ABSTRACT

1. Title of Project

Travel Reimbursement Claim System

2. Goal of Project

The main goal of a travel reimbursement claim system is to streamline and facilitate the process of reimbursing employees or individuals for expenses incurred during official travel. The system aims to automate and expedite the reimbursement process, ensuring accuracy, transparency, and efficiency.

By implementing a travel reimbursement claim system, organizations seek to eliminate manual and paper-based methods, reducing paperwork and administrative burdens. This, in turn, saves time and resources for both employees and the finance department.

The system allows travelers to submit their expense claims digitally, attaching necessary receipts and documentation. It automates the verification and approval process, ensuring compliance with company policies and travel guidelines. This real-time processing accelerates the reimbursement cycle, leading to quicker reimbursements, thus increasing employee satisfaction.

Additionally, the system provides detailed insights into travel expenses, allowing organizations to analyze spending patterns, identify cost-saving opportunities, and optimize travel policies.

INTRODUCTION

1. Background:

In today's globalized business landscape, employees frequently undertake business-related travel, incurring various expenses such as accommodation, transportation, meals, and other incidental costs. Properly managing and reimbursing these expenses is vital for maintaining employee satisfaction, financial transparency, and organizational efficiency. Manual reimbursement processes are often cumbersome, error-prone, and time-consuming, leading to delayed reimbursements and dissatisfied employees.

2. Project Objectives:

The main objective of our Travel Reimbursement Claim System is to create an automated and user-friendly platform that simplifies the entire process of submitting, verifying, and processing travel expense claims. The system aims to achieve the following:

- Efficiency: Streamline the reimbursement claim process, reducing paperwork and manual intervention, and minimizing processing time.
- Accuracy: Implement robust validation mechanisms to ensure accurate and compliant reimbursement calculations.
- Transparency: Provide a clear audit trail of all travel-related transactions and approvals for enhanced financial transparency.
- Cost Control: Identify cost-saving opportunities and optimize travel-related spending through data analysis.
- Employee Satisfaction: Enhance employee experience by offering a hassle-free and timely reimbursement process, fostering a positive work environment.

3. Scope of the Project:

The Travel Reimbursement Claim System will cover the entire reimbursement lifecycle, starting from the employee's submission of expense claims to the finance department's final reimbursement approval. The system will support various types of expenses related to business travel, including airfare, lodging, meals, ground transportation, and other eligible costs.

Key features within the system will include:

- User-friendly expense submission interface.
- Automated validation of expense claims against company policies and spending limits.
- Real-time tracking and status updates for employees and finance personnel.
- Secure data storage and access control to maintain confidentiality.
- Seamless integration with existing HR and accounting systems.

4. Target Users:

The primary users of the Travel Reimbursement Claim System will be employees who engage in business travel, as well as finance and HR personnel responsible for expense verification and reimbursement processing. The system will accommodate different user roles with varying levels of access rights and privileges.

5. Expected Benefits:

Upon successful implementation, the Travel Reimbursement Claim System is expected to:

- Reduce reimbursement processing time and associated administrative overhead.
- Enhance accuracy in expense calculations and policy compliance.
- Provide data insights to optimize travel-related spending.
- Improve employee satisfaction and morale by ensuring timely reimbursements.
- Strengthen financial transparency and auditability.

6. Project Deliverables:

The project will deliver a fully functional Travel Reimbursement Claim System, including software, documentation, and user training materials. The system will be thoroughly tested for performance, security, and usability before deployment.

PROJECT PLANNING

Duration: 12 Weeks

Week 1: Project Initiation

- Gather project requirements and finalize the scope.
- Identify key stakeholders and establish communication channels.
- Conduct initial research and analysis of existing systems or requirements.

Week 2-3: Design and Planning

- Define the system architecture and database structure.
- Design the user interface and user experience (UI/UX).
- Create a detailed project plan with milestones and deliverables.

Week 4-6: Development - Phase 1

- Implement the backend infrastructure and database.
- Develop core features such as expense submission and receipt attachments.
- Begin developing the reimbursement claim workflow and rules.

Week 7-8: Development - Phase 2

- Continue implementing additional features, such as approval workflows and reporting.
- Conduct iterative testing and debugging to ensure functionality.

Week 9-10: User Acceptance Testing (UAT)

- Involve stakeholders and end-users in UAT to validate the system's functionality.
- Address any issues and make necessary adjustments based on user feedback.

Week 11-12: Documentation and Deployment

- Prepare comprehensive user documentation and training materials.
- Perform final system testing and quality assurance.
- Deploy the system to the production environment and ensure a smooth transition.

REQUIREMENTS ANALYSIS

1. Working Environment

Appian Platform

Appian is a low-code business process management (BPM) and application development platform that enables organizations to design, build, and deploy enterprise-grade applications quickly and efficiently. It allows developers and business users to collaborate and create applications using a visual interface with drag-and-drop components, reducing the need for traditional hand-coding.

To create a travel reimbursement claim system using Appian, follow these steps:

- **1. Design:** Use Appian's low-code interface to design the system's user interface and workflow. Create forms for travelers to submit claims and define approval processes.
- **2. Integration:** Integrate Appian with databases, APIs, and email services to securely manage reimbursement data and send notifications.
- **3. Automation:** Leverage Appian's built-in automation to validate and process claims automatically, reducing manual efforts and errors.
- **4. Analytics:** Utilize Appian's analytics capabilities to generate real-time reports on travel expenses and claim status.
- 5. Mobile App: Create a mobile app for travelers to submit claims conveniently on the go.
- 6. Security: Implement Appian's security features to ensure data privacy and compliance.
- **7. Testing:** Thoroughly test the system to ensure it meets the organization's travel reimbursement requirements.

With Appian's low-code platform, you can rapidly develop and deploy the travel reimbursement claim system with reduced development time and costs.

Jira Software

Jira Software is a popular project management tool developed by Atlassian. It is used to track and manage tasks, issues, and projects throughout their lifecycle.

To create a travel reimbursement claim system project in Jira, we can set up a project with customized issue types (e.g., reimbursement request, approval, rejection), workflows, and fields to capture essential details (e.g., travel dates, expenses, receipts). Team members can collaborate, assign tasks, and track the status of each reimbursement claim. With Jira's reporting features, stakeholders can gain insights into reimbursement trends, pending claims, and system performance, streamlining the entire reimbursement process efficiently.

MySQL

MySQL is an open-source relational database management system (RDBMS) widely used for storing and managing structured data. It provides a robust and efficient platform for developers to create and manage databases, making it an ideal choice for building the backend of a travel reimbursement claim system.

In the context of a travel reimbursement claim system, MySQL can be used to store various types of data, such as user information, travel expenses, reimbursement requests, approval status, and more. The system can be designed to interact with the MySQL database through queries and commands to perform operations like data insertion, retrieval, updating, and deletion.

To create a travel reimbursement claim system using MySQL, developers typically start by designing the database schema. This involves defining the tables, their relationships, and specifying the attributes and data types to ensure proper data organization and integrity.

As users submit reimbursement claims, the system will store the data in the appropriate MySQL tables. When an approval process is initiated, the system can use SQL queries to fetch and update the relevant data based on the workflow. For example, retrieving all pending reimbursement requests or updating the approval status.

MySQL's efficiency and speed in handling data operations make it well-suited for processing large volumes of reimbursement data and providing quick responses to user requests. By integrating MySQL with the project, developers can create a reliable, secure, and scalable travel reimbursement claim system that efficiently manages and processes reimbursement-related data, ultimately providing a smooth and streamlined experience for users and administrators alike.

2. Software Requirements

The Software requirements of this project includes:



3. Hardware Requirements

The Hardware requirements of this project includes:

<u>Components</u>	<u>Minimum</u>	Recommended
RAM	4GB	8GB
Disk	128GB	512GB
Processor	Intel Core i3 2 nd generation	Intel Core i7 5 th generation

DESIGN PHASE

1. User Interface (UI) Design:

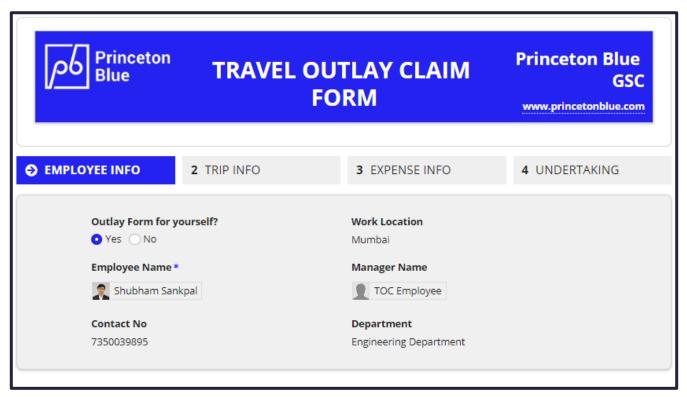
Project Heading



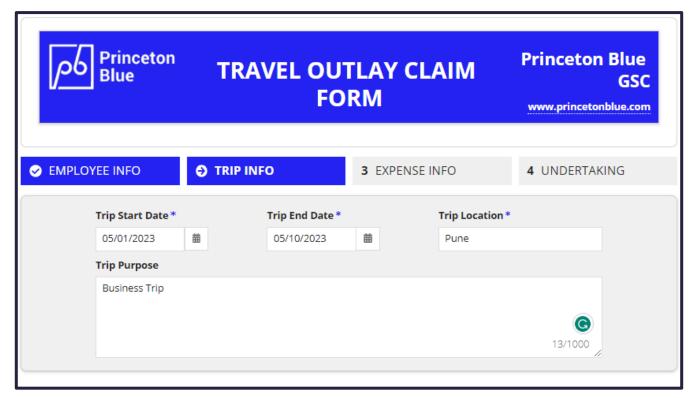
Project Milestone



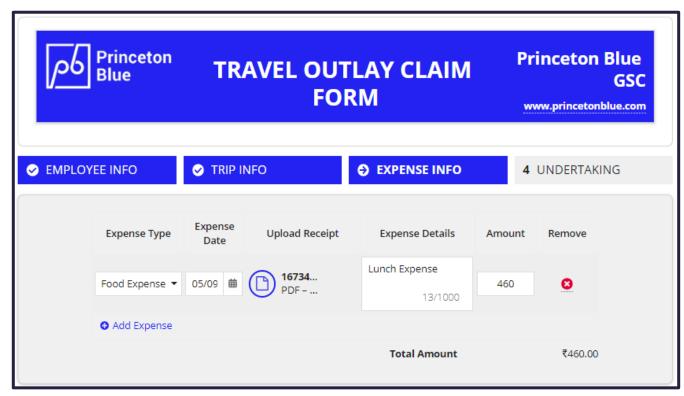
Employee Information



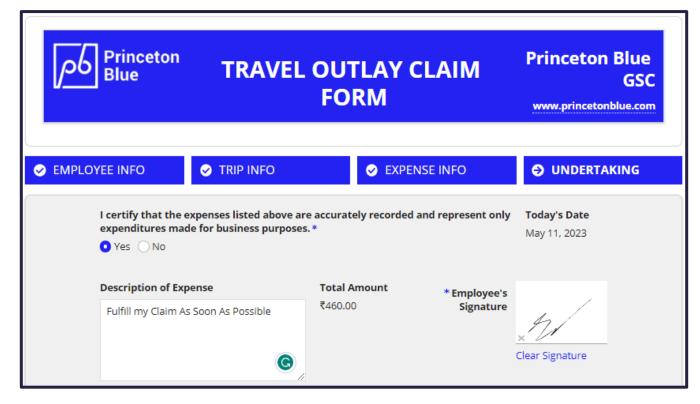
Trip Information



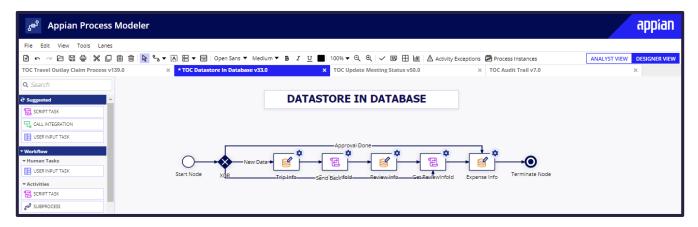
Expense Information



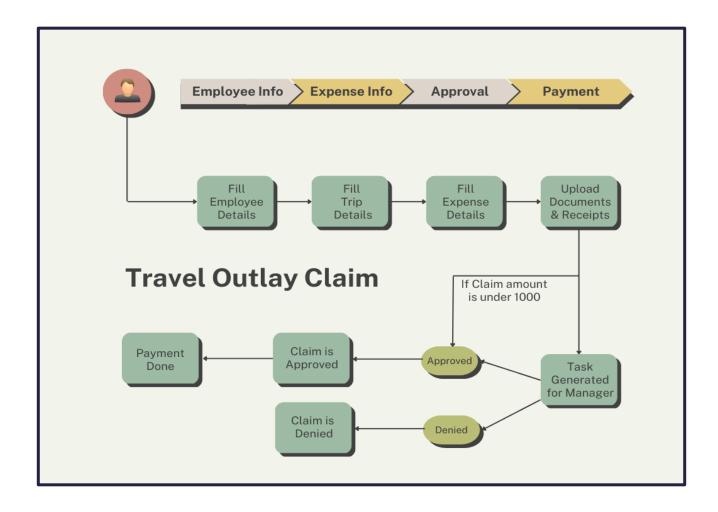
Undertaking Information



2. Workflow and Data-flow Design:



- 1. So the flow starts from Employees Details. The employee needs to provide their basic information, such as employee ID, name, branch, department, and contact.
- 2. Then the Employee needs to provide Trip Details like the start date & end date of the trip, the location of the trip & what is the purpose of the trip.
- 3. Employees will be able to submit their travel expenses, including receipts and other supporting documents, through the application.



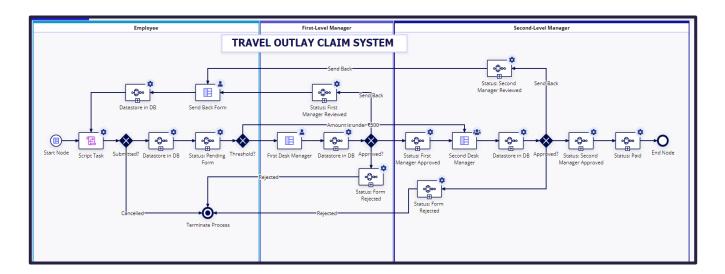
- 4. After submitting all the Travel Outlay claim details to the employee, the Task generates for the Managers. Then they will be able to approve or reject expense reimbursement requests. They can view the details provided by the employee, including the supporting documents, and make a decision based on the organization's policies.
- 5. If the Outlay claim amount is under 1000 rupees, the application can be configured to automatically approve the reimbursement request without the Managers approval. This can be done by setting a threshold value for automatic approval in the Process model of the application.

3. Database Design:

The travel outlay claim system database design includes tables for employees, travel details, expenses, and approvals. The "employees" table stores employee information, while the "travel details" table holds trip specifics. The "expenses" table records individual expense items with amounts and descriptions. The relationships between tables are established using foreign keys. The system ensures data integrity and handles expense approvals by linking to the "approvals" table. A well-structured database design enables efficient data retrieval and processing, streamlining the travel outlay claim process for employees and management alike.

TOC_EMPLOYEE_INFO (Master Table)		TOC_ATTACHMENT (Master Table)		TOC_EXPENSE_INFO (Transaction Table)		
Name	Type 🔻	Name	Туре	Name	Туре	
id (PK)	int(10)	attachmentId (PK)	int(10)	expenseInfold (PK)	int(10)	
employeeId	int(10)	expenseInfold (FK)	int(10)	currentStatusId (FK)	int(10)	
employeeUsername	varchar(100)	appianDocld	int(10)	requestedDate	datetime	
location	varchar(100)	docName	varchar(100)	description (Null)	varchar(1000)	
departmant	varchar(100)	docExtension	varchar(100)	firstLevelApprovalDate	datetime	
contactNo	varchar(100)			secondLevelApprovalDate	datetime	
expenseInfold (FK)	int(10)	TOC_AUDIT_TRAIL (Ma	aster Table)	firstLevelApprovedBy	varchar(100)	
firstLevelManagerId	int(10)	Name v	Type 🔻	secondLevelApprovedBy	varchar(100)	
secondLevelManagerId	int(10)	auditTrailId (PK)	int(10)	expenseType	varchar(100)	
		expenseInfold (FK)	int(10)	totalAmount	decimal	
TOC_TRIP_INFO (Master Table)		action	varchar(100)	currencyId (FK)	int(10)	
Name	Type ▼	approvalsComment (Null)	varchar(100)	empSignDocId	int(10)	
tripId (PK)	int(10)	username	varchar(100)			
expenseInfold (FK)	int(10)	actionDate	datetime	TOC_REFERENCE_DATA	TOC_REFERENCE_DATA (Master Table)	
startDate	date			Name	Туре	
endDate	date			refld (PK)	int(10)	
tripLocation	varchar(100)			refType	varchar(100)	
tripPurpose (Null)	varchar(1000)			refKey	varchar(100)	
				refDisplayValue	varchar(100)	

IMPLEMENTATION



Designing a process model for a travel reimbursement system in the Appian platform involves breaking down the entire reimbursement process into distinct steps, defining roles and responsibilities, and creating a workflow that ensures smooth and efficient processing. Below is a high-level process model for a travel reimbursement system:

1. Initiation:

- Employee initiates the reimbursement request by logging into the Appian platform.
- The system captures basic details such as employee names, travel dates, purpose of travel, and expenses incurred.

2. Pre-Approval:

- If the organization requires pre-approval for travel, the request is routed to the appropriate manager or department for review.
- The manager can approve, reject, or request additional information.

3. Expense Submission:

- The employee submits expense details such as receipts, invoices, and supporting documents through the Appian platform.
- The system validates the expense details for completeness and adherence to company policies.

4. Expense Verification:

- The finance department or designated personnel review the submitted expenses.
- They verify the receipts, check for policy compliance, and assess the reasonableness of the expenses.

5. Approval:

- If the expenses are within policy limits and verified, the reimbursement request is forwarded to the designated approver(s) for final approval.
- Approvers can be multiple based on the expense type or amount.

6. Payment Processing:

- Once approved, the reimbursement request is sent to the finance team for payment processing.
- Payment can be made through payroll or other methods, depending on the organization's process.

7. Notifications and Communication:

- Throughout the process, automated notifications are sent to the relevant stakeholders to keep them informed of the status of the reimbursement request.
- Employees are notified when their request is received, approved, or rejected.
- Approvers and finance personnel receive notifications for pending approvals or payment processing.

8. Exception Handling:

- In case of policy violations or discrepancies in submitted expenses, the system can flag the request for manual review and resolution.
- The respective personnel can communicate with the employee to resolve the issue.

Additionally, when implementing the process model in Appian, it's essential to design user-friendly forms and interfaces, define appropriate access controls, and consider integrations with other systems (e.g., HR, finance) for seamless data exchange.

MAIN ROLES & USER STORY

End User	Roles
Company Employee	 Submitting Accurate and Complete Expense Reports Following Company Policies Checking the Status of Their Claims
Company Manager	 Reviewing Expense Reports Approving or Denying Reimbursement Claims Providing Guidance to Employees

User Story 01: < Initiate Travel Outlay Claim Request > #Required.

From the employee's point of view, the role in a travel outlay claim application involves several key responsibilities. These may include:

Accurately documenting travel expenses: The employee is responsible for keeping track of all expenses related to their business travel, including transportation, lodging, meals, and any other expenses incurred during their trip. They should ensure that all expenses claimed are within the company's policies and guidelines, and that they have supporting documentation such as receipts and invoices.

Submitting the claim for reimbursement: Once the employee returns from their business trip, they should submit their travel outlay claim application in a timely manner, following the company's procedures and requirements for reimbursement. They should ensure that all necessary information and documentation are included and that the claim is complete and accurate.

Following company policies and procedures: The employee should adhere to the company's policies and procedures for travel expenses. They should also communicate with their supervisor or finance department if they have any questions or issues related to their travel expenses or the reimbursement process.

Providing additional documentation: In some cases, the employee may need to provide additional documentation or clarification to support their travel outlay claim application. They should be prepared to do so in a timely manner and to communicate effectively with their supervisor or finance department to resolve any issues that arise.

User Story 02: < Verify Travel Outlay Claim Request > #Required.

From a manager's point of view, the role in a travel outlay claim application involves several key responsibilities. These may include:

Reviewing and approving travel requests: Before an employee travels for business purposes, the manager may need to review and approve their travel requests. This includes ensuring that the trip is necessary and aligned with the company's goals and that the employee has received proper authorization to travel.

Ensuring compliance with policies and procedures: The manager is responsible for ensuring that employees comply with the company's travel policies and procedures. This includes setting and enforcing limits on travel expenses, approving expenses within those limits, and ensuring that all expenses are properly documented and approved.

Reviewing and approving expense claims: After the employee returns from their business trip, the manager may need to review and approve their travel outlay claim application. This involves verifying that the expenses claimed are reasonable and necessary for business purposes, and that they comply with the company's travel policies and guidelines.

User Story 03: < Status of Travel Outlay Claim Request >

Claim status information in a Travel Outlay Claim Application refers to the current status of an employee's reimbursement claim. Some common claim status categories in a Travel Outlay Claim Application may include:

Pending: This status means that the claim has been submitted and is awaiting review and approval by the manager or finance department.

Approved: This status means that the claim has been reviewed and approved for payment and is now being processed for reimbursement.

Rejected: This status means that the claim has been reviewed and rejected, typically due to incomplete or inaccurate information or because the expenses claimed do not comply with the company's policies and guidelines.

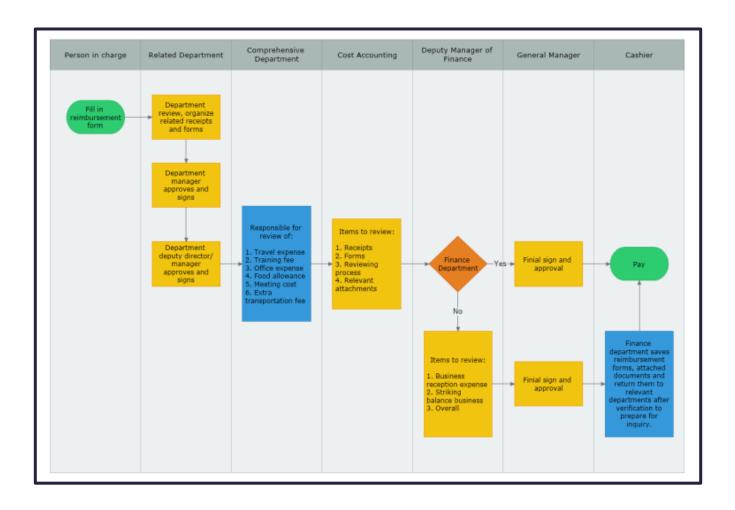
Processing: This status means that the claim has been approved and is now being processed for payment, typically through the company's payroll or accounting system.

Paid: This status means that the claim has been processed and payment has been made to the employee.

DIAGRAM PHASE

Flowchart Diagram

A flowchart diagram in a travel reimbursement claim system is a visual representation of the step-by-step process that an employee needs to follow when submitting a travel reimbursement claim. It outlines the various stages and decision points involved in the reimbursement process, from the initial submission of expenses to the final approval and payment. The flowchart helps to illustrate the workflow and ensures that all necessary steps are followed accurately and consistently. It may include actions like submitting receipts, verifying expenses, approval processes, and disbursing funds to the employee.



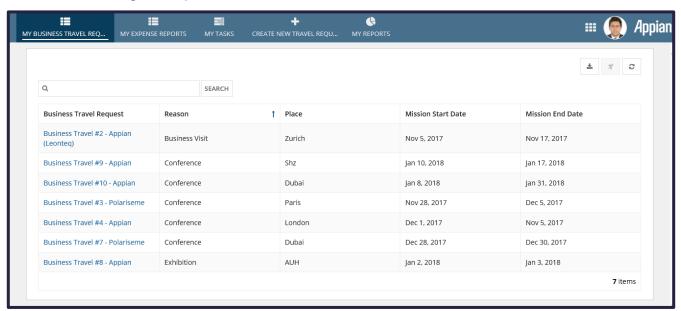
TESTING & DEPLOYMENT

Site of Travel Reimbursement Claim System

In Appian, a "site" refers to a distinct and isolated environment within the platform where specific applications and processes are developed, deployed, and run. Sites help in organizing and segregating different projects, departments, or business units, allowing for better control over access, security, and governance. Each site in Appian has its own set of users, groups, and data, making it a logical boundary to manage applications and data in a structured manner.

My Travel Requests

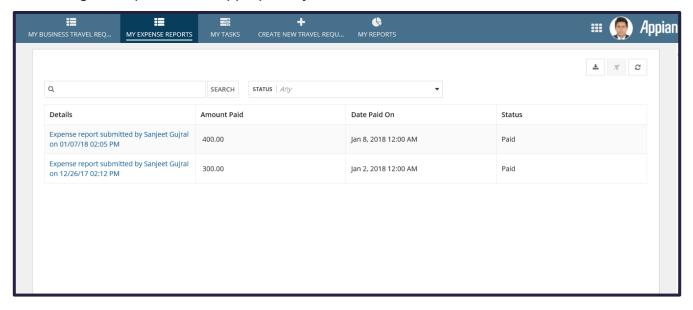
A travel claim request is a formal submission made by an individual, typically an employee or traveler, to seek reimbursement for expenses incurred during a business trip or official travel. The request includes details such as travel dates, destinations, incurred costs (e.g., meals, transportation, accommodation), and supporting receipts or documentation. The organization or company reviews and approves these claims based on their travel policy before reimbursing the traveler for eligible expenses.



My Expense Report

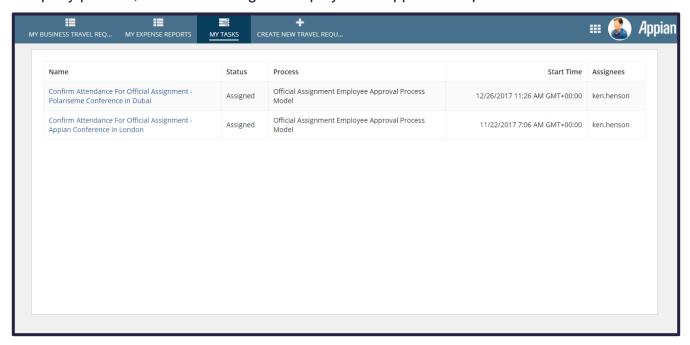
An expense report is a document that summarizes and provides details about the travel reimbursement claims that have been successfully processed and completed. It typically includes information such as the employee's name, travel dates, destinations, expenses incurred, supporting receipts, reimbursement amounts, and any additional notes or approvals

related to the claims. This report helps track and review the status of travel claims and ensures that all eligible expenses are appropriately reimbursed.



My Tasks

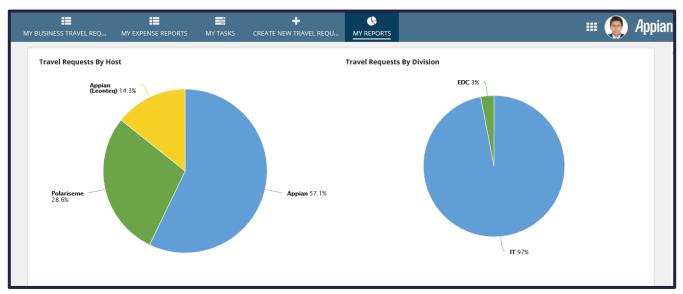
Task involves processing and reviewing travel-related expenses submitted by employees. When an employee travels for work purposes and incurs expenses, they submit a travel claim form detailing their expenditures, such as transportation, accommodation, meals, and other eligible costs. HR is responsible for verifying the claim's accuracy, ensuring it adheres to company policies, and reimbursing the employee for approved expenses.



My Report

Travel claim analysis reports are visual representations of data related to travel expenses and reimbursements. They help analyze and present the information in a clear and concise manner. Some common charts and diagrams used for travel claim analysis include:

- **1. Expense Pie Chart:** Shows the distribution of expenses into categories like accommodation, meals, transportation, etc.
- **2. Expense Trend Line Chart:** Illustrates the change in expenses over time, helping identify spending patterns.
- 3. Expense Bar Chart: Compares expenses across different travelers or departments.
- **4. Expense Heat Map:** Depicts high and low spending areas geographically.
- **5. Expense Bubble Chart:** Combines data points, showing expenses as bubbles with different sizes representing amounts.
- **6. Approval Workflow Diagram:** Represents the flow of travel claims through the approval process.
- **7. Expense Category Comparison Radar Chart:** Compares expenses across categories using a radar-like graph.



These charts and diagrams provide valuable insights into travel spending patterns, identify cost-saving opportunities, and aid decision-making for better expense management.

EVALUATION

The project developed by our intern shows great potential. It boasts a user-friendly interface, smart automation, and seamless integration, providing efficient expense management. With some refinement, it could become an invaluable asset for our organization.

The travel reimbursement claim system developed by our intern is impressive! Its user-friendly interface, seamless automation, and robust reporting capabilities make expense management a breeze. Great job!

SALAM MOHAMMAD (TRAINER)

NEHA PRIYA (MENTOR)

The travel reimbursement claim system created by my colleague is fantastic! It's easy to use, saves time with automation, and ensures compliance with company policies. The mobile app makes submitting expenses on the go a breeze. The system's reporting features provide valuable insights, and the customer support is top-notch.

Great job on the project! The intern's efforts were commendable, showing dedication and creativity. Their work has added significant value to the project, and it's evident they put in a lot of hard work. Well done!

ADITYA BENKAR (COLLEAGUE)

NEHA PRIYA (MENTOR)

CONCLUSION

In conclusion, the development of a travel reimbursement claim system using Appian has proven to be a significant step forward in streamlining and enhancing the efficiency of the reimbursement process for travel-related expenses. The project successfully leveraged the capabilities of the Appian platform to create a user-friendly and automated solution, benefiting both employees and the finance department.

Through this system, employees now have a convenient and intuitive mobile application that allows them to effortlessly submit their travel expenses, eliminating the need for cumbersome paperwork and manual data entry. The mobile app's user-friendly interface and real-time feedback provide a seamless experience for travelers, thereby increasing their satisfaction and overall productivity.

From the finance department's perspective, the Appian-based system has dramatically reduced the time and effort required to process travel reimbursements. The automated workflows and intelligent decision-making capabilities have significantly accelerated the approval process, ensuring prompt reimbursement to employees and preventing delays that were common in the previous manual system.

The integration of Appian's reporting and analytics tools has further empowered the finance team with valuable insights into travel expenditure patterns and potential cost-saving opportunities. This data-driven approach enables the organization to make more informed decisions and optimize travel-related expenses effectively.

In addition to its operational benefits, the Appian travel reimbursement system has also enhanced compliance and transparency. The built-in validation rules and policy checks ensure that all submitted claims adhere to company policies and regulatory requirements, reducing the risk of fraudulent or erroneous claims.

Overall, the implementation of the travel reimbursement claim system using Appian has brought numerous advantages to the organization, including improved efficiency, reduced administrative burden, enhanced user experience, and better financial controls.

FUTURE SCOPE

There are several potential future scope and enhancements that can consider improving the system's functionality and user experience:

- 1. Mobile App Enhancements: Focus on improving the mobile app experience for users, allowing them to submit reimbursement claims on-the-go with ease. Integrate features like OCR (Optical Character Recognition) to capture and extract information from receipts directly through the app.
- **2. Al-driven Expense Categorization:** Implement artificial intelligence algorithms to automatically categorize expenses based on receipts and descriptions. This will streamline the reimbursement process and reduce the manual effort required from users.
- **3. Advanced Approval Workflow:** Enhance the approval workflow with dynamic routing based on claim type, amount, or employee designation. Consider integrating with organizational hierarchy data to automate approval delegation during employee absences or vacations.
- **4. Real-time Currency Conversion:** If your system involves international travel, integrate real-time currency conversion to calculate reimbursement amounts accurately in the traveler's home currency.
- **5.** Integration with Travel Booking Platforms: Integrate with popular travel booking platforms to fetch travel data directly, simplifying the reimbursement process for users. This could include extracting flight and hotel booking details and automating their inclusion in the reimbursement claim.
- **6. Analytics and Reporting:** Provide comprehensive analytics and reporting capabilities for both employees and finance teams. Visualize reimbursement trends, expenses by category, average approval times, etc., to help management make data-driven decisions.
- 7. Integration with Payment Gateways: Enable direct reimbursement payments to employees' bank accounts through integration with secure payment gateways, reducing the time and effort required for manual payment processing.
- **8. Compliance and Policy Adherence:** Implement robust checks to ensure travel expense claims adhere to company policies and government regulations. This could include flagging policy violations and generating alerts for finance teams to review.

- **9. Gamification and Incentives:** Introduce a gamification element to encourage employees to adhere to expense policies and submit claims promptly. Reward employees who consistently follow guidelines with incentives or recognition.
- **10. Chatbot Assistance:** Integrate a chatbot within the app to answer common queries related to the reimbursement process, policy guidelines, or claim status updates. This will reduce the burden on support teams and enhance user satisfaction.

Remember that the specific scope of enhancements would depend on the requirements and feedback from users and stakeholders. Regularly gather feedback and conduct usability testing to identify pain points and areas that require improvement in your travel reimbursement claim system.

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