. SAP logins will be made available to end users with operational access to the system once the decisions are final [31].

## 6.5 Phase 5: Go-Live and Support

Hypercare phase is another name for the last phase, go-live and support. Until the predetermined completion point is reached, this stage will continue, and it may include tasks like obtaining certain business performance indicators or hitting incident volume goals. During this stage, duties are transferred to individuals who will take over system maintenance going forward. The sustainment team takes over responsibility for incident resolution in the middle of this hypercare period, allowing the project team to get ready for its post-project role and the sustainment team to be ready for its shift to the problem-solving role. After the hypercare phase is finished, a final programme review is carried out to look for any significant issues and to make any final choices regarding the closure of the hypercare phase [31].

## 7 Project Design and Implementation

## 7.1 Significance of Leave Management

Giving workers time off is crucial to preserving a positive work-life balance. The required employee perks that are protected by labour legislation include leave. In order to ensure that both employees and employers do not suffer financial losses, it is expected that these benefits would be administered properly. When workers are refused leave, it can result in poor employee engagement, which might cause a significant drop in productivity [22, 23].

Since taking a leave of absence is a cyclical process, effective and efficient management calls for active monitoring in addition to adequate control. Some responsibilities must be carried out when employees take time off from work. Institutions

must consequently strike a compromise between the necessity for worker leave and maintaining a smooth operation. Managers must therefore make sure that vacations are properly scheduled, authorised, and documented.

It might be difficult to handle leave. Consequently, having a productive leave management procedure is crucial. An effective method might forecast employee engagement and workplace satisfaction levels with ease. An efficient leave roster should be taken into account while managing and administering leave, and unplanned leave should be eliminated if feasible. It is important to get rid of inconsistencies that arise during the administration of leaves of absence since they might prohibit the company from performing at its best. Poorly handled leave policies might have a negative financial and legal impact on the company.

## 7.2 Types of Leave

As stated in an organization's terms of service and a nation's labour regulations, there are several sorts of leave. Each of these specified leave entitlements has a certain number of leave days attached to it. Both the public and commercial sectors need to manage leave to guarantee that the necessary human resources are available to run the organisation. Employers and workers should thus come to an agreement on leave schedules that assure uninterrupted work while also being flexible enough to accommodate staff members' social and family responsibilities. There are many different types of leaves, such as maternity, paternity, sick, sabbatical, casual, and special leaves.

#### 7.2.1 Sick leave

An employee is permitted to miss work for a specified amount of time during sick leave. Sick leave cannot be included in annual leave and has to be verified by a certified medical professional. Every employee in a company is entitled to sick time. Sick days are measured in calendar days, and they do not roll over to the next year. Depending on the company, sick leave may be taken for a different amount of time. There are several criteria indicating that an employee may request sick leave for a variety of medical reasons [10, 12, 25]. Sick leave may be used for a little time, for temporary or permanent incapacitation brought on by illnesses or injuries sustained at work. The organization's sick leave policy and labour rules must always be followed.

When taking a sick day from work, employees are obligated to notify their immediate superior [12, 26]. Employees are required to use their sick days for things like hospital stays and doctor's visits. Any employee who is permanently unable to perform their regular duties may be given a leave of absence upon certification from a licensed medical professional. If a person becomes unwell at work, they are therefore eligible for occupational injuries and disease leave.

#### 7.2.2 Maternity leave

Most labour regulations shield pregnant and nursing women from dangerous employment for both herself and the child as part of the required employee perks. Employees who are female are reportedly eligible for a six-month maternity leave. However, in some organisations, female employees are entitled to at least twelve (12) weeks of maternity leave upon presentation of a medical certificate issued by a licensed medical officer that specifies the anticipated date of delivery. Therefore, female workers are permitted to take maternity leave before giving birth as determined by a medical professional. The motherhood in addition to whatever time the female may take off for annual leave A worker has rights. The Act also mandates that female employees on maternity leave get full pay in addition to any other benefits to which they are qualified. Additionally, it prohibits a company from firing a female employee who takes maternity leave without authorization [27].

#### 7.2.3 Paternity leave

A leave of absence with job protection for working dads for the first few months following delivery. International convention does not need paternity leave. Paternity leave duration's are often substantially shorter than maternity leave duration's. Employees on paternity leave frequently continue to get full pay throughout their brief absences. Father-specific leave entitlements may be a component of the parental leave plan rather than a distinct right in some nations [29].

#### 7.2.4 Casual leave

When a circumstance of an emergency nature prevents an employee from being present in the workplace, the employee may apply for casual leave. It is computed in business days. Most companies only provide ten (10) days of casual leave each year. After the yearly leave has been used up, the employer may provide this type of leave. It is not transferable to the next year. If the institution disapproves of the explanations given for the employee's absence for which the casual leave is being asked, it has the power to refuse the request [28].

#### 7.2.5 Sabbatical leave

Sabbatical leave is a leave of absence given for the purpose of study, research, or other worthwhile endeavours to further an organization's scientific objective. Depending on the amount of years an employee would have worked for the institution, the organisation may award a sabbatical leave of up to two years.

## 7.3 Development Framework

The HR e-Leave Management System development diagram Figure 4 shows how the system should be created in terms of data suppliers, suggested system modules, procedures, networks, connections, users, and deliverable. The information sources are mostly the workers who apply for leaves online, with HR or the manager approving or rejecting the request. Additionally, the HR staff plays a crucial part in the system, particularly in the administration modules, and they are the ones that receive the outcomes of the business analytic. Reports will be produced by the system for the Payroll Section.

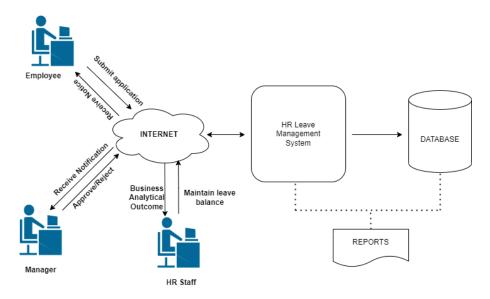


Figure 4: Development Diagram

#### 7.3.1 Leave Request Request Form

Leave Request Initial screen will look like as shown in Figure 5. These Screen has three options as follows

- Create Leave Request.
- Request Approval/Reject.
- Leave Request Report

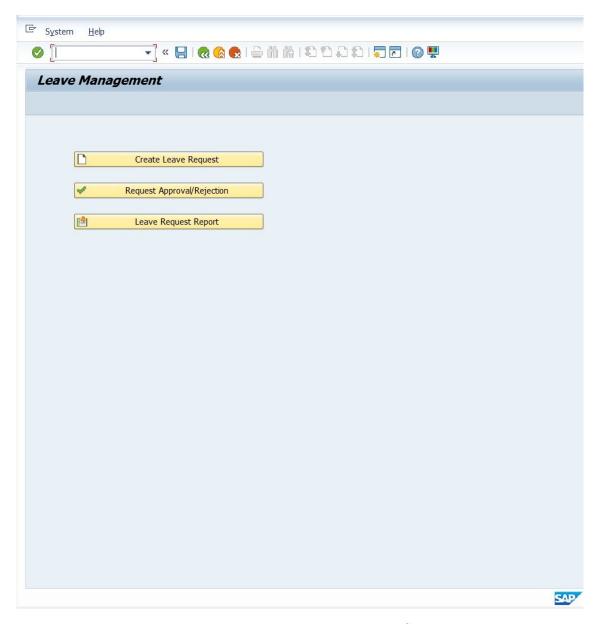


Figure 5: Leave Management Initial Screen

On click of Create Leave Request button a new screen will be open as shown in figure 6 where user enter all the details. Based on the reason given by employee, leave balance will be calculated automatically. Once employee saved the information a unique ID will be generated and this request number will be sent via mail to HR or manager of the team whom employee is working under.

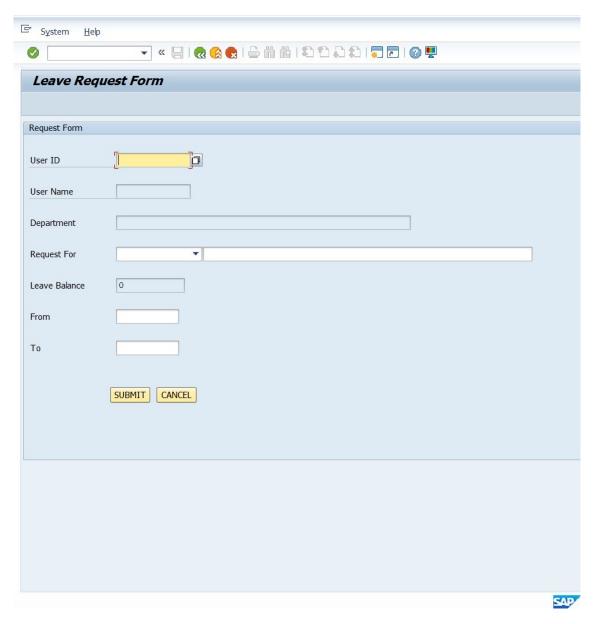


Figure 6: Leave Request Request Form

#### 7.3.2 Leave Request Report for Approval/Rejection

Manager or HR of the company will receive notification and decide whether to approve or reject the request. Manger/HR can assign employee task to any other employee who is working on the team if the employee leave is longer than usual and the assinged employee will receive notification via email.

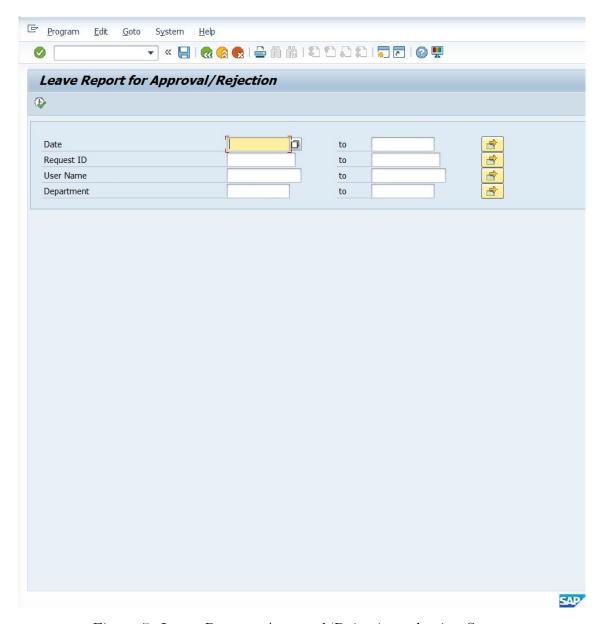


Figure 7: Leave Request Approval/Rejection selection Screen

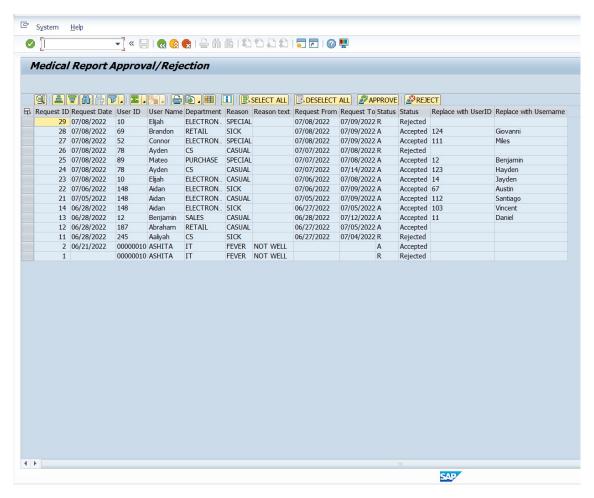


Figure 8: Leave Request for Approval/Rejection

## 7.3.3 Leave Request Report

Leave request report is the summary report where anyone in the organization can check the status of leave report.

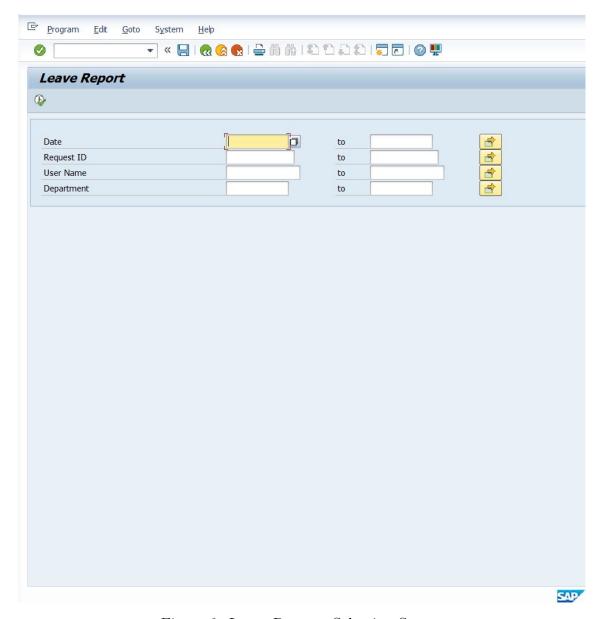


Figure 9: Leave Request Selection Screen

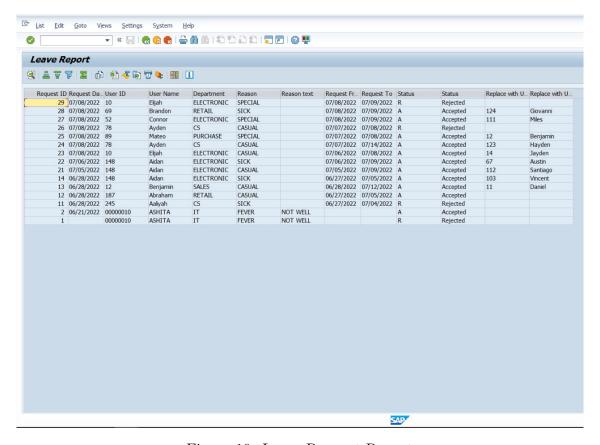


Figure 10: Leave Request Report

## 8 Conclusions

The leave management system works better and is more user-friendly. Additionally, the system is built to fulfil the primary goals of the leave management system, which include assisting users in maintaining records, utilising the program, managing members efficiently, and managing employee leaves. This implementation will avoid drawbacks like:

- Data flow of the leave request does not need any office assistant and it can be done under the individual who is applying.
- The online leave management system establishes a methodical synchronisation, ensuring that absent employee are not given their assigned tasks.
- As a result, it will be simpler for the supervising officer to approve the vacation request form in an open and honest way.

## 9 Recommendations

- The performance of each employee throughout the working session may be determined by tabulating their individual leave records into a pie chart format for HR evaluation activities.
- This system's compiled data may also be given to various departments, such as Finance and Accounts, for direct salary computation.

Furthermore, this project can be implemented in web-application to look good and user friendly Figure.11, 12 gives a dummy look of web application.

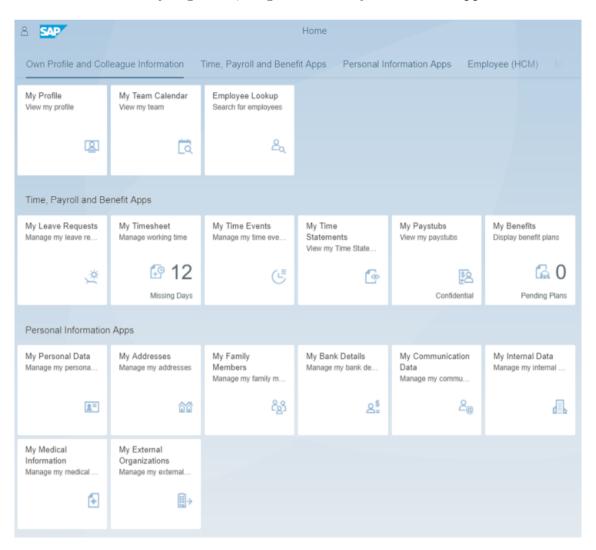


Figure 11: Tile of User account

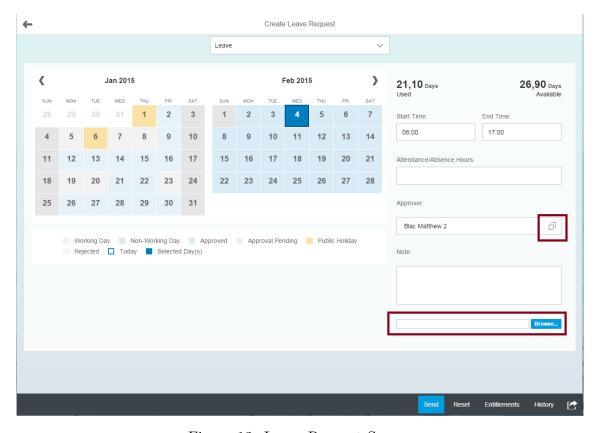


Figure 12: Leave Request Screen

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