

UniLodge

An AirBnB Alternative for Students

Final Year Project B.Sc.(Hons) in Software Development

BY FARIS NASSIF AARON BURNS

April 16, 2020

Advised by Dr. John French & Dr. Martin Kenirons
DEPARTMENT OF COMPUTER SCIENCE AND APPLIED PHYSICS
GALWAY-MAYO INSTITUTE OF TECHNOLOGY (GMIT)

Contents

| 1 | Intr | oduction | 3 | | | | | | | | | | |
|---|------|--|--------|--|--|--|--|--|--|--|--|--|--|
| | 1.1 | Context | 3 | | | | | | | | | | |
| | | 1.1.1 Web Applications | 3 | | | | | | | | | | |
| | | 1.1.2 Something | 3 | | | | | | | | | | |
| | 1.2 | Project Objectives | 3 | | | | | | | | | | |
| | 1.3 | Summary | 3 | | | | | | | | | | |
| | | 1.3.1 Methodology | 3 | | | | | | | | | | |
| | | 1.3.2 Technology Review | 4 | | | | | | | | | | |
| | | 1.3.3 System Design | 4 | | | | | | | | | | |
| | | 1.3.4 System Evaluation | 4 | | | | | | | | | | |
| | | 1.3.5 Conclusion | 4 | | | | | | | | | | |
| 2 | Me | Methodology 5 | | | | | | | | | | | |
| | 2.1 | Project Management | 5 | | | | | | | | | | |
| | 2.2 | Other things that'll come to me | 5 | | | | | | | | | | |
| | | 2.2.1 Ideas? Brainstorming? | 5 | | | | | | | | | | |
| | | 2.2.2 Agile? | 5 | | | | | | | | | | |
| | 2.3 | Version Control | 5 | | | | | | | | | | |
| | | 2.3.1 Considerations | 5 | | | | | | | | | | |
| | | 2.3.2 Github | 5 | | | | | | | | | | |
| | 2.4 | | | | | | | | | | | | |
| | | 2.4.1 Types of Testing we'll do | 5 | | | | | | | | | | |
| | 2.5 | System Architecture | 5 | | | | | | | | | | |
| | | 2.5.1 Components of Project | 5 | | | | | | | | | | |
| | | 2.5.2 Brief discussion about moving pieces | 5 | | | | | | | | | | |
| 3 | Tec | nnology Review | 6 | | | | | | | | | | |
| 4 | Svs | tem Design | 7 | | | | | | | | | | |
| | 4.1 | 9 | | | | | | | | | | | |
| | 4.2 | Data Tier | 7 7 | | | | | | | | | | |
| | | 4.2.1 MongoDB | 7 | | | | | | | | | | |
| | | 4.2.2 Schema | 7 | | | | | | | | | | |
| | | 4.2.2 Hegbing | 7 | | | | | | | | | | |

| | | 4.2.4 Another thing i'm forgetting | 7 | | | | | | | |
|---|-----|--|---|--|--|--|--|--|--|--|
| | 4.3 | Logic Tier | 7 | | | | | | | |
| | | 4.3.1 Login/Authentication | 7 | | | | | | | |
| | | 4.3.2 Web Token | 7 | | | | | | | |
| | | 4.3.3 Flask API | 7 | | | | | | | |
| | 4.4 | Application Tier | 7 | | | | | | | |
| | | 4.4.1 Angular Stuffs | 7 | | | | | | | |
| | | 4.4.2 Routing? | 7 | | | | | | | |
| | | 4.4.3 Something else | 7 | | | | | | | |
| _ | C | | 8 | | | | | | | |
| 5 | Sys | System Evaluation | | | | | | | | |
| | 5.1 | Testing | 8 | | | | | | | |
| | | 5.1.1 Types of Testing | 8 | | | | | | | |
| | | 5.1.2 Deployment Testing | 8 | | | | | | | |
| | | 5.1.3 Unit Testing? | 8 | | | | | | | |
| | | 5.1.4 System Testing | 8 | | | | | | | |
| | | 5.1.5 Some more things here I'm neglecting | 8 | | | | | | | |
| | 5.2 | Overall Evaluation | 8 | | | | | | | |
| 6 | Cor | nclusion | 9 | | | | | | | |
| | 6.1 | Overview | 9 | | | | | | | |
| | 6.2 | 9 | | | | | | | | |
| | 6.3 | Learning Outcomes | 9 | | | | | | | |
| | | ~ | | | | | | | | |

List of Figures

| 1. | 1 | The | image | caption | should | be succinct. | but | descriptive. | | | | | |
|----|---|------|-------|---------|---------|--------------|-----|--------------|-------|---|---|---|--|
| т. | - | 1110 | mage | Capuon | biiouiu | DC Duccillet | Dut | deberration. | • | • | • | • | |

About this Project

Abstract Housing, and the lack of affordable accommodation has become a hot topic in recent times, especially in relation to students having to endure undesirable living conditions for even more so undesirable rates. Daily, students are commuting great distances to avoid having to endure the financial burden of living at a local level. Students being unable to bear this burden leads to lower admission and attendance rates, an undesirable outcome for both the educational institutions and those looking to attend.

The proposed solution to help bridge this issue will be a web application, providing an easily accessible platform for students, and for those living locally or living at a reasonable distance, who may not have the outlet to advertise their spare room or inhabited apartment.

Authors This was developed as a 15 credit project by Faris Nassif and Aaron Burns, final year students of Galway-Mayo Institute of Technology.

Acknowledgements The authors would like to acknowledge the project supervisors Dr. John French and Dr. Martin Kenirons for the time and advice they dispensed during the course of the project.

Introduction

Talk about introduction stuff, brainstorming project ideas, airbnb stats and stuff yaknow

1.1 Context

Brief, contextualize project

1.1.1 Web Applications

To do :(

1.1.2 Something

To do :(

1.2 Project Objectives

To do :(

1.3 Summary

This section will contain a brief overview of each chapter outlined in this dissertation.

1.3.1 Methodology

In this chapter, the processes undertaken during the life cycle of the project in regards to planning and development will be outlined. The decisions, thought processes and influential factors leading up to those processes and design implementations will also be described.

1.3.2 Technology Review

A technological review will attempt to encapsulate the technical aspect of the project. This includes the different technologies incorporated, their implementation, why they were implemented and why they were chosen. The benefits of our chosen implementations will be critically analysed and compared with alternatives.

1.3.3 System Design

A detailed explanation of the overall architecture of the project will be provided. Code-snippets and diagrams will be provided to help illustrate the inner workings of the application at a high level. Improvements to the system will be identified and potential competitive alternatives will be discussed.

1.3.4 System Evaluation

An evaluation of the software developed in the project will be carried out with the initial project objectives in mind. The final results of the project will be reviewed, including an analysis of areas for improvement and potential changes applicable to the overall system.

1.3.5 Conclusion

To conclude, a brief review will encapsulate the overall system. Key insights will be identified and reflected upon. A final analysis will describe our experience and what can be taken from the overall development lifecycle.

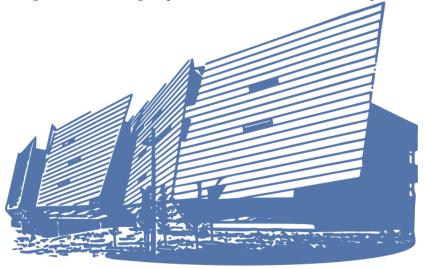


Figure 1.1: The image caption should be succinct but descriptive.

Methodology

Talk about introduction stuff, brainstorming project ideas, airbnb stats and stuff yaknow

2.1 Project Management

Blah..... was cited by [1] in ... You should refer to images and tables by their label and let latex figure out the numbering for you. E.g. we can refer to the figure on this page as Fig.1.1 instead of writing "Fig.1"...

2.2 Other things that'll come to me

- 2.2.1 Ideas? Brainstorming?
- 2.2.2 Agile?
- 2.3 Version Control
- 2.3.1 Considerations
- 2.3.2 Github
- 2.4 Testing
- 2.4.1 Types of Testing we'll do
- 2.5 System Architecture
- 2.5.1 Components of Project
- 2.5.2 Brief discussion about moving pieces

Technology Review

Blah.....

System Design

- 4.1 Overview
- 4.2 Data Tier
- 4.2.1 MongoDB
- 4.2.2 Schema
- 4.2.3 Hashing
- 4.2.4 Another thing i'm forgetting
- 4.3 Logic Tier
- 4.3.1 Login/Authentication
- 4.3.2 Web Token
- 4.3.3 Flask API
- 4.4 Application Tier
- 4.4.1 Angular Stuffs
- 4.4.2 Routing?
- 4.4.3 Something else ..

System Evaluation

5.1 Testing

Approaches to testing something something

- 5.1.1 Types of Testing
- 5.1.2 Deployment Testing
- 5.1.3 Unit Testing?
- 5.1.4 System Testing
- 5.1.5 Some more things here I'm neglecting
- 5.2 Overall Evaluation

Conclusion

- 6.1 Overview
- 6.2 Learning Outcomes
- 6.3 Final Thoughts

Bibliography

[1] Michael Zasloff. Antimicrobial peptides of multicellular organisms. nature, 415(6870):389-395, 2002.