Abstract

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Course: COM547 – Computing Systems

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Project Final Report

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# Acknowledgements

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# 1 Introduction

## 1.1 Background

Applied Systems have operated for over 30 years powering the insurance industry across the USA, Canada, Ireland and the United Kingdom, providing industry leading technology to the insurance industry (Applied Systems, 2018).

As a company; Applied Systems strive to provide insurance brokers with innovative software solutions to maximise the brokers business profits and improve customer communications.

As an employee of Applied Systems, and being sponsored by then during my university studies, the challenge was set for me to use my Computing Systems Project as an opportunity to research and implement a proof-of-concept for the next innovative piece of software that they may put in to production for release to the market.

Considering my background as a software developer with experience working on web-based products, I decided to research emerging trends on the web in relation to business-to-customer interactions.

My research found…… TODO – conduct research in this area

With the findings from the research and taking my personal interest in to account, I have decided to develop a chatbot that can be deployed to use on Facebook Messenger. The chatbot should enable insurance broker customers to communicate with the bot and receive an insurance quote.

## 1.2 Project Aims

The aim of the project is to create a proof-of-concept chatbot for Applied Systems.

The chatbot should allow Facebook Messenger users to “chat” with the bot and receive a motor or home insurance quote based on the information they have entered.

## 1.3 Project Objectives

To give the project structure, a list of project objectives has been identified and listed below:

* Allow the user to get a motor insurance quick quote[[1]](#footnote-1)
* Allow the user to get a home insurance quick quote1
* Keep a record of conversations between the user and the bot
* Keep a record of any quotes returned to the user
* Keep a record of any errors encountered during the workflow
* Allow user to retrieve a previous quote
* Allow user to choose a returned quote
* Allow user to choose to be contacted by the insurance broker that provided the quotes
* Follow up conversation with email to insurance broker and the user

## 1.4 Project Activities

To ensure that as many objectives as possible are met, a list of project activities has been identified and listed below:

* Determine questions and question order for motor insurance quick quote
* Determine questions and question order for home insurance quick quote
* Design database for storing conversations, quotes and errors
* Establish possible SQL queries for inserting, updating and reading from database
* Research possible framework to use for implementing chatbot
* Research best programming language to use
* Create chatbot solution
* Create logging service
* Create database
* Write and implement database
* Write and implement test plan
* Perform user testing
* Implement changes from user testing

## 1.5 Outline of Dissertation Structure

The rest of this dissertation will follow the below structure:

* Chapter 1 – Introduction
* Chapter 2 – Review of Current Chatbots
* Chapter 3 – Technical Background
* Chapter 4 – Development Lifecycle
* Chapter 5 – Requirements Gathering and Analysis
* Chapter 6 – Design
* Chapter 7 – Implementation
* Chapter 8 – Challenges and Solutions
* Chapter 9 – Testing and Evaluation
* Chapter 10 – Results
* Chapter 11 – Conclusions
* Chapter 12 – Suggested Future Improvements to Project

# Review of Current Chatbots

# Technical Background

# Development Lifecycle

# Requirements Gathering & Analysis

## Requirements Gathering

## Analysis

# Design

# Implementation

## System Architecture

## Detail code

*Code Explanation*

*Libraries used*

# Challenges and Solutions

# Testing and Evaluation

*Validation and verification*

*Evaluation of process and methods used to reach outcome*

# Results

Fulfilment of project objectives

# Conclusions

# Suggested Future Improvements to Project

# References

Applied Systems. (2018, 04 11). *About Us - About Applied*. Retrieved from Applied Systems website: https://www1.appliedsystems.com/en-ie/about-us/about-applied/

# Appendices

1. A ‘quick quote’ is a reduced set of questions that still allows insurance quotes to be returned when requested. For questions not asked, default answers are set. [↑](#footnote-ref-1)