# Abstract

# Introduction < 1-2 page>

## Sections

### Subsections

Problem: Voice control as a tool for simplifying everyday tasks in the context of culinary.

Solution: Alexa uses voice control, which can make following the recipe easier

2 levels of interaction 🡪 a) Alexa only responding to a given request

b) More in depth communication between Alexa and the user

How the skills are going to simplify the task

Introduce the concept of voice control and human computer interaction

State the aim of the project

State what is going to happen in the project

### Project Objectives

# Literature review/ Background Survey < 1-2 + 1 pages>

Focus on voice control and voice interaction

!!lookk at conversational interaction// spoken dialog systems

Outline and evaluate the current research/ literature on the topic

Why voice control interaction?

Why Alexa rather than any other voice-controlled interface?

Why recipes?

## Related Skills < 1 page max>

Recipedia <https://www.amazon.co.uk/Unilever-Recipedia/dp/B01MT9T33W/ref=lp_10387782031_1_5?s=digital-skills&ie=UTF8&qid=1530109063&sr=1-5>

3 key features: Find your recipes; Step by step hands free cooking; Save your recipe for later

Baking Inspiration <https://www.amazon.co.uk/William-V-baking-inspiration/dp/B0754KCS3Z/ref=lp_10387782031_1_8?s=digital-skills&ie=UTF8&qid=1530109063&sr=1-8>

Tower Recipes <https://www.amazon.co.uk/gp/product/B074N5CN1K?ref=skillrw_dsk_pnps_dp_1>

Benefits from a diverse set of recipes or ingredients. Provides step by step guide to the recipe. However, does not allow the user to search a recipe based on multiple ingredients.

Ask Stubb <https://www.amazon.co.uk/Stubbs-Legendary-Bar-B-Q-Ask-Stubb/dp/B072QCZBMF/ref=lp_10387782031_1_11?s=digital-skills&ie=UTF8&qid=1530109063&sr=1-11>

Meal Idea <https://www.amazon.co.uk/gp/product/B01E1ZSQ5U?ref=skillrw_dsk_pnps_dp_5>

Provides the user with meal ideas. Benefits from suggesting recipes that use only common basic ingredients. Limited in that it does not suggest ideas based on ingredients or any other queries, but only offers a random meal suggestion.

# Requirements Gathering < 3-4 pages>

## Personas

* Unexperienced home cook (e.g. a student)
  + James is a 19-year-old student from St. Andrews. He has recently moved to Glasgow to complete a Bachelor’s degree in Computing Science and lives in a private rented flat with his flat mate Stuart. He doesn’t have much cooking experience as his mother used to prepare the meal at his home in St. Andrews. He is on a limited budget and usually buys food items on sale. As a computing science student, he is fascinated about technology and wants an easy to use technological innovation to help him plan his meals based on the products he has found on a good price.
* Experienced home cook, who wants to improve their cooking skills (e.g. a parent)
  + Susan is 34 years old mother of two from New Castle. As a music producer she works long shifts and doesn’t have the time to plan the meals for her family. She has good cooking skills but lacks ideas of meals. As she shops only once a week and buys primarily seasonal food, she needs to find recipes with the ingredients she has. She tried to look for recipes online, however, it is time consuming to find a good one. She has an Alexa powered device at home and would like to be able to find suitable recipes for her ingredients using voice interaction while performing other tasks at home.

## Scenarios

* A home cook who wants to impress their partner by cooking something new
  + James has recently started dating Jessica and decided to invite her over for dinner. He is sitting in his room trying to come up with a good meal. He knows that she doesn’t like red meat but loves citrus fruits and chocolate. He decides to use Cooking Buddy to suggest him a meal. Without having to stand up he turns his Alexa powered device sitting on his desk. He uses his voice to navigate through the suggested recipes. He asks for a meal with chicken and lemon. Alexa suggests a Moroccan chicken with lemon and olives. He asks Alexa for the ingredients and she presents them. Then he asks for a recipe with chocolate and orange, and she suggests Chocolate and orange scones. James is delighted and asks Cooking Buddy to display the ingredients on a card in the Alexa app. He says “Exit” and Alexa completes the session.
* A home cook who wants to make the most out of the ingredients they have available
  + Susan gets home after a long and exhausting day at work. Her kids are coming from school soon and she needs to plan today’s meal. She checks the fridge and the pantry and finds some chicken, cream and lasagna sheets. Alexa suggests Chicken Lasagna with White Sause. Susan asks for the ingredients and she doesn’t like the recipe. So, she asks Cooking Buddy again asks for the next recipe. Alexa suggests Chicken Lasagna Rolls with Chive Cream Sause. Susan likes this recipe and she asks Alexa for the ingredients. Turns out she has everything needs. She says “Exit” and Alexa closes the session.

## Requirements

### Must Have

* Voice enabled activation
* Accept queries from the user
* Search recipes based on the user’s request
* User can request a recipe with one or more ingredients
* User can ask for a type of meal (e.g. lasagna)
* User is presented with the top ranked recipe based on their query first
* The user can invoke a help message
* The user can request the last message to be repeated
* The user can exit at any time

### Should Have

* User can decide to opt in or out of a recipe
* The user can request the next recipe suggestion
* The user is prompted to navigate through a list of recipes until they find the one that suits them
* The user can request to see the link to the full recipe displayed on a card

### Could Have

* The user can request to hear again the previous recipe suggestion
* The user can request the ranking of the given recipe

### Would Like to Have

* The given recipe is read step by step

### Nonfunctional requirements

* The skills can support both British and American English
* User can read the recipe from a card in the Alexa mobile application
* The user can choose between two versions of the skill

# Skills < 4-5 pages>

## Design 1

### Voice user interface

### Flow Diagram

## Implementation 1

## Testing 1

## Design 2

### Voice user interface

### Flow Diagram

## Implementation 2

## Testing 2

# Evaluation < 5-8 pages in total>

## Methodology < 1-2 pages >

### Design

Tasks 2-3

Skills 2

IV 1 🡺 task 1, task 2, etc. (task 1 🡪 step by step guide to interacting with the skill to achieve an outcome; task 2 🡪 providing the participant with a goal only, and letting them find their own way through it)

IV 2 🡺 Skill 1 and Skill 2

### Participants

### Procedure

## Analysis/ Results: < 3-4 pages>

### Self-reported data

e.g. Questionnaire (Likert Scale)

open – ended questions

### Logs from Alexa

## Discussion: < 1-2 pages >

# Conclusion < 1 pages >

# References < 1-2 pages >

# Appendix < 3 pages >

Plain Language Statement

Consent Form

Questionnaire (s)