

□ □ □ □ □ □ □ □ □ □ □ □ □ □ □

1. ■■■■■■ ■■■■■■

- [illegible]

2. ■■■■■ ■■■■■■■■■■ ■■■■■■■■■■

- **RESEARCH DESIGN**
- **DATA COLLECTION**
- **ANALYSIS**
- **CONCLUSIONS**
- **REFERENCES**
- **APPENDICES**
- **BIBLIOGRAPHY**
- **GLOSSARY**
- **INDEX**
- **INTRODUCTION**
- **LITERATURE REVIEW**
- **METHODS**
- **RESULTS**
- **DISCUSSION**
- **CONCLUSION**
- **ACKNOWLEDGEMENTS**
- **DECLARATION OF INTEREST**
- **FUNDING**
- **ETHICS STATEMENT**
- **CONFLICT OF INTEREST**
- **AUTHOR CONTRIBUTIONS**
- **PUBLISHER'S NOTE**
- **CONTACT INFORMATION**
- **CORRESPONDENCE TO:**
- **KEYWORDS**
- **ABSTRACT**
- **INTRODUCTION**
- **LITERATURE REVIEW**
- **METHODS**
- **RESULTS**
- **DISCUSSION**
- **CONCLUSION**
- **ACKNOWLEDGEMENTS**
- **DECLARATION OF INTEREST**
- **FUNDING**
- **ETHICS STATEMENT**
- **CONFLICT OF INTEREST**
- **AUTHOR CONTRIBUTIONS**
- **PUBLISHER'S NOTE**
- **CONTACT INFORMATION**
- **CORRESPONDENCE TO:**
- **KEYWORDS**
- **ABSTRACT**

3. ■■■■ ■■■■■■

- [illegible]





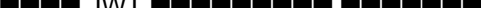


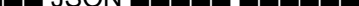
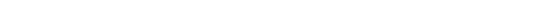
1. ■■■■■■ ■■■■■■

- Python Flask - ██████████ ██████████ ██████████ ██████████

- SQLAlchemy ORM - ██████████ ██████████ ██████████ ██████████
- PostgreSQL - ██████████ ██████████ ██████████ ██████████
 - Bootstrap - ██████████ ██████████ ██████████ ██████████
- Chart.js - ██████████ ██████████ ██████████ ██████████
 - JWT Authentication - ██████████ ██████████ ██████████ ██████████
 - RESTful API - ██████████ ██████████ ██████████ ██████████

2. ■■■■■ ■■■■■

3. API

- API  30+ endpoint
- 
-  JWT 
-  JSON 
- 
- 
- 

Project Overview

Feature	Requirement	Implementation
Authentication	Secure login/logout	JWT tokens, OAuth2
Authorization	Role-based access control	RBAC system
Reporting	Generate reports	PDF, Excel, CSV
API Endpoints	30+ endpoint	RESTful API
Database	15+ tables	PostgreSQL
API Endpoints	30+ endpoint	RESTful API
Reporting	PDF, Excel, CSV	Report generator

System Architecture

- Frontend: React.js
- Backend: Node.js
- Database: PostgreSQL
- Authentication: OAuth2
- Reporting: Report generator
- API: RESTful API
- Deployment: Docker

Deployment

Environment:

- Operating System: Linux/Windows/macOS
- Python 3.8
- Database: PostgreSQL
- RAM: 2GB RAM
- Disk Space: 10GB
- Network: Internet access

Dependencies:

- Browser: Chrome, Firefox, Safari, Edge
- JavaScript

- [illegible]

