REAL-TIME COLLABORATION MESSAGING APPLICATION

By

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Abstract

The students working on this project are Thao-Tran Le-Phuong, Honor Lopes, Riley MacKinnon, and Igor Veselinovic and their student numbers are 100997443, 101008909, 100996542, and 101011081, respectively. The supervisor for this project is Professor Cheryl Schramm. This document will be covering their project, the real-time collaboration messaging application, otherwise known as Riht. The project was designed and implemented during the 2019-2020 school year to meet the requirements for SYSC 4907. Riht was developed to create a more socially driven real-time messaging application based upon current models of real-time text editors. The group was able to create a real-time messaging application and implement the conversation spaces as they had in the requirements.

Acknowledgements

I would like to thank my supervisor, anyone who paid me money, gave me equipment, etc.

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List of Abbreviations

VoIP	Voice over Internet protocol
MRI	Magnetic resonance imaging

Chapter 1

Introduction

Give an introduction to your project. This might include:

- Motivation for your project

- Problem you are trying to solve

- Scope of your project

- Organization of your report

You should tune this appropriately for what best suits your project.

Chapter 2

The Engineering Project

2.1   Health and Safety

Using the Health and Safety Guide posted on the course webpage, students will use
this section to explain how they addressed the issues of safety and health in the system
that they built for their project.

2.2   Engineering Professionalism

Using their course experience of ECOR 4995 Professional Practice, students should
demonstrate how their professional responsibilities were met by the goals of their
project and/or during the performance of their project.

2.3   Project Management

One of the goals of the engineering project is real experience in working on a long-
term team project. Students should explain what project management techniques or
processes were used to coordinate, manage and perform their project.

2.4   Individual Contributions

This section should carefully itemize the individual contributions of each team member. Project contributions should identify which components of work were done by each individual. Report contributions should list the author of each major section of this report.

2.4.1   Project Contributions

Give the individual contributions of the each team member towards the project.

2.4.2   Report Contributions

Give the individual contributions of the each team member towards writing the final report.

Chapter 3

Background Literature Review

3.1 A Few LaTeX Examples

You can reference great written works like this [**?**] or others like this [**?**].

3.2 Mathematical Equations

Simple equations, like x^y or $x_n = \sqrt{a+b}$ can be typeset right in the text line by enclosing them in a pair of single dollar sign symbols. Don't forget that if you want a real dollar sign in your text, like $2000, you have to use the \$ command.

An example equation is

$$A = B \tag{1}$$

This was equation (**??**).

A more complicated equation should be typeset in *displayed math* mode, like this:

$$z \left(1 \ + \ \sqrt{\omega_{i+1} + \zeta - \frac{x+1}{\Theta+1} y + 1} \ \right) \quad = \quad 1$$

The "equation" environment displays your equations, and automatically numbers them consecutively within your document, like this:

$$\left[\mathbf{X} + \mathrm{a} \ \geq \ \underline{\hat{a}} \sum_{i}^{N} \lim_{x \to k} \delta C \right] \tag{2}$$

Other environments exist, like the "align" environment. For instance, the *unitary* Fourier transform pair is given as

$$X(j\Omega) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} x(t)e^{-j\Omega t}dt \tag{3}$$

$$x(t) = \frac{1}{\sqrt{2\pi}} \int_{-\infty}^{\infty} X(j\Omega)e^{j\Omega t}d\Omega \tag{4}$$

Here is a matrix:

$$\begin{bmatrix} 1 & 2 \\ 3 & 4 \end{bmatrix}$$

Possible useful text environments could include the following.

Lemma 3.2.1. *This is a lemma.*

Theorem 3.2.2. *This is a theorem.*

Proof. This is the proof of Theorem **??**. □

Definition 3.2.3. This is a definition.

Notation. This is some notation.

3.3 Example Figure

An example figure grabbed from the Carleton University webpage (`http://www.carleton.ca`) is shown in Fig. **??**.

Figure 1: Carleton University logo.

Chapter 4

Conclusions

I conclude that my project is awesome. Hey look at this table.

k	x_1^k	x_2^k	x_3^k	remarks
0	-0.3	0.6	0.7	
1	0.47102965	0.04883157	-0.53345964	*
2	0.49988691	0.00228830	-0.52246185	s_3
3	0.49999976	0.00005380	-0.52365600	
4	0.5	0.00000307	-0.52359743	$\epsilon < 10^{-5}$
7	0.5	0	-0.52359878	$\epsilon < \xi$

Table 1: This is a great table.

Isn't Table **??** really nice? This next one is nice too.

	Singular		Plural	
	English	**Gaeilge**	English	**Gaeilge**
1st Person	at me	**agam**	at us	**againn**
2nd Person	at you	**agat**	at you	**agaibh**
3rd Person	at him	**aige**	at them	**acu**
	at her	**aici**		

Table 2: Another nice table.

References

[1] T. Me and R. You, "A great result," *Wonderful Journal*, vol. 5, no. 9, pp. 1–11, 1998.

[2] J. Him and K. Her, "An even better result that you won't believe," *Best Journal Ever*, vol. 4, no. 8, pp. 55–66, 2002.

Appendix A

Extra Simulation Results

Appendix B

Review of Linear Algebra