

Platforma Web pentru Gestionarea Cheltuielilor

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1. Prezentare generală

Această aplicație web are ca scop gestionarea eficientă a cheltuielilor într-o organizație, oferind utilizatorilor posibilitatea de a urmări, aproba și raporta cheltuielile într-un mod centralizat. Similar cu alte soluții de management financiar, aplicația se diferențiază prin interfața sa intuitivă și suportul pentru multiple roluri

Roluri

- Administrator
- Contabil
- Angajat
- Şef de Departament

2. Fundamente teoretice

Aplicația se bazează pe concepte fundamentale de management finanțiar și contabilitate.

- Algoritmi de sortare și filtrare pentru raportarea cheltuielilor.
- Algoritmi de validare pentru cererile de cheltuieli.
- Teorii de optimizare pentru gestionarea bugetelor departamentale.

3.Tehnologie IT

01

Backend: Java, Spring Boot,
pentru logica de server și
manipularea datelor.

02

Frontend: React, pentru
construirea interfeței utilizator

03

Baza de date: MySQL, pentru
stocarea și gestionarea datelor
despre cheltuieli.

04

Platforma hardware/software: Aplicația va rula pe
servere cu sistem de operare Linux/Windows și va
fi accesibilă prin browsere web moderne (Chrome,
Firefox, Edge).

4. Arhitectura si Designul Sistemului

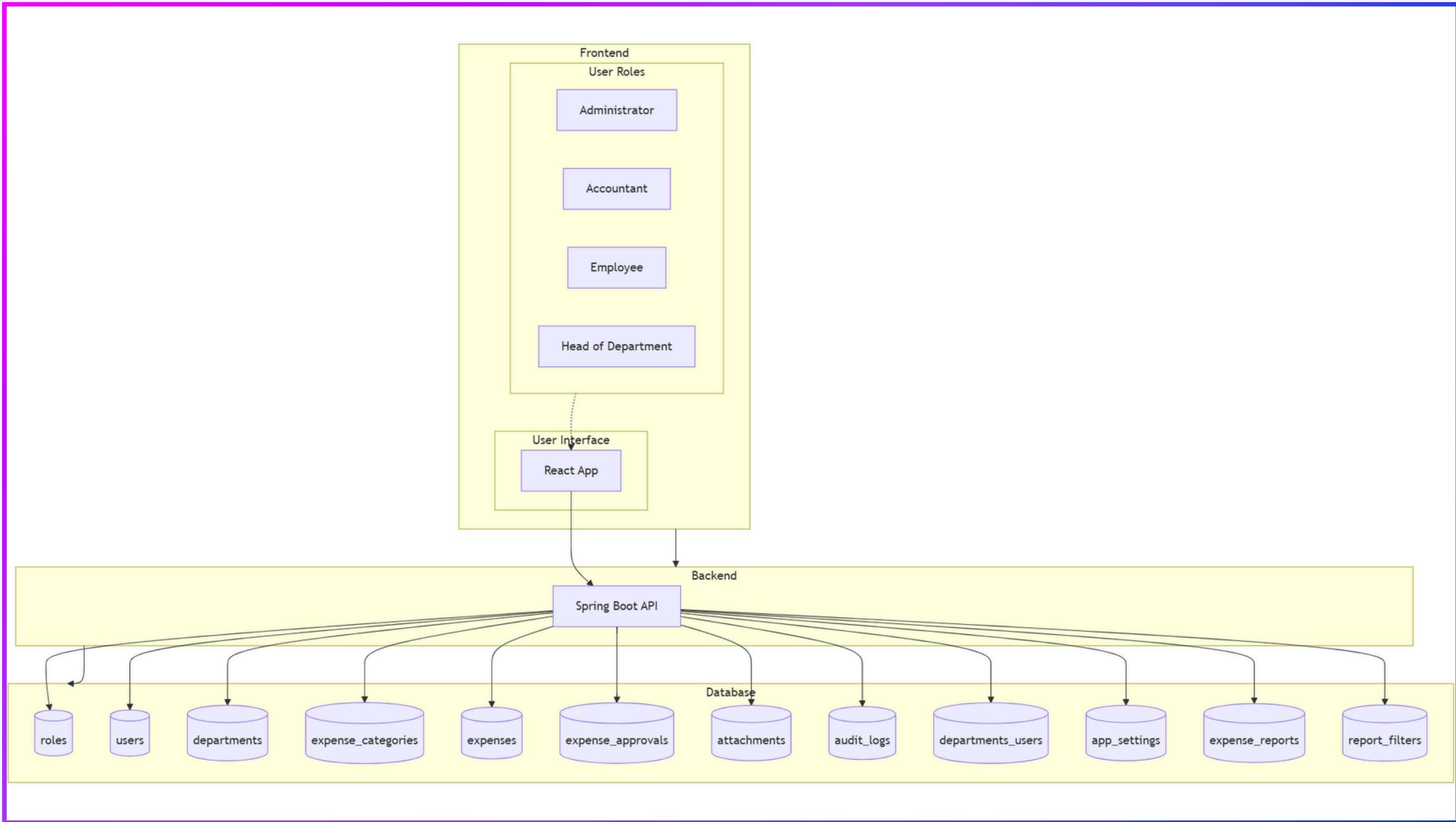


Diagrama
Arhitectură
Generală
Sistem

Diagrama de Flux Activități

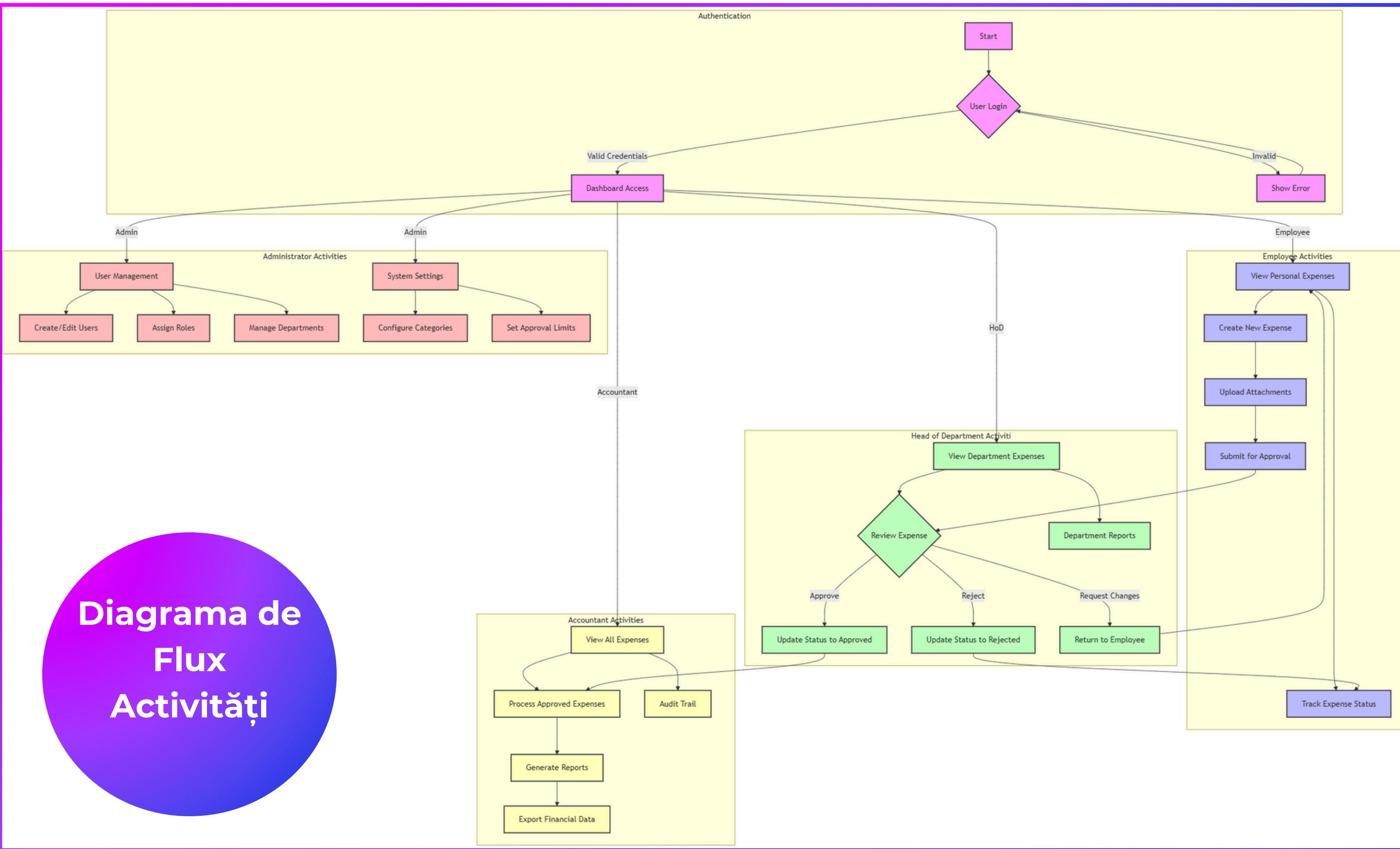


Diagrama de Clase

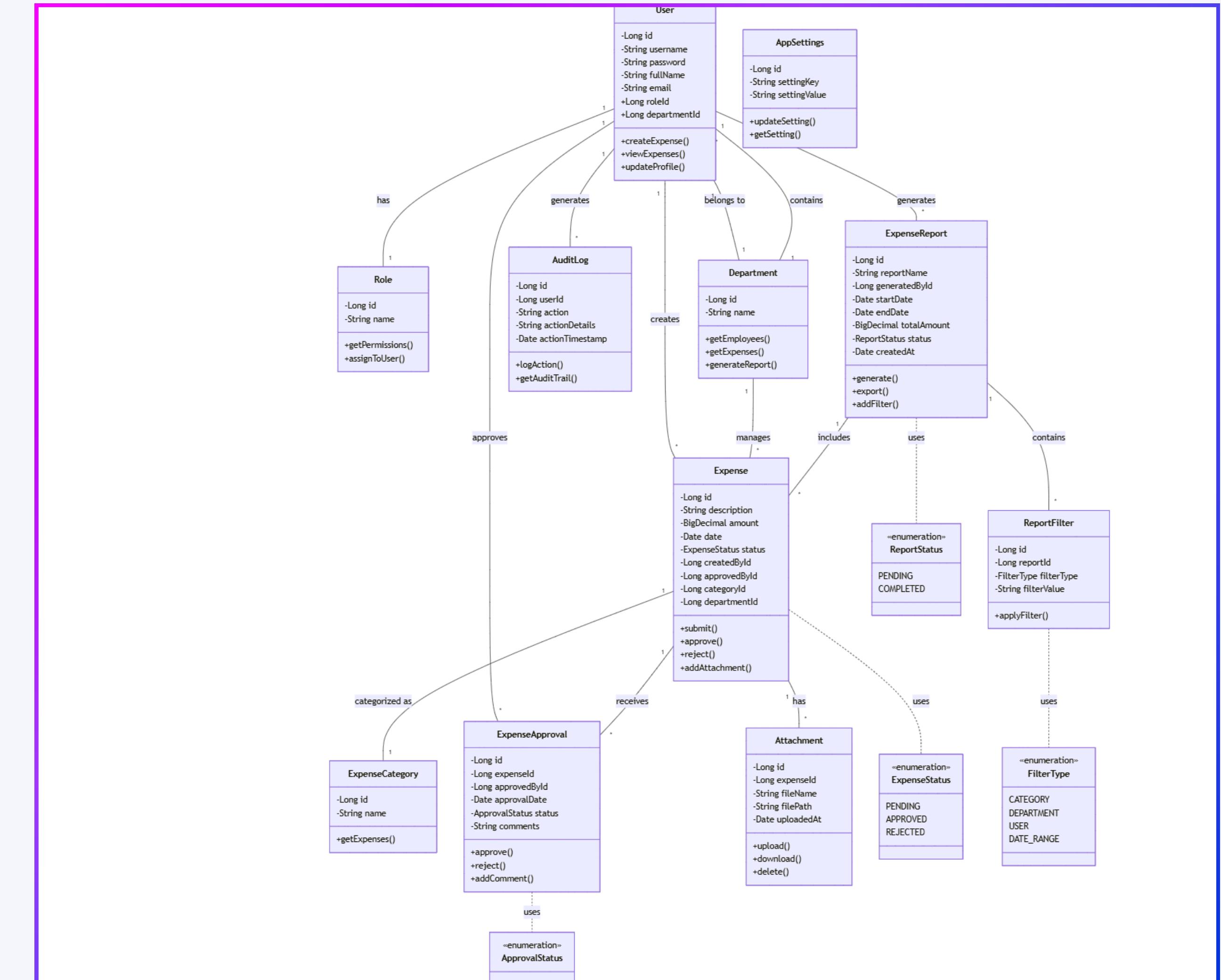


Diagrama de Obiecte

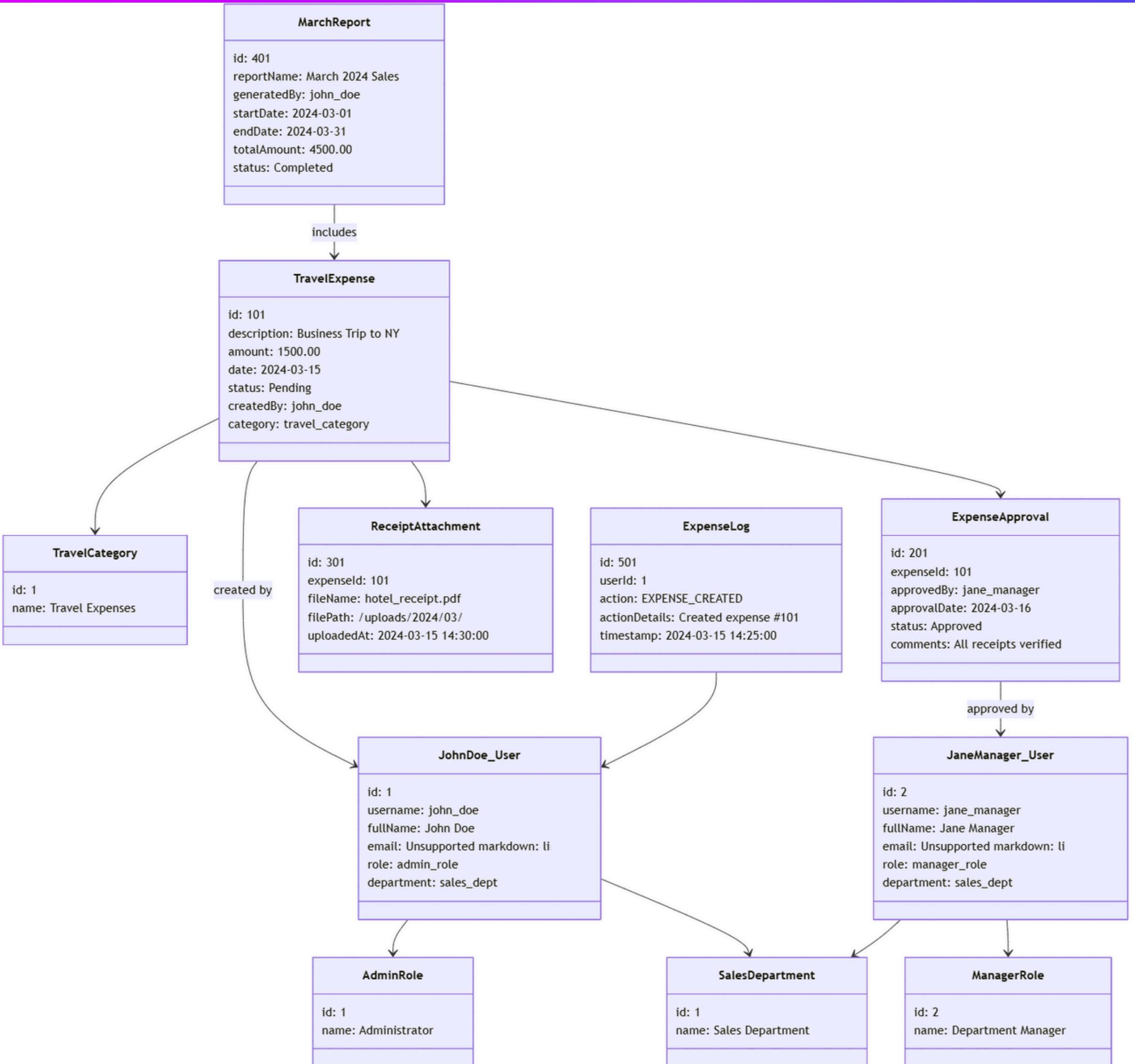
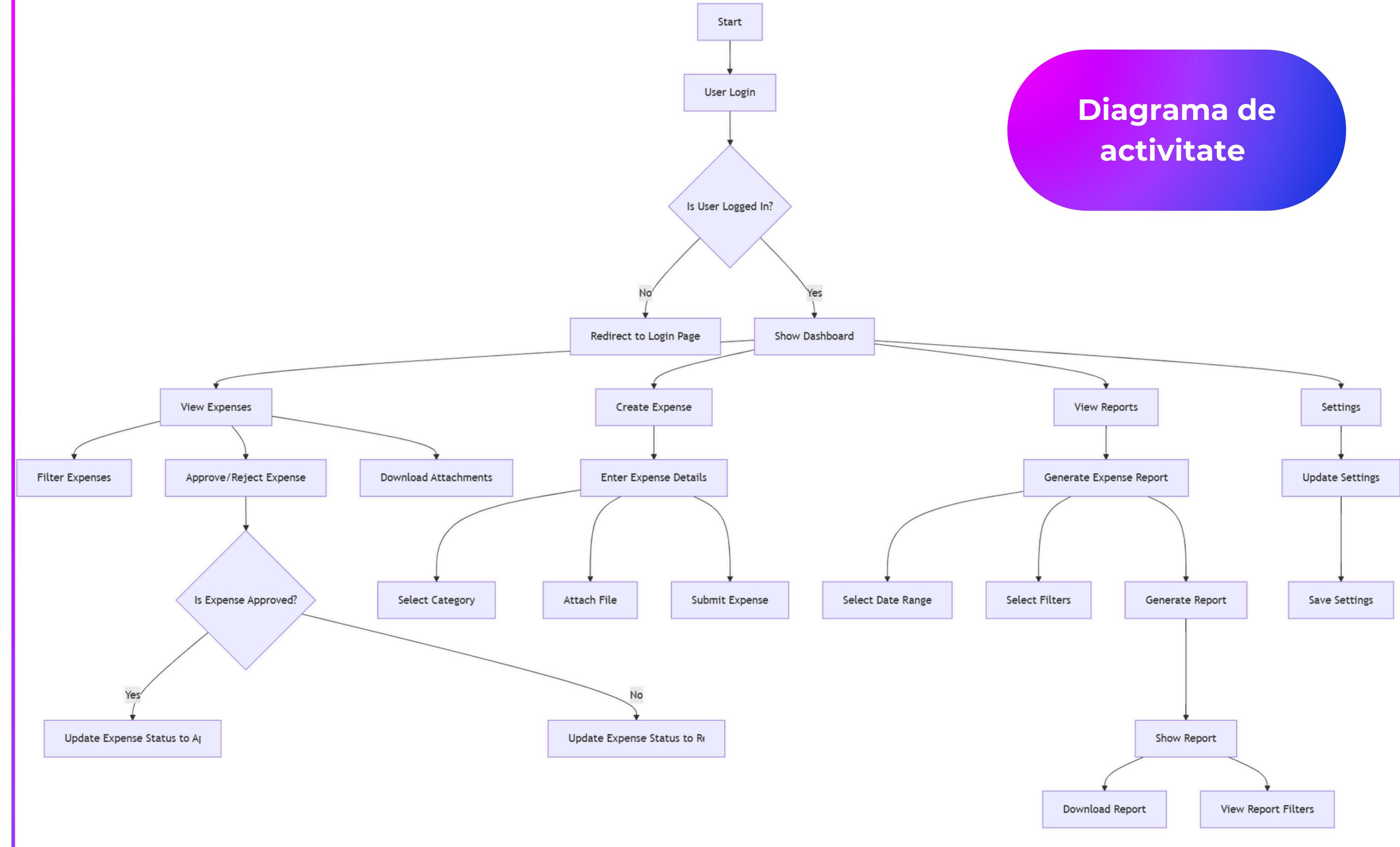


Diagrama de activitate



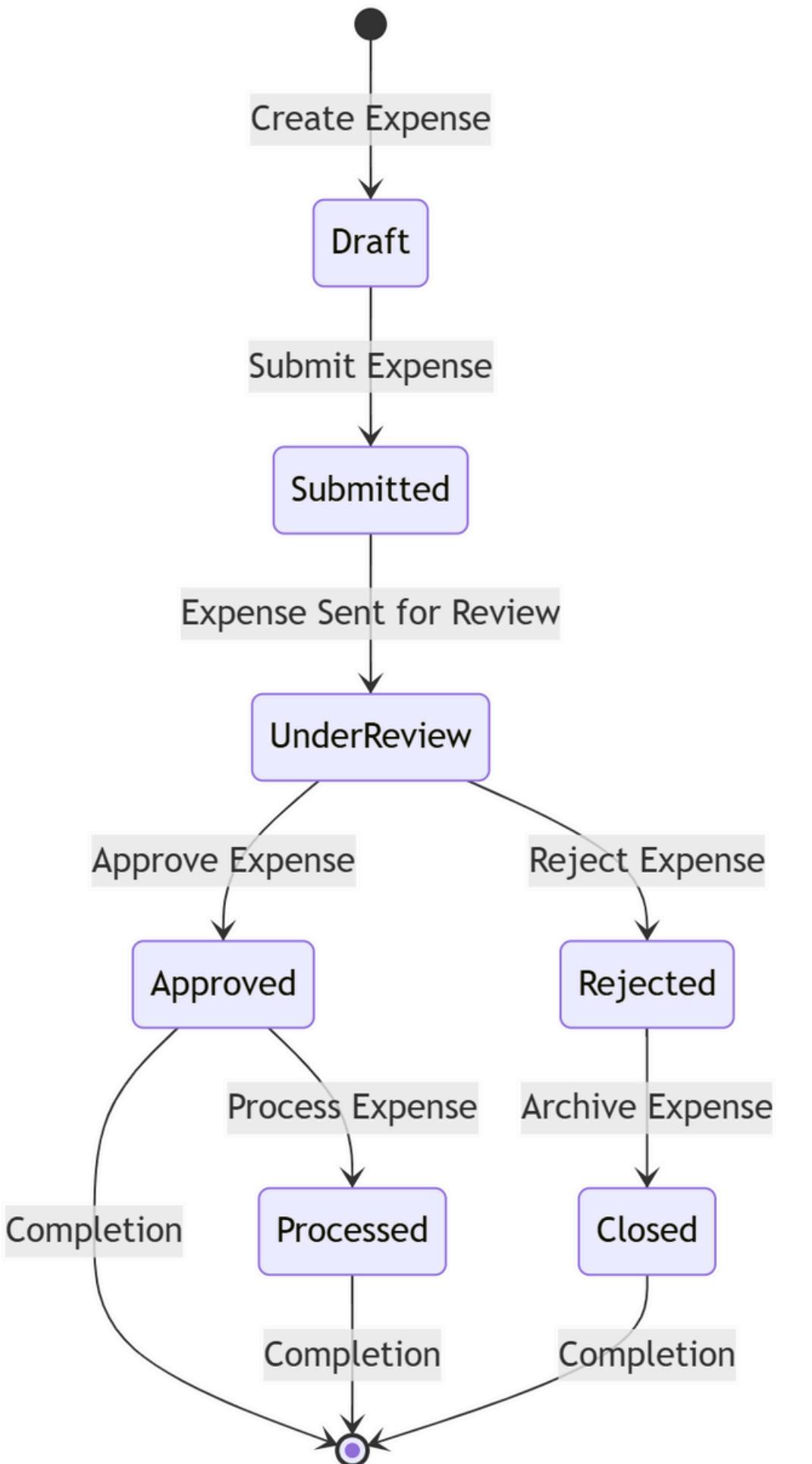


Diagrama de Tranzitie
Stări

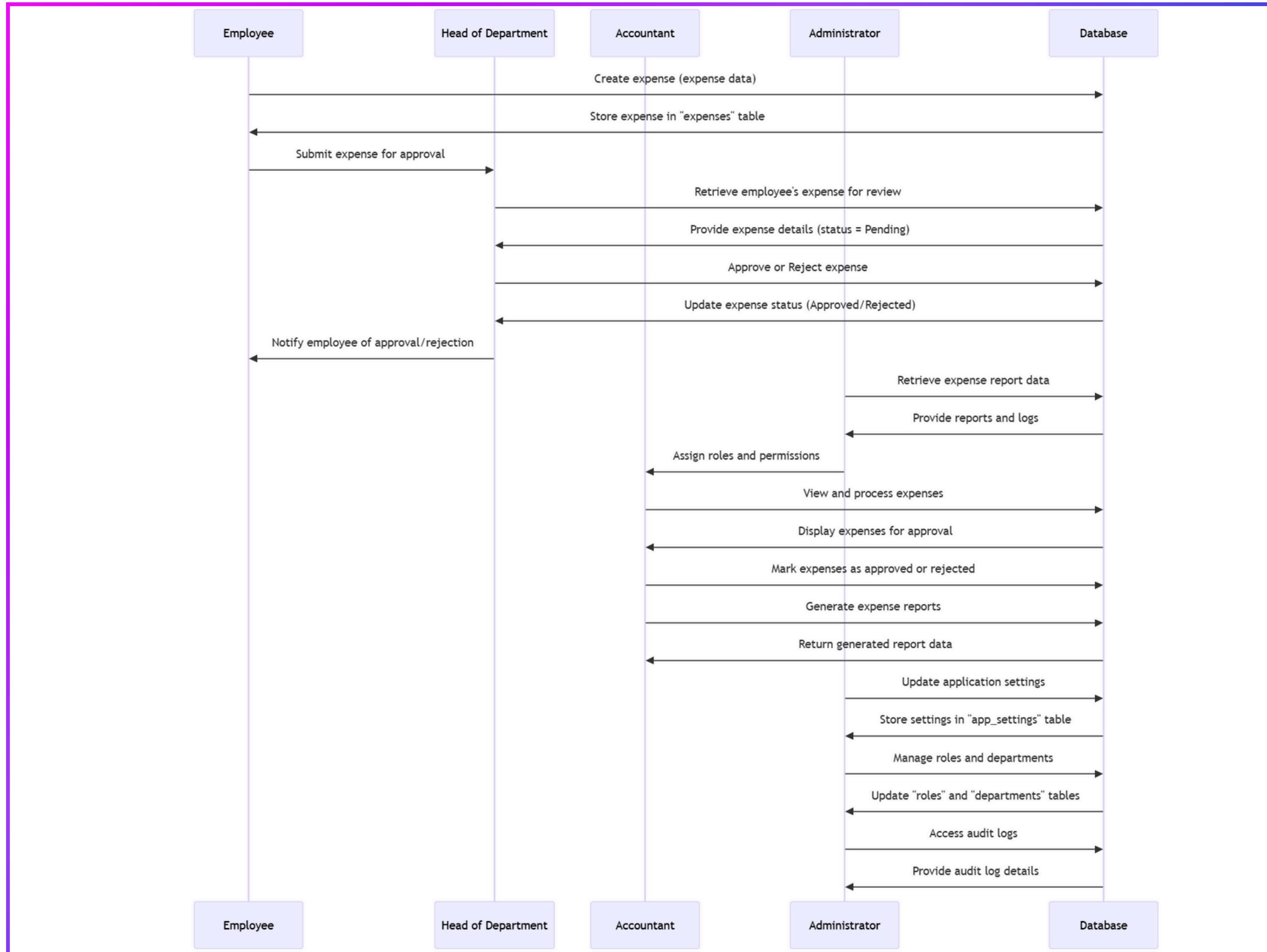


Diagrama de Comunicare

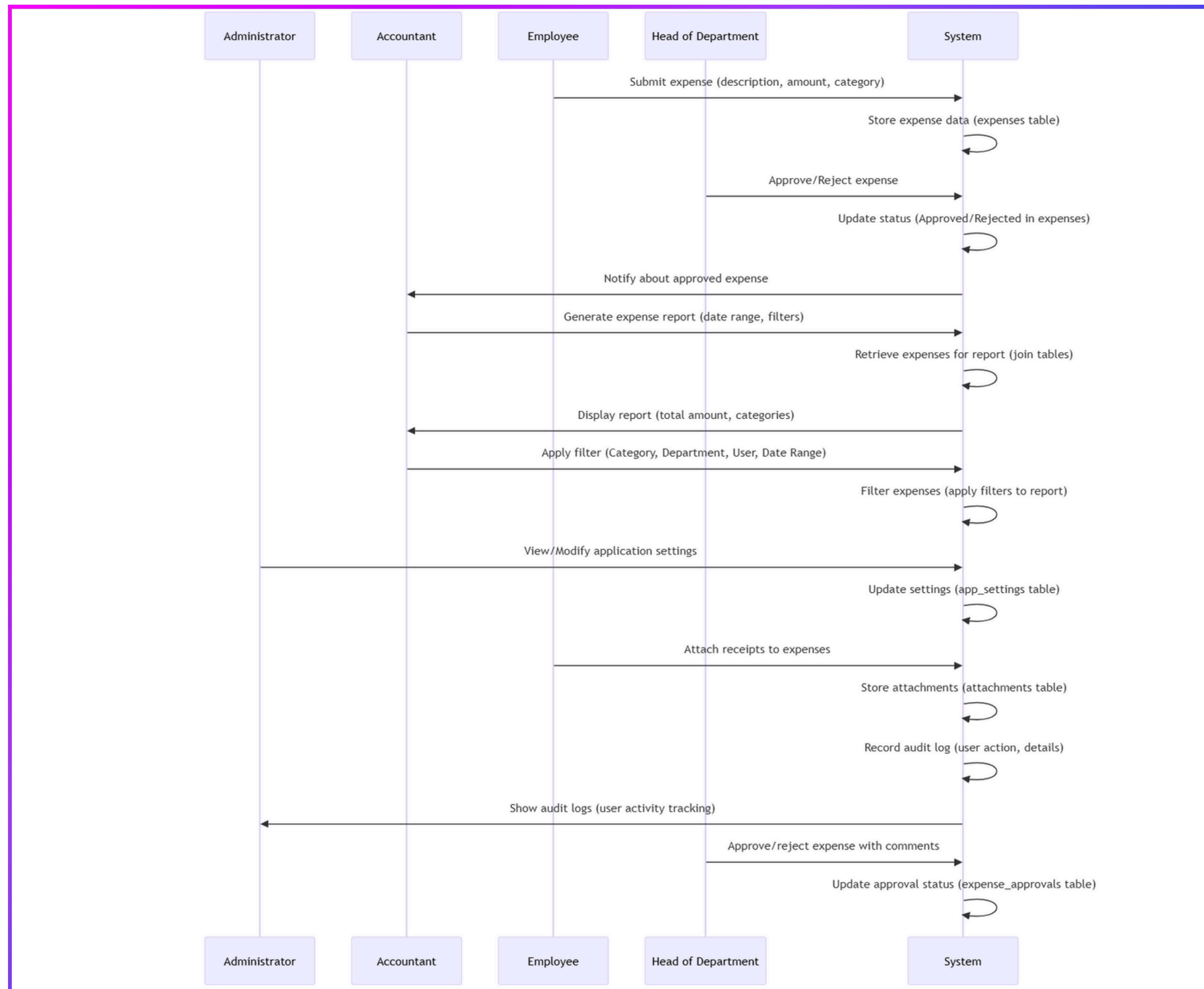
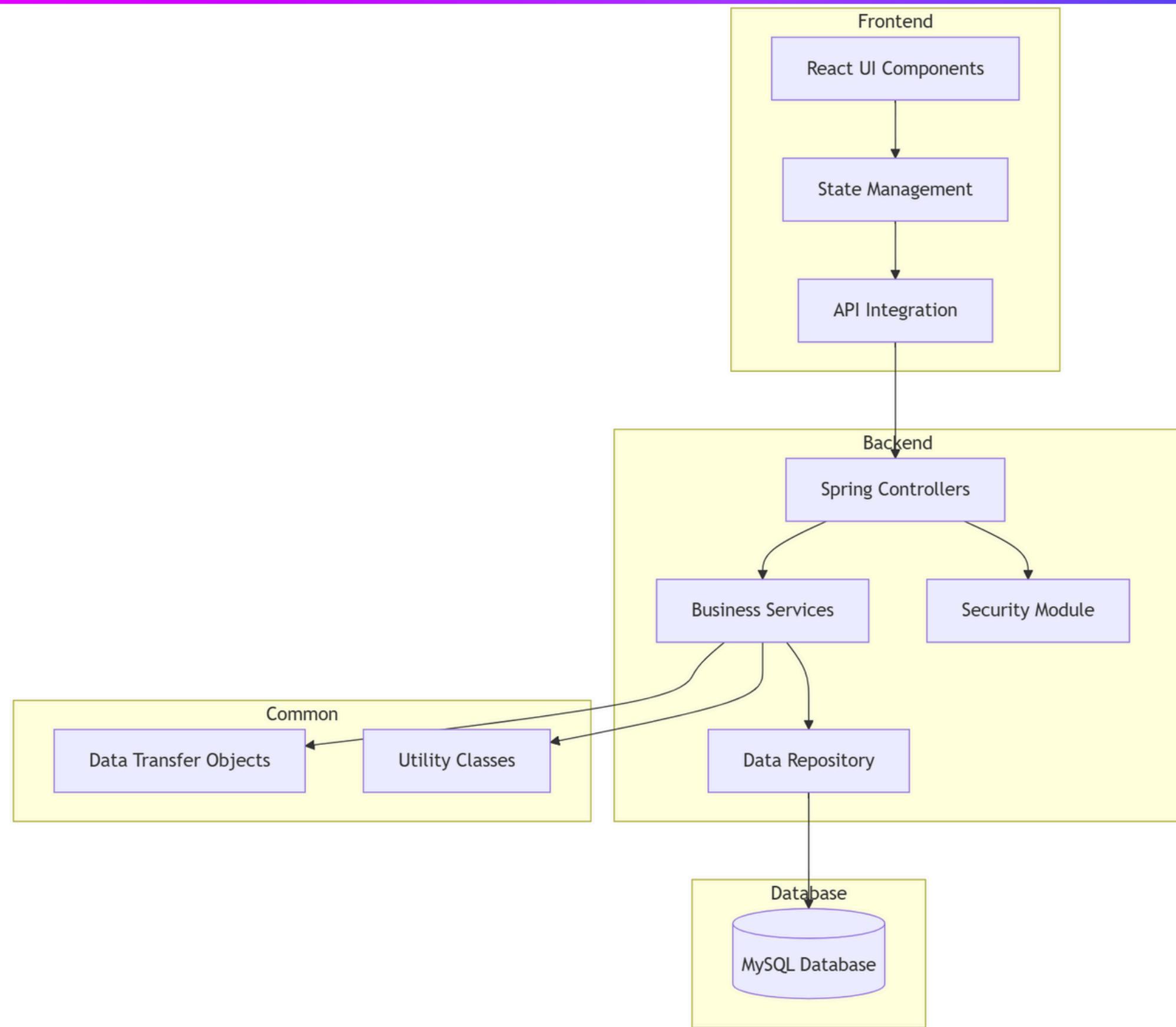


Diagrama de Interacțiune

Diagrama de Pachete



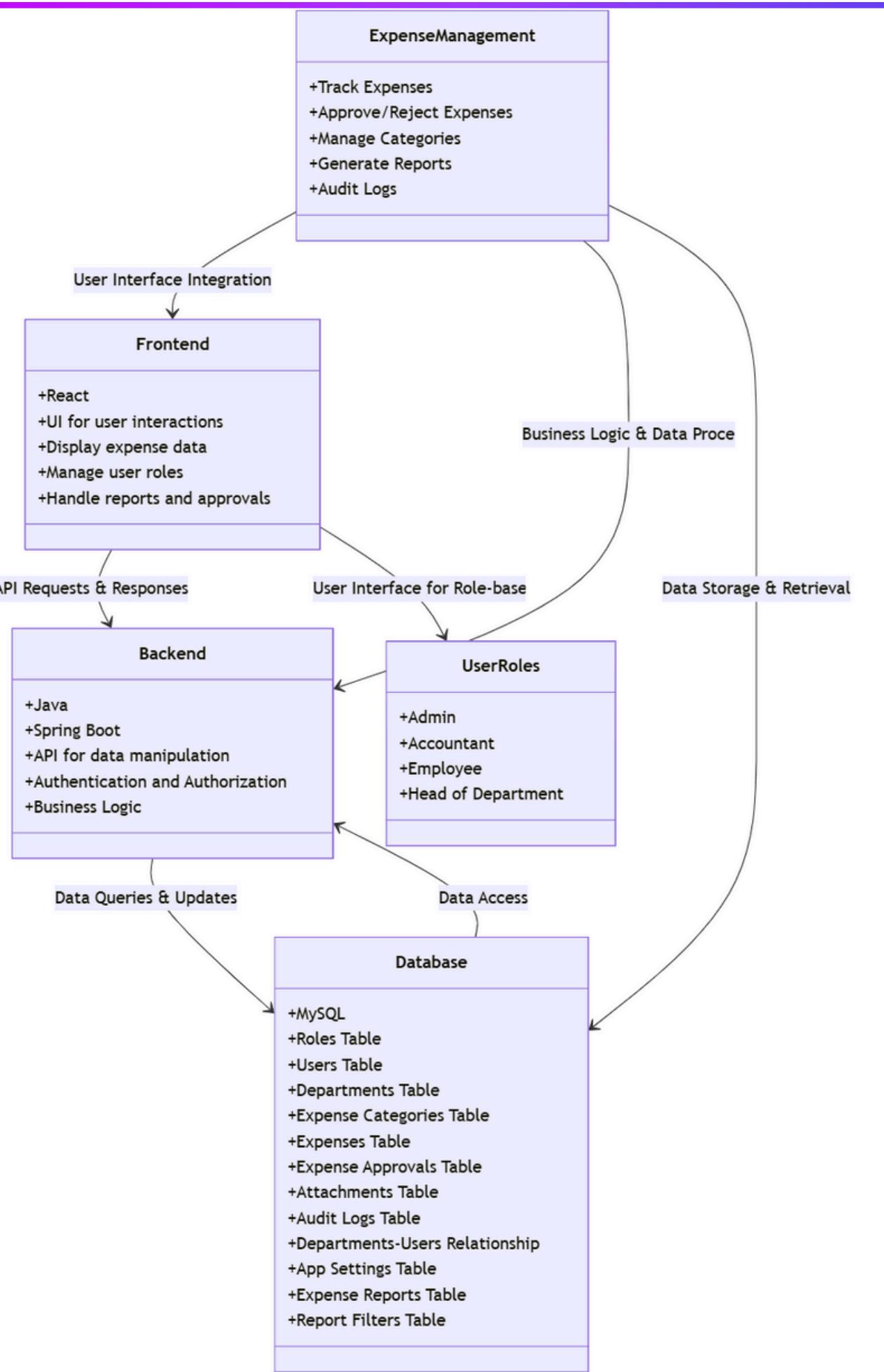


Diagrama de Componente

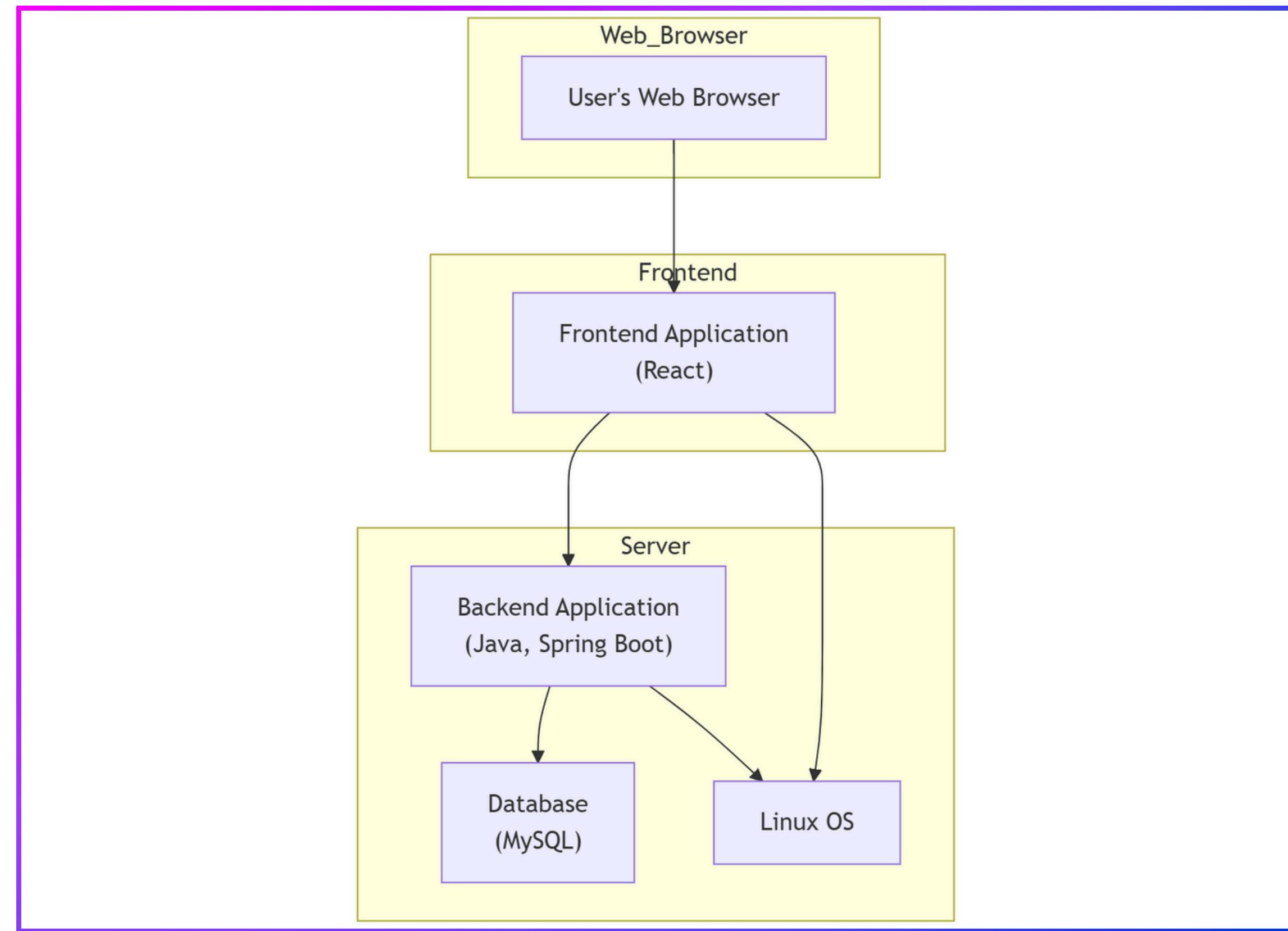
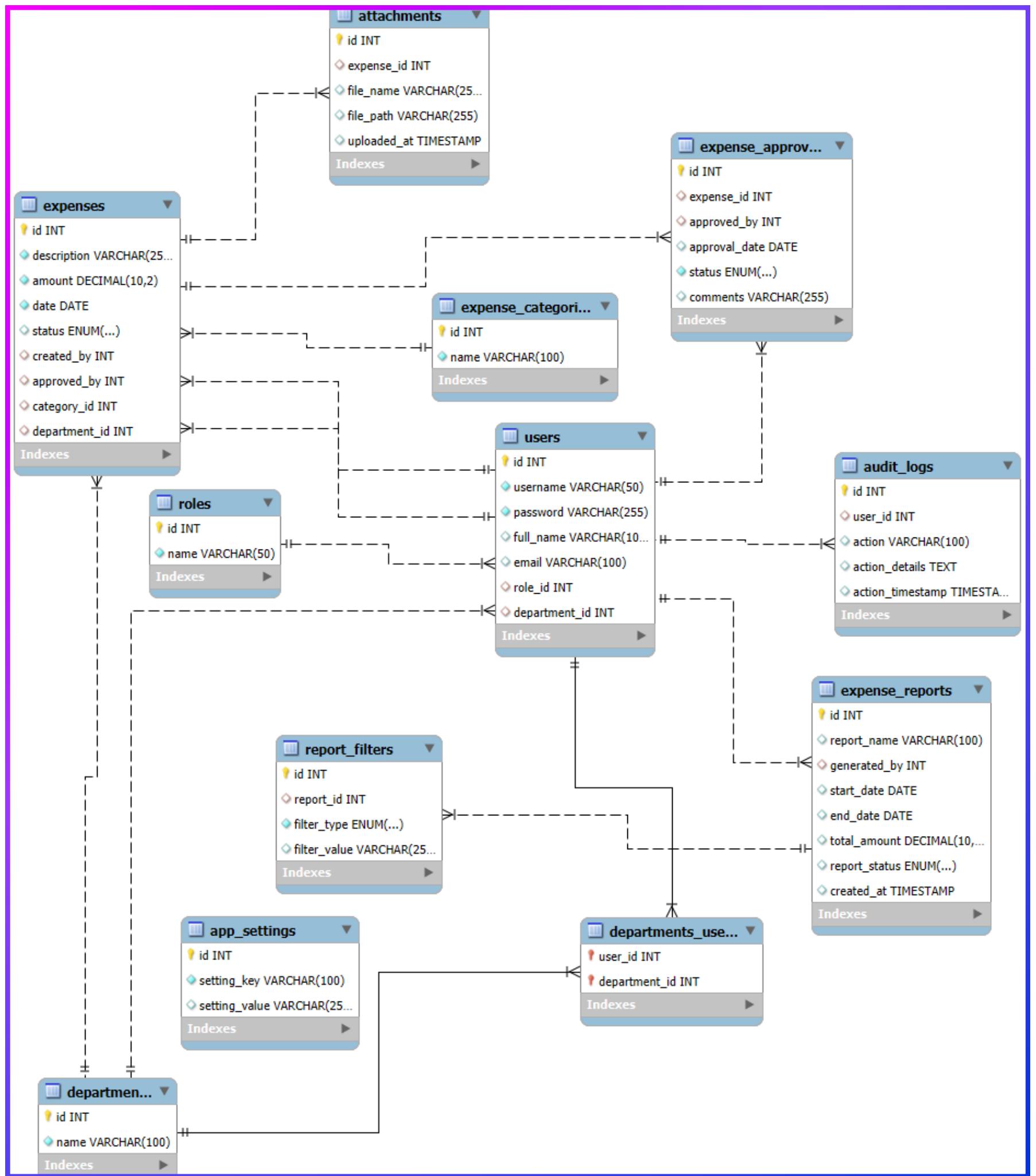
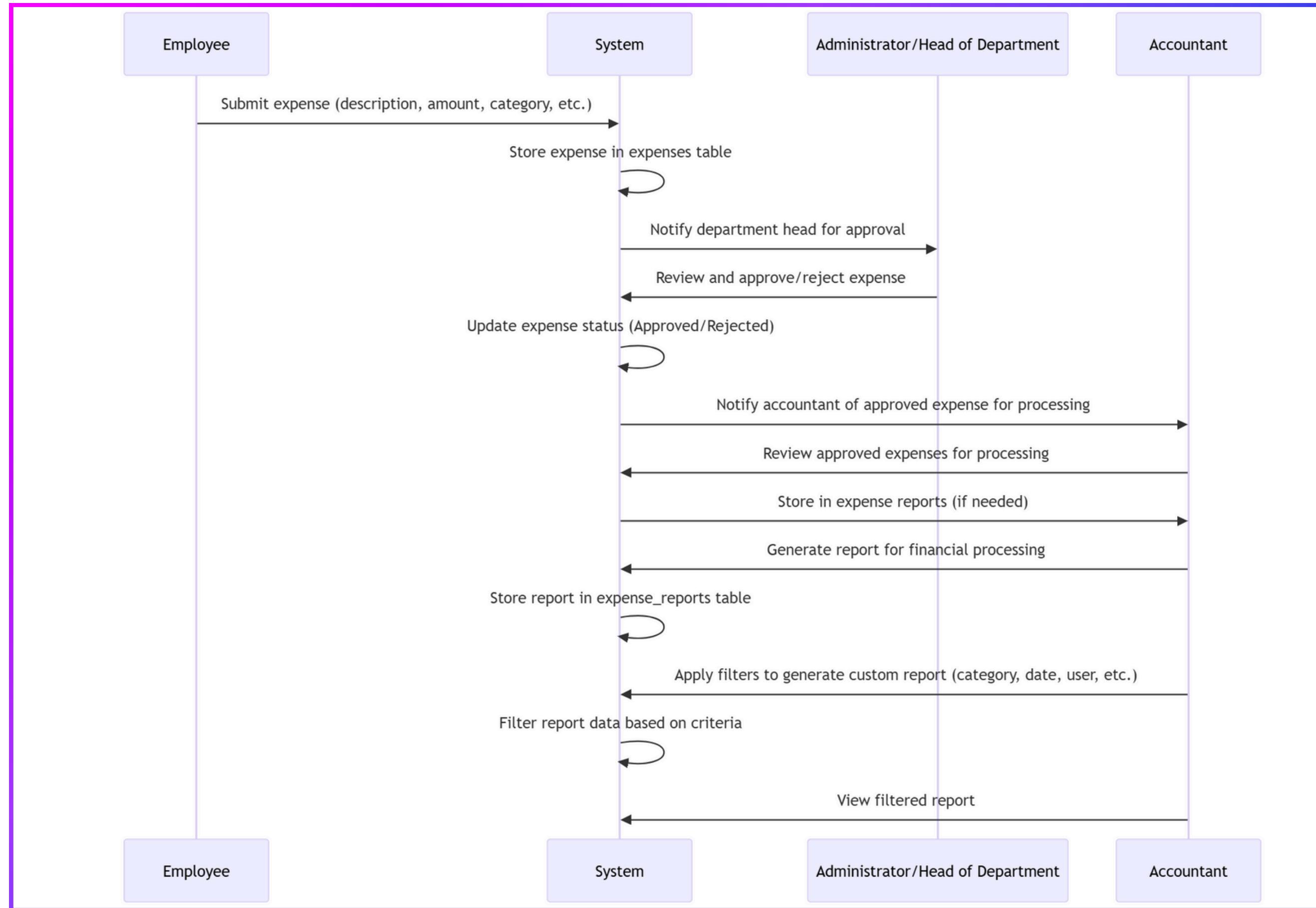


Diagrama de
Desfășurare

Diagrama de Baza de Date





**Diagrama de
Secvențiere**

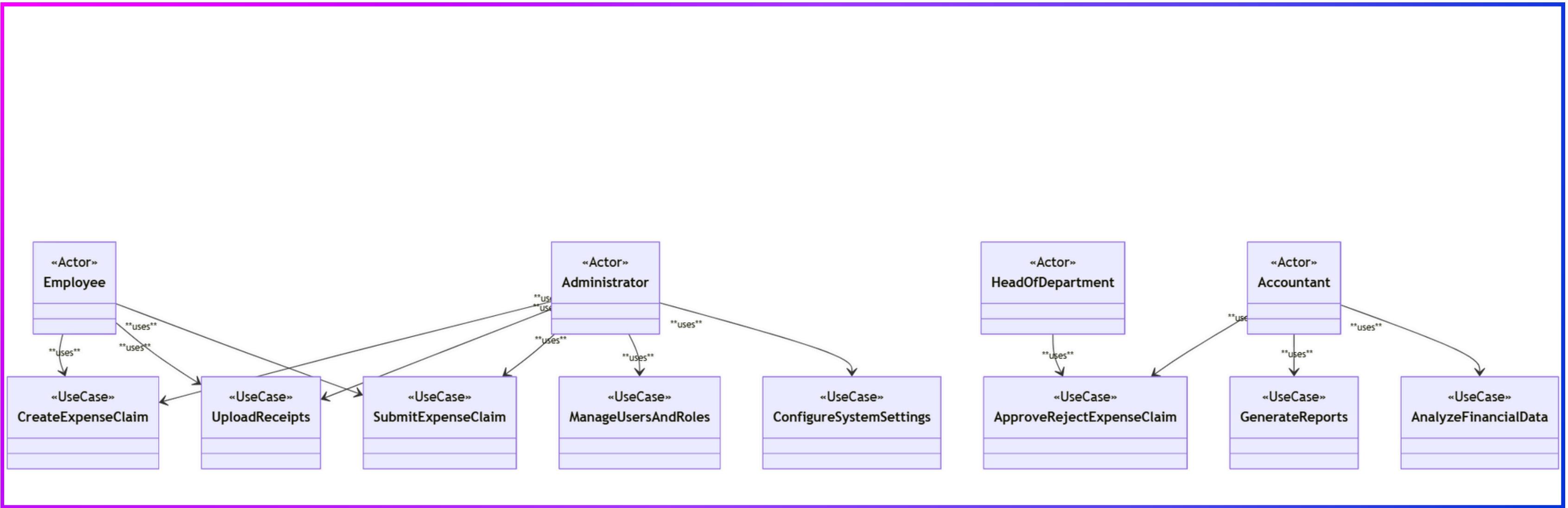


Diagrama de
Use-Case

5. Modul de operare/ Prezentarea interactivității

Aplicația va permite utilizatorilor să interacționeze cu sistemul printr-o interfață web prietenoasă. Utilizatorii se vor autentifica pentru a accesa funcționalitățile disponibile în funcție de rolul lor. Cererile de cheltuieli vor fi introduse și trimise pentru aprobăt, iar statusul lor va fi actualizat în timp real. Rapoartele vor putea fi generate pe baza datelor existente, oferind o vizualizare clară a cheltuielilor.

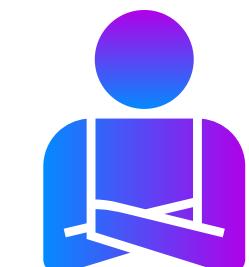
6. Portabilitate

1



Aplicația va fi dezvoltată astfel încât să fie accesibilă de pe diverse dispozitive (desktop, laptop, tabletă) și sisteme de operare (Windows, macOS, Linux) prin intermediul browserelor web

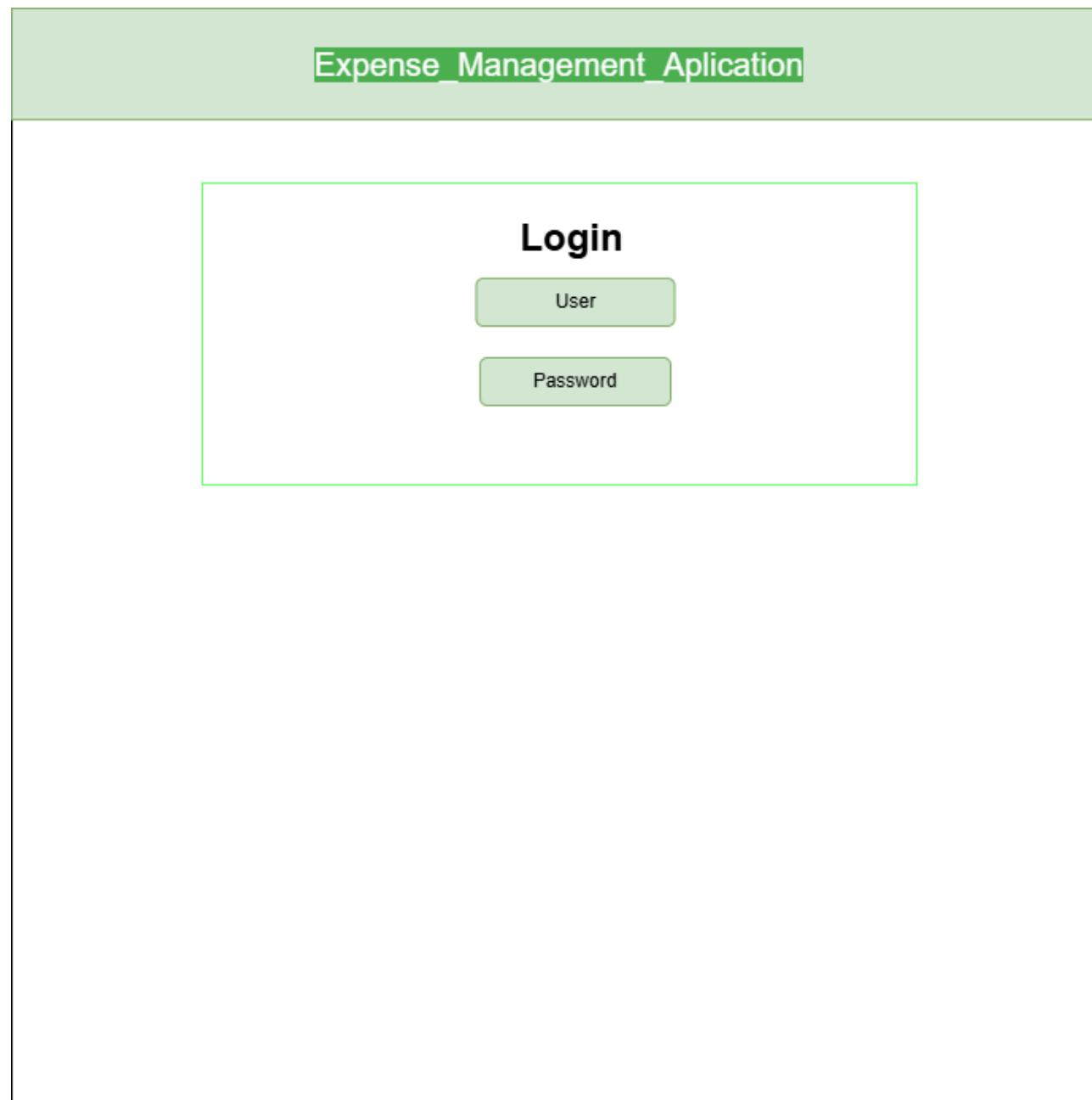
2



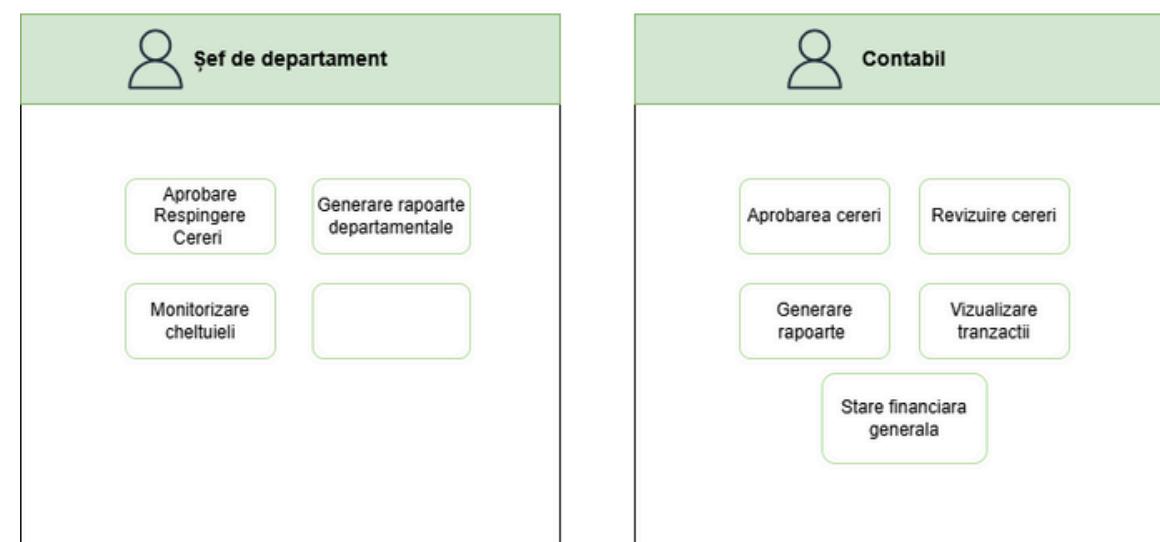
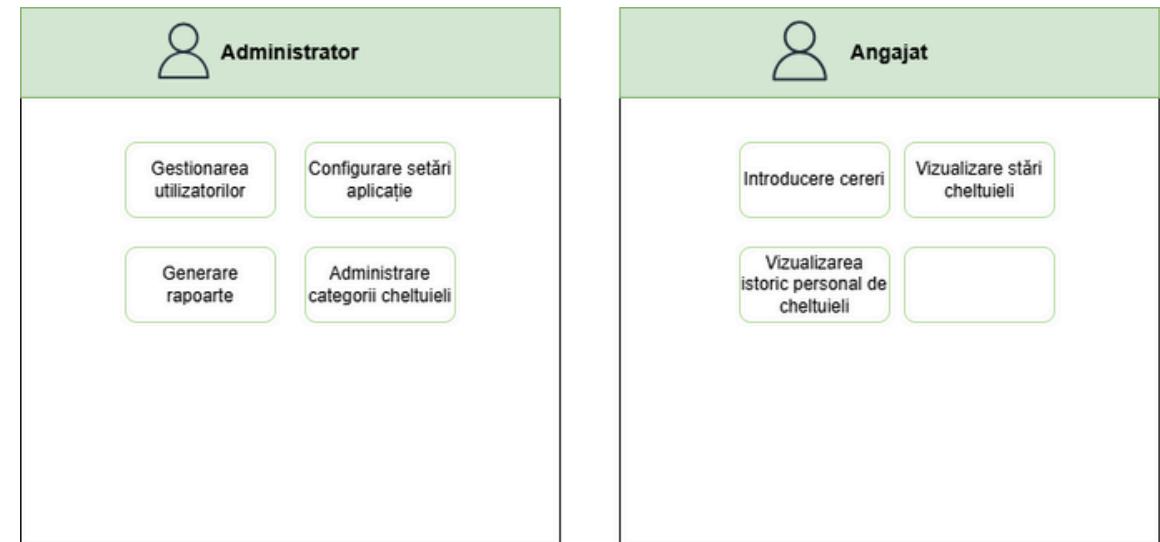
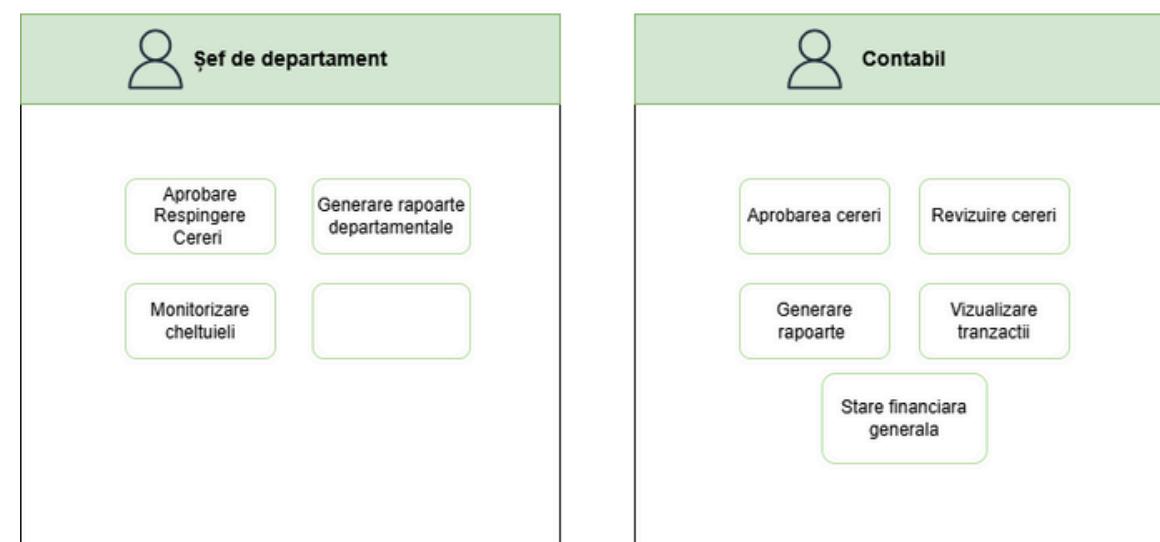
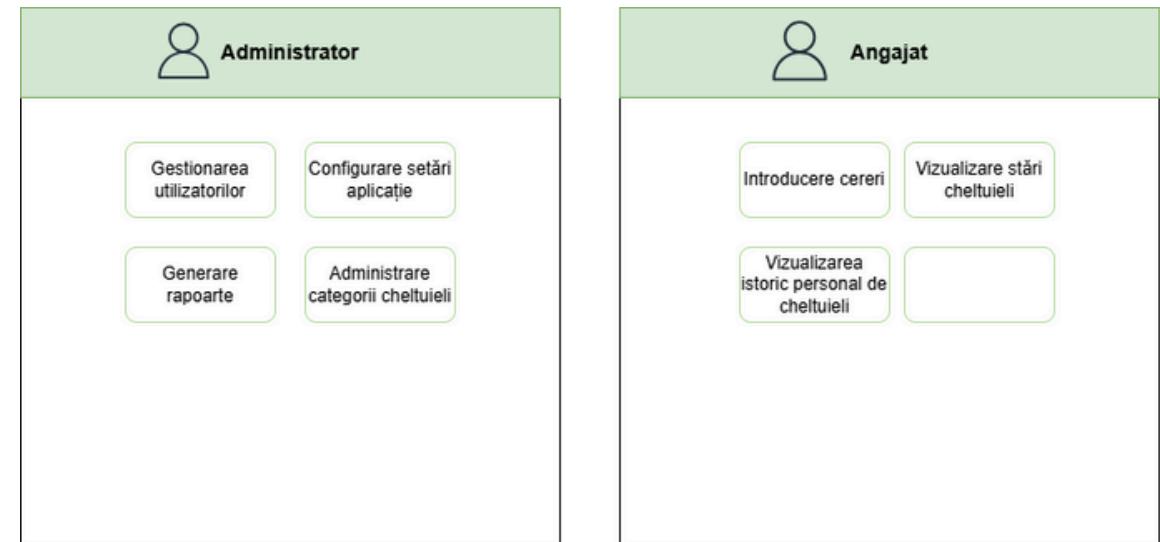
De asemenea, backend-ul va putea fi implementat pe diverse servere, asigurându-se astfel portabilitatea și scalabilitatea aplicației.

7. Concept pentru interfață grafică

Fereastra principală



Fereastra în funcție de utilizator



Aplicatie realizata

A admin admin

Expense Tracker

A

Expenses

| Description | Amount | Date | Category | Status | Actions |
|-------------------|----------|------------|-------------|----------|----------------------|
| Fly | \$ 200 | 12/18/2024 | Flight | APPROVED | Edit |
| PC | \$ 25000 | 12/16/2024 | Hardware | APPROVED | Edit |
| Laptops | \$ 2500 | 12/19/2024 | Hardware | APPROVED | Edit |
| Software Licenses | \$ 1250 | 12/20/2024 | Software | APPROVED | Edit |
| Maintenance | \$ 900 | 12/14/2024 | Maintenance | APPROVED | Edit |
| Marketing | \$ 450 | 12/13/2024 | Marketing | APPROVED | Edit |
| Fly | \$ 2000 | 12/22/2024 | Flight | APPROVED | Edit |
| Office Supplies | \$ 1000 | 12/15/2024 | Office | APPROVED | Edit |

[Logout](#)

A admin

Expense Tracker

Dashboard Overview

\$42950.00
Total Expenses +12%

\$0.00
Monthly Average +8%

2
Pending Approvals +5%

[Logout](#)

A admin
admin

Expense Tracker

User Management

Add User

| Username | Email | Role | Department | Actions |
|----------|----------------------|-----------------|----------------|---------|
| admin | admin@company.com | ADMIN | Administration | |
| finance | finance@company.com | ACCOUNTANT | Finance | |
| manager | manager@company.com | DEPARTMENT_HEAD | Sales | |
| employee | employee@company.com | EMPLOYEE | IT | |

Logout

A admin

Expense Tracker

Reports

Generate Report

Start Date: 12/01/2024

End Date: 01/01/2025

Generate Report

Report Summary

| | |
|--------------|-----------------------|
| Total Amount | \$42950 |
| Period | 12/1/2024 - 1/1/2025 |
| Generated By | admin |
| Generated At | 1/14/2025, 4:40:55 PM |

[Logout](#)

M manager
department head

Expense Tracker

Sales Reports

Start Date: 12/01/2024 End Date: 01/14/2025 Report Type: Overview

Generate Report **Reset**

Expense Summary

Total Expenses: \$4,550

Number of Expenses: 4
Average Expense: \$1,137.5

Monthly Expenses Trend

A placeholder for a monthly expenses trend chart. The chart area has a light gray background with dashed grid lines. The y-axis is labeled with values 4500 and 6000. A single data point is plotted at approximately 4500.

M manager
department head

M

| Expense Tracker | | | | | |
|-------------------------------------|--------------------|---------|---------------------------------|--|---|
| | | | | | |
| Dashboard | Team Building | \$ 1500 | <input type="date"/> 12/21/2024 | | <button>APPROVED</button> |
| Expenses | Food | \$ 100 | <input type="date"/> 12/22/2024 | | <button>REJECTED</button> |
| Reports | Food | \$ 200 | <input type="date"/> 12/22/2024 | | <button>APPROVED</button> |
| Department Reports | Hardware Repairs | \$ 600 | <input type="date"/> 12/23/2024 | | <button>APPROVED</button> |
| | Subscriptions | \$ 850 | <input type="date"/> 12/19/2024 | | <button>APPROVED</button> |
| | Internet Bills | \$ 500 | <input type="date"/> 12/20/2024 | | <button>APPROVED</button> |
| | Cloud Services | \$ 800 | <input type="date"/> 12/19/2024 | | <button>APPROVED</button> |
| | Transportation | \$ 300 | <input type="date"/> 12/21/2024 | | <button>PENDING</button> <button>Approve</button> <button>Reject</button> |
| | Training Materials | \$ 1500 | <input type="date"/> 12/22/2024 | | <button>APPROVED</button> |
| | paper | \$ 50 | <input type="date"/> 12/22/2024 | | <button>PENDING</button> <button>Approve</button> <button>Reject</button> |

[Logout](#)

M

manager
department head

M

Expense Tracker

0

2024-12

Monthly Expenses

Dashboard

Expenses

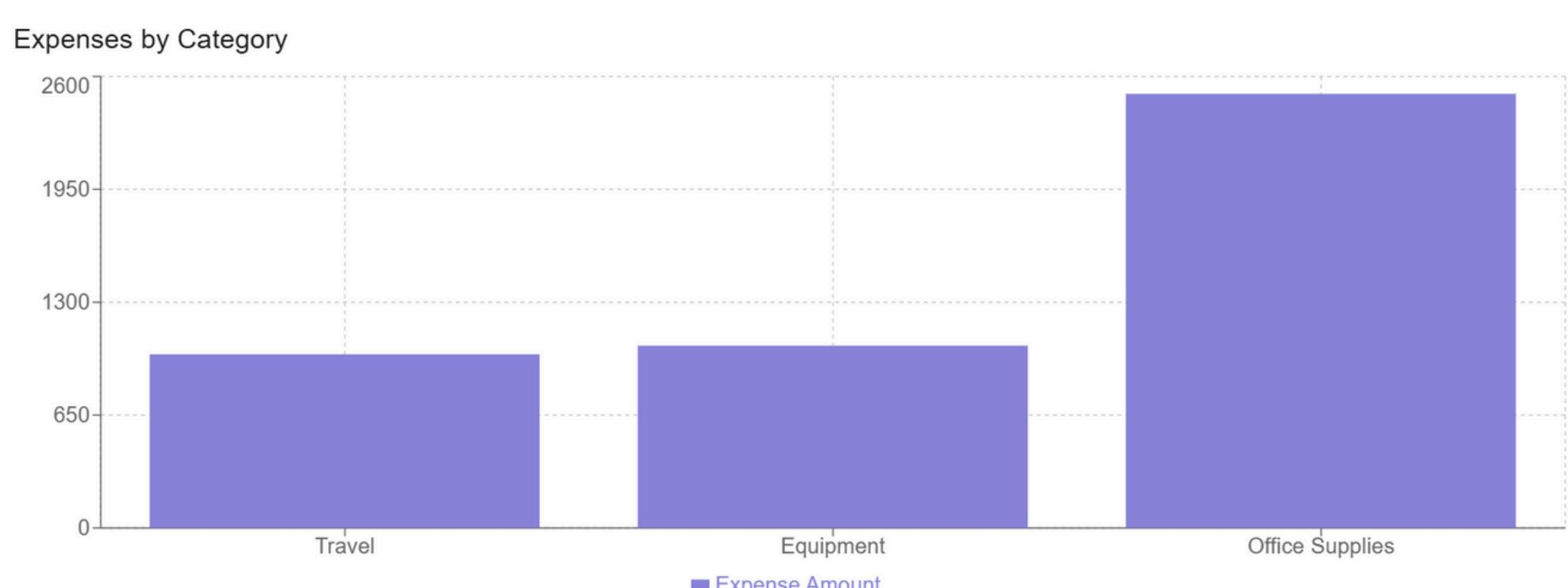
Reports

Department Reports

Logout

M

Expenses by Category



| Category | Expense Amount |
|-----------------|----------------|
| Travel | ~800 |
| Equipment | ~1000 |
| Office Supplies | ~2600 |

Expense Amount

finance
accountant

Expense Tracker

Accountant Reports

Start Date: 12/01/2024 End Date: 01/14/2025 Report Type: All Expenses

Generate Report **Reset**

Report Results

A bar chart titled "Report Results" showing the total expense amount for December 2024. The y-axis represents the amount in dollars, ranging from 0 to 60,000 with major ticks every 15,000. The x-axis shows the date "Dec 2024". A single blue bar represents the total expense amount.

| Category | Value |
|---------------------|-----------|
| Total Expenses | \$42,950 |
| Total Transactions | 20 |
| Average Transaction | \$2,147.5 |

Logout

finance
accountant

F

Expense Tracker

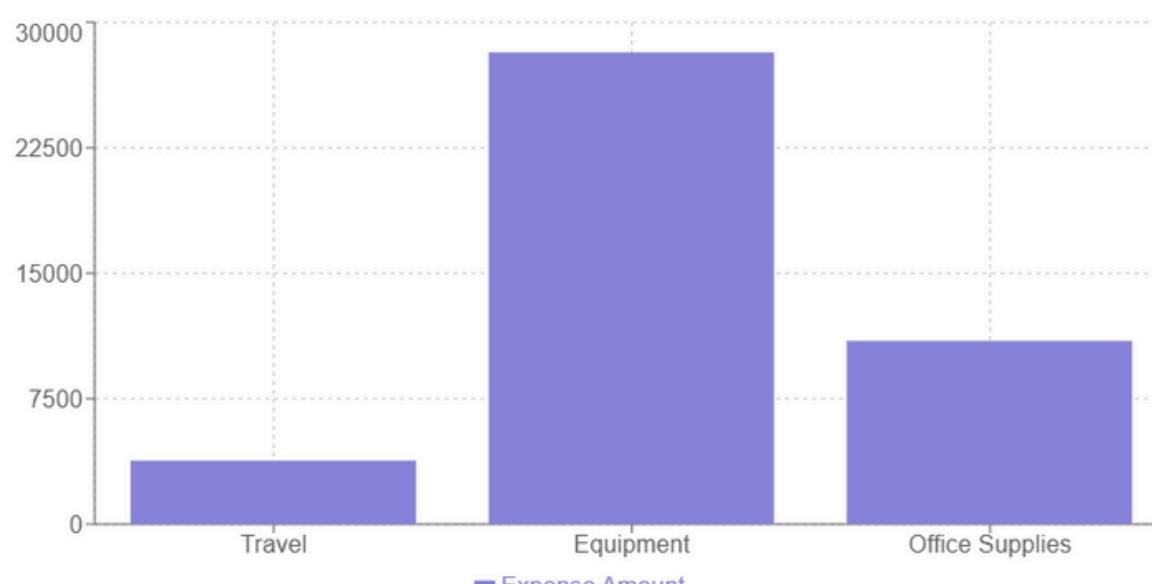
F

Accountant Reports

Start Date: 12/01/2024 End Date: 01/14/2025 Report Type: By Category

Generate Report Reset

Report Results



Expense Amount

| Total Expenses | Total Transactions | Average Transaction |
|----------------|--------------------|---------------------|
| \$42,950 | 20 | \$2,147.5 |

Logout

F finance
accountant

[Logout](#)

Expense Tracker

| Category | Amount | Date | Status | Action |
|--------------------|---------|------------|----------|--|
| Team Building | \$ 1500 | 12/21/2024 | APPROVED | |
| Food | \$ 100 | 12/22/2024 | REJECTED | |
| Food | \$ 200 | 12/22/2024 | APPROVED | |
| Hardware Repairs | \$ 600 | 12/23/2024 | APPROVED | |
| Subscriptions | \$ 850 | 12/19/2024 | APPROVED | |
| Internet Bills | \$ 500 | 12/20/2024 | APPROVED | |
| Cloud Services | \$ 800 | 12/19/2024 | APPROVED | |
| Transportation | \$ 300 | 12/21/2024 | PENDING | Approve Reject |
| Training Materials | \$ 1500 | 12/22/2024 | APPROVED | |
| paper | \$ 50 | 12/22/2024 | PENDING | Approve Reject |

finance
accountant

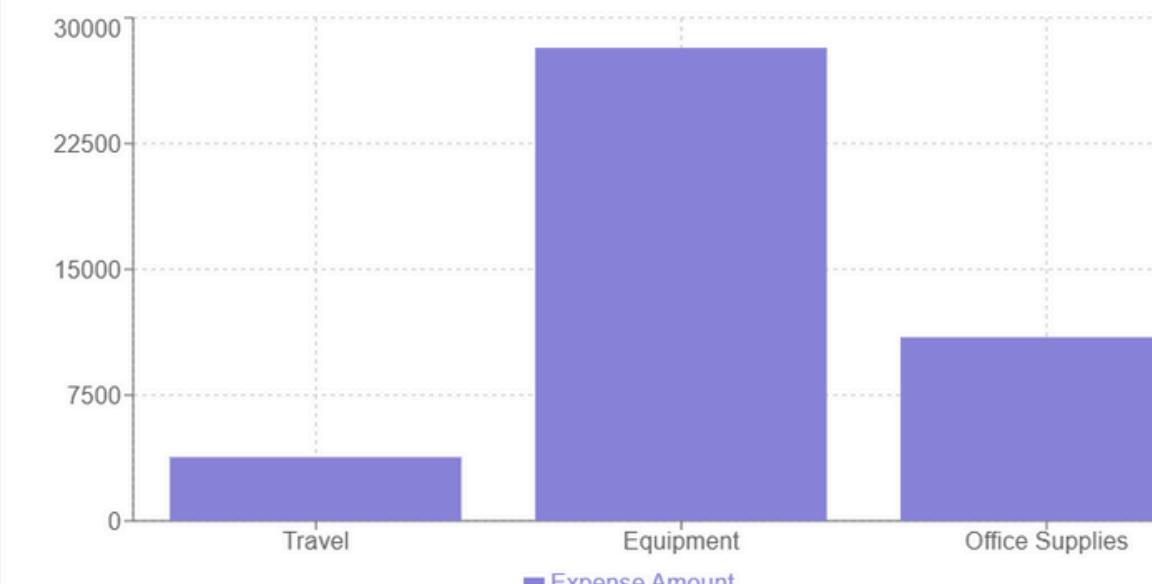
Expense Tracker

Accountant Reports

Start Date: 12/01/2024 End Date: 01/14/2025 Report Type: By Department

Generate Report **Reset**

Report Results



The chart displays three categories of expenses: Travel, Equipment, and Office Supplies. The Y-axis represents the Expense Amount in dollars, ranging from 0 to 30,000. The X-axis lists the categories. The bars are colored purple.

| Category | Expense Amount |
|-----------------|----------------|
| Travel | \$42,950 |
| Equipment | \$29,147.5 |
| Office Supplies | \$2,147.5 |

Total Expenses: \$42,950 **Total Transactions:** 20 **Average Transaction:** \$2,147.5

Logout

E employee

Expense Tracker

E

Expenses

+ Add Expense

| Description | Amount | Date | Category | Status | Actions |
|-------------------|----------|------------|---------------|----------|---------|
| Fly | \$ 200 | 12/18/2024 | Flight | APPROVED | |
| PC | \$ 25000 | 12/16/2024 | Hardware | APPROVED | |
| Laptops | \$ 2500 | 12/19/2024 | Hardware | APPROVED | |
| Software Licenses | \$ 1250 | 12/20/2024 | Software | APPROVED | |
| Maintenance | \$ 900 | 12/14/2024 | Maintenance | APPROVED | |
| Marketing | \$ 450 | 12/13/2024 | Marketing | APPROVED | |
| Fly | \$ 2000 | 12/22/2024 | Flight | APPROVED | |
| Office Supplies | \$ 1000 | 12/15/2024 | Office | APPROVED | |
| Equipment | \$ 2500 | 12/16/2024 | Equipment | APPROVED | |
| Travel Expenses | \$ 750 | 12/18/2024 | Travel | APPROVED | |
| Team Building | \$ 1500 | 12/21/2024 | Team Building | APPROVED | |

Logout

The screenshot shows a web-based application titled "Expense Tracker". The interface includes a sidebar on the left and a main content area on the right.

Left Sidebar:

- User icon: A blue circle with a white letter "E".
- User name: employee
- Role: employee
- Navigation links:
 - Dashboard
 - Expenses
 - Reports
- Logout link: A red button with a white "Logout" text and a red arrow icon.

Main Content Area:

The title "Expense Tracker" is at the top. Below it, a modal window is open for "New Expense".

New Expense Form Fields:

- Description*: An input field.
- Amount*: An input field.
- Date*: A date picker showing "01/14/2025".
- Category*: A dropdown menu.

Buttons:

- Cancel (light blue button)
- Submit (dark blue button)



Multumesc!