

Abstract

Every organization needs an application to manage resources, assets, cost to company and timesheets. In the current marketplace, there are several tools which are meeting the purpose which are licensed and costly for small IT companies and startups. There should be a single application which covers all the required modules for IT organization to continue business with daily operations. Runbook is a common terminology used in every IT organization which is used to automate the tasks, perform routine activities in a single application. It acts as an interface between Infrastructure teams responsible for deployments and runbook coordinator, development teams, and Business Analysts. The Objective of application is to develop a web application using various technologies to bring all the stakeholders in a common page about the project execution and making them aware of top management activities ongoing in the organization. The Application will have an interface to tools for updating the status of Jobs in the application. The idea of the application will be provided to the project owner for approval before designing and development. The scope of the project will include planning, design, development, testing, and documentation.

Introduction

The problem statement of the project is to develop a web application which covers all required modules to run the IT organization. The application should be an open source which is not licensed which can help small scale IT organizations and startups to effectively manage the resources, assets, timesheets, and some automated tasks. The Project was initiated by identifying the required modules like authentication and authorization which play a crucial role in any application. The primary objective is to create a single page web application and technologies which support MEAN Stack, Java Full Stack, MERN stack etc.,

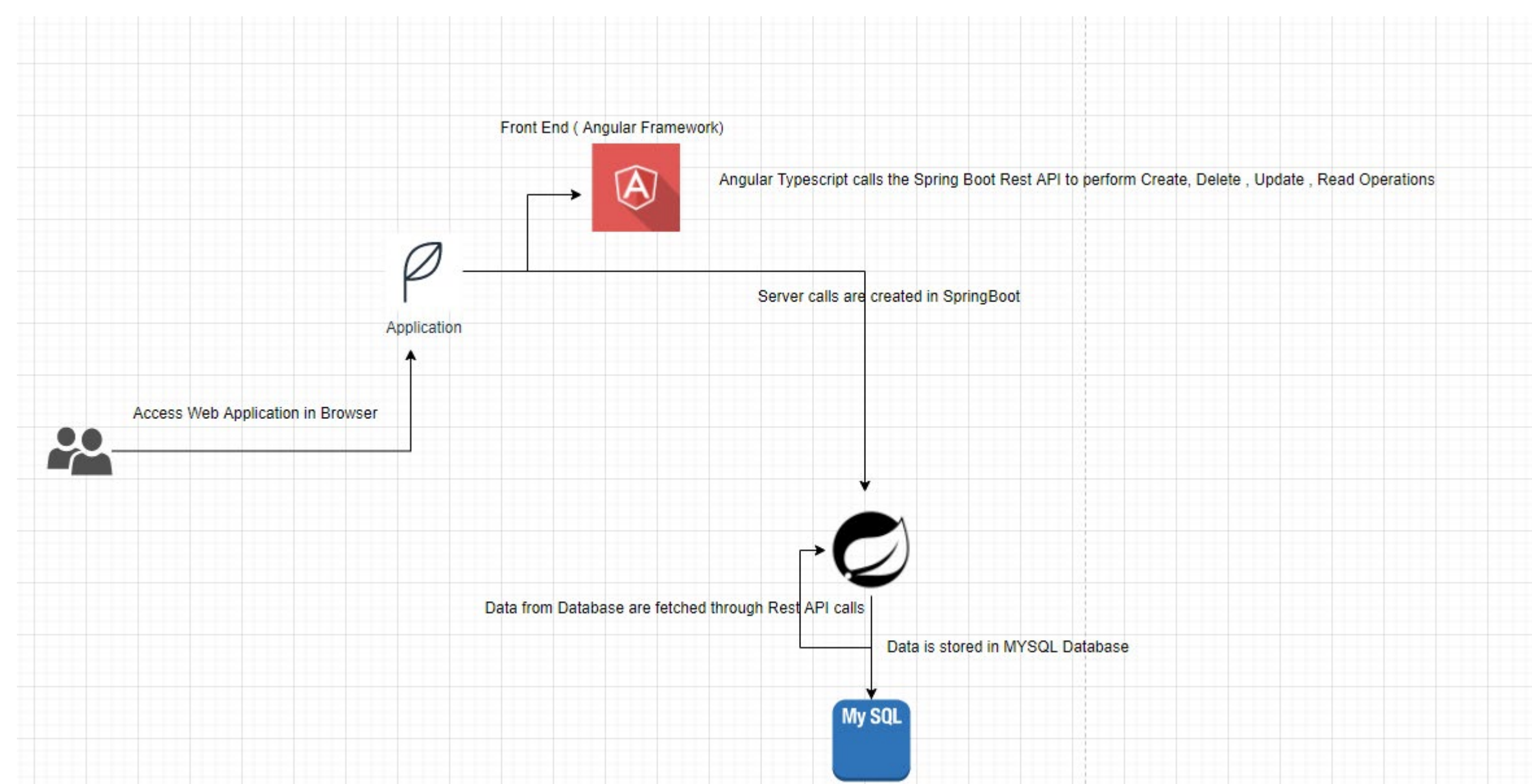
As per analysis, below are mandatory features for web application

- Frontend UI design
- Backend Service API design
- Database
- Authentication and Authorization
- Webserver Hosting

Research Question(s)

- Application consists of a Dashboard with various modules of the runbook application
- Application consists of module User profile, displaying the User's credentials
- Application consists of module Create User, where the User can create their account and edit their profile
- Application consists of module Employee tracking, for the User to notice the progress of the runbook
- Application consists of module Timesheets, which displays the runbook scheduled for a particular time
- Application consists of module Access Management, which allows the user to request for access to perform daily activities
- Application consists of module Employee Performance, where the employee's performance is displayed

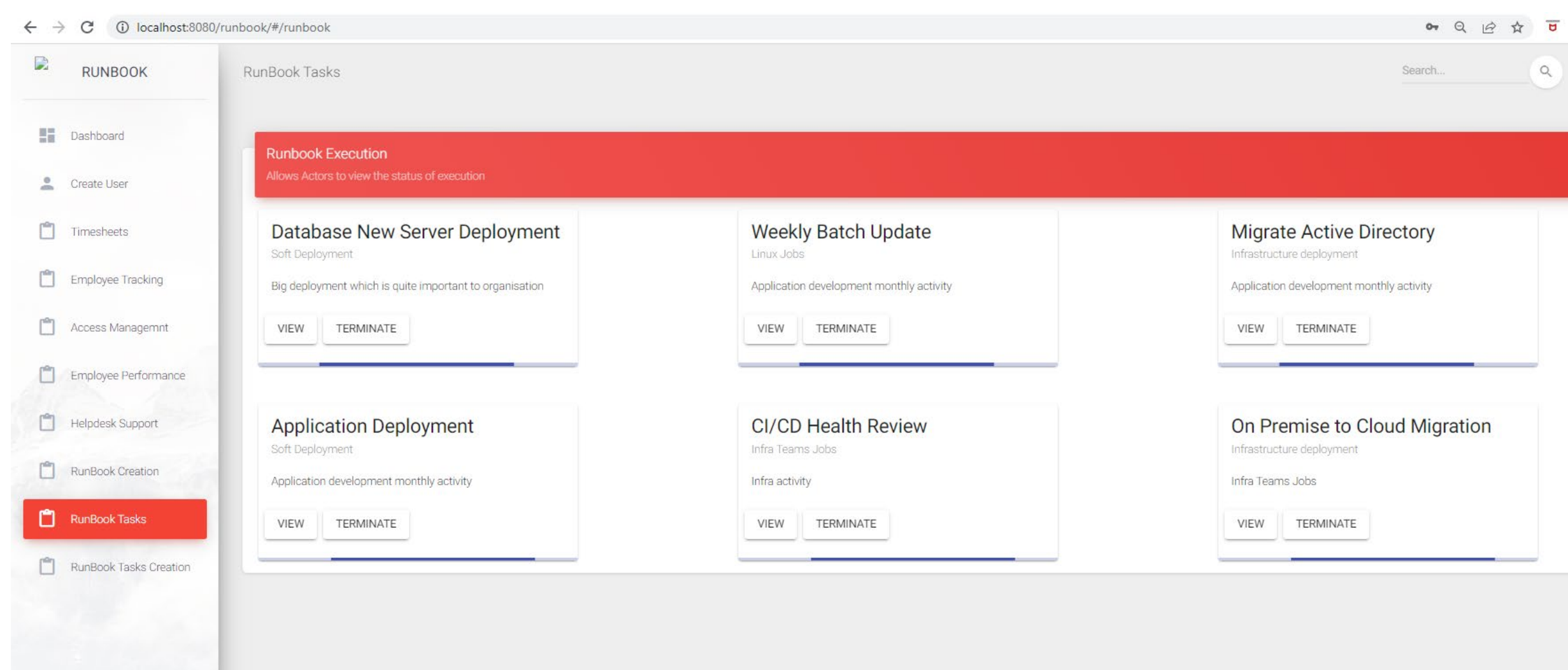
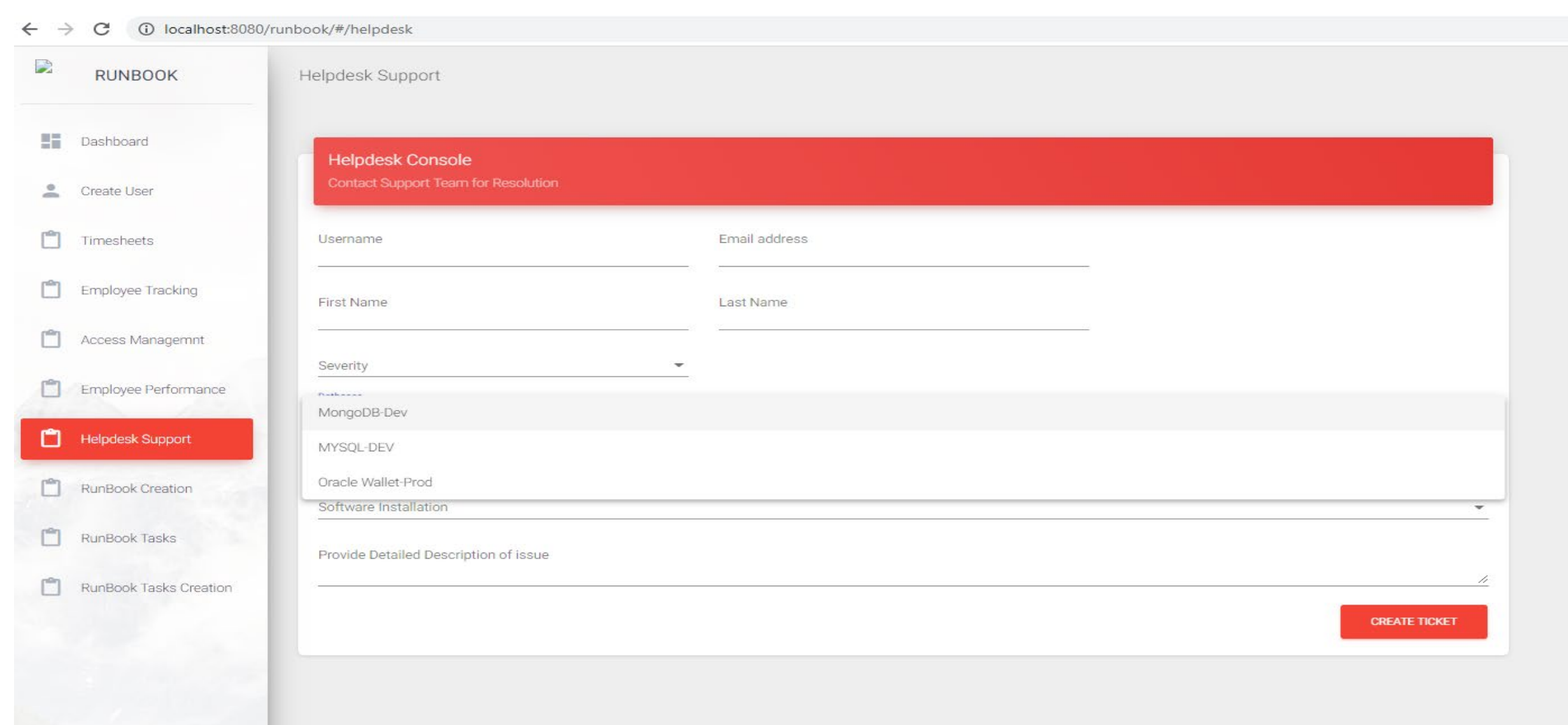
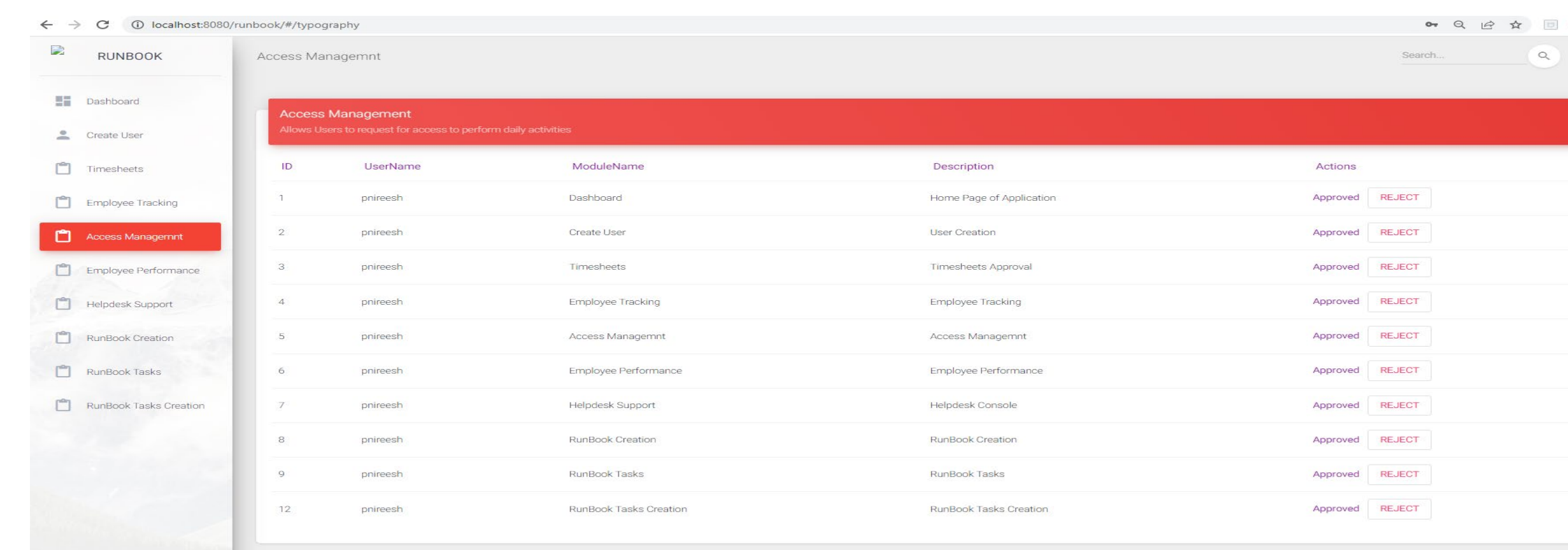
Materials and Methods



Tools



Results



Conclusions

Use runbooks to characterize standardized methods for the IT administrators to utilize. As the administrators use the runbooks, there is a saving of money on costs on the grounds that every administrator presently should not invest energy to create a procedure to fix an issue that was solved previously. A runbook is essential for general automation that has many applications beyond incident management.

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Contact Information

<https://sites.google.com/view/runbook-automation>

References

- https://www.ibm.com/garage/method/practices/manage/tool_runbook_automation/
- <https://docs.microsoft.com/en-us/azure/automation/start-runbooks>