



INITIAL DESIGN SPECIFICATION
WEEK STARTING (3/2/2020)

MEng Year 3

Department of Electronics

University of York

Software Engineering Group 4

Document Control

Version	Modified By	Date	Section Modified	Remarks
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Table of Contents

1. Intro	3
1.1 What the design specification & project plan isn't	3
2. Initial UI Guidelines and Requirements	4
2.1 UI/Functional Guidelines for first iteration	4
3. XML Schema	5
4. Initial Case/Function diagrams	5

1. Intro

Now that programing has begun on individual modules for user stories a weekly Design specification and project plan is to be created which aims to outline:

- **UI mockups, paper/working prototypes and guidelines**

To account for the Agile process these guidelines are never set in stone and instead should be an outline for the whole team of a best effort approximation of the UI implementation as a whole from user/team feedback.

Guidelines > A set of rules to be followed in designing any element within the app relating to the UI. For example a specific color scheme based around previous input from user queries and feedback or team feedback.

- **Overall structure and functionality of the app (from a coders perspective)**

UML diagrams > Unified modelling language. How we will outline the apps functionality.

XML/ Firebase database Schemas and implementations (including spikes) > An outline and description of how data is stored within the Firebase database and XML format documents and an outline of the spike formats to be used within Android studio.

1.1 What the design specification isn't

The design specification & project plan is not for any of the following:

- **An outline of how the product will function from a users perspective**

These are declared in the Functional Specification and User Stories document. The design specification section of this document is only interested in the internal coding implementation, overall design guidelines for the whole app and minimum knowledge required to produce a coherent iteration of the project. IE horizontal scrolling instead of vertical. To accommodate an Agile process these can be changed at any point during the cycle and are not concrete.

- **Any testing or integration plans**

These will be outlined in the Testing and Integration plans and specification.

- **An outline of the tasks to be completed for the following week**

Whilst this typically could be included, to save time this will be outlined from the minutes produced from the meeting and discussed on Slack.

2. Initial UI Guidelines and Requirements

Note that most of the guidelines are best guess implementations that allow us to produce a working prototype only... Guidelines such as general appearance of color scheme may change from user feedback.

2.1 UI/Functional Guidelines for first iteration

Guideline	Description
Overall appearance	Based mainly around James mockup design with some minor changes such as a square image size, more icons and the addition of filter options shown in Joe B's diagram with a drop down tick box section included instead of individual icons.
Pictures	<ul style="list-style-type: none"> • JPEG format - Better compression. Used to limit data we have to store on Firebase server which is limited • Square shape - Standard format for recipe pictures, means all the detail from the image is displayed properly and the image quality isn't significantly reduced by scaling it up.
Colours	<p>Color Scheme guidelines where that the colours should be</p> <ul style="list-style-type: none"> • More muted - Not detract from the images of food • Light - Not too much contrast between images of food taken during the day. (the majority of recipes)
Recipe scrolling	Netflix style horizontal scrolling
Filters	Drop down menu with tick boxes, words and icons from the recipe screen.
Hold press information*	Pop up window, additional info displayed here
Icons	Included within the app wherever appropriate, especially the sidebar and alongside filter options with the exception that a description. e.g. 'vegan filter' is added.

Key: * = relating to a new user story requirement.

3. XML Schema

Cannot decide XML schema format for presentation. This is a project wide standard that needs to be agreed for all groups.

Recipe schema Link:

<https://firebasestorage.googleapis.com/v0/b/scrn-plan-bc521.appspot.com/o/cooking%20recipe%20schema.xml?alt=media&token=c8411017-a286-4ec1-b1eb-f46efb9a2aa8>

```
<recipe xml:id="BeansOnToast">
  <filters>
    <filter>nutFree</filter>
    <filter>Halal</filter>
    <filter>vegan</filter>
    <filter>vegetarian</filter>
    <filter>Pescatarian</filter>
  </filters>
  <title>Beans On Toast</title>
  <author uid="ppWNQSWCOUYHZHsFJ1pkvj5Seac2" displayName="Joe B" />
  <pictureURL>https://www.seriousseats.com/recipes/images/2012/10/227311-20121107-british-bi
  <time quantity="1"
    unit="minutes"/>
  <price>0.85</price>
  <difficulty>0.5</difficulty>
  <stars>3.5</stars>
  <ingredients>
    <ingredient name="Bread"
      quantity="2"
      unit="slices"/>
    <ingredient name="Beans"
      quantity="0.5"
      unit="Tin"/>
  </ingredients>
  <method>
    <step videoURL="[URLINK]">1. Slide the bread. </step>
    <step videoURL="[URLINK]">2. Open tin of Beans.</step>
    <step videoURL="[URLINK]">3. Put beans in saucepan and heat to 1000oC.</step>
    <step videoURL="[URLINK]">4. Grill one side of each slide of bread</step>
    <step videoURL="[URLINK]">5. Add beans to bread</step>
    <step videoURL="[URLINK]">6. ENJOY!</step>
  </method>
</recipe>
..
```

```

<recipe xml:id="CheeseOnToast">
  <filters>
    <!--No Filters added-->
  </filters>
  <title>Cheese on Toast</title>
  <author uid="eYaUvot6CFclKwXoDQf9DYglWlx2" displayName="James C" />
  <pictureURL>https://images.eatthismuch.com/site\_media/img/252986\_simmyras\_c4a2276b-8be6-4477-b2c0-c0ef47df514c
  <time quantity="3"
    unit="minutes"/>
  <price>1.25</price>
  <difficulty>1</difficulty>
  <stars>5</stars>
  <ingredients>
    <ingredient name="Bread"
      quantity="2"
      unit="slices"/>
    <ingredient name="Cheese"
      quantity="2"
      unit="slices"/>
  </ingredients>
  <method>
    <step pictureURL="[URLINK]">1. Slice the bread and cheese.</step>
    <step pictureURL="[URLINK]">2. Grill one side of each slice of bread.</step>
    <step pictureURL="[URLINK]">3. Turn over the bread and place a slice of cheese on each piece.</step>
    <step pictureURL="[URLINK]">4. Grill until the cheese has started to melt.</step>
    <step>5. Serve and enjoy!</step>
  </method>
</recipe>

```

```

<recipe xml:id="MushroomSoup">
  <filters>
    <filter>nutFree</filter>
    <filter>vegan</filter>
    <filter>vegetarian</filter>
  </filters>
  <title>Quick and Easy Mushroom Soup</title>
  <author uid="XwZ8JzhAxaSc28alrX9583RI2jK2" displayName="Cthulu the great" />
  <pictureURL>https://thecozyapron.com/wp-content/uploads/2018/07/vegetable-soup\_thecozy
  <videoURL duration="1" startTime="" endTime="">https://www.youtube.com/watch?v=q-PT9hK
  <time quantity="20" unit="minutes"/>
  <price>3.45</price>
  <difficulty>2</difficulty>
  <stars>2</stars>
  <ingredients>
    <ingredient name="Fresh mushrooms"
      quantity="7"
      unit="pieces"/>
    <ingredient name="Garlic"
      quantity="1"
      unit="cloves"/>
    <ingredient name="Olive oil"
      quantity="2"
      unit="tablespoons"/>
    <ingredient name="Milk"
      quantity="200"
      unit="milliliters"/>
    <ingredient name="Water"
      quantity="200"
      unit="milliliters"/>
    <ingredient name="Cream"
      quantity="100"
      unit="milliliters"/>
    <ingredient name="Vegetable soup cube"
      quantity="1/2"
      unit="cubes"/>
    <ingredient name="Ground black pepper"
      icon="img/icon/blackPepper"
      quantity="1/2"
      unit="teaspoons"/>
    <ingredient name="Dried parsley"
      quantity="1"
      unit="teaspoons"/>
  </ingredients>
  <method>
    <step>1. Slice mushrooms and garlic.</step>
    <step>2. Fry mushroom slices and garlic with olive oil.</step>
    <step>3. Once mushrooms are cooked, add milk, cream water. Stir.</step>
    <step>4. Add vegetable soup cube.</step>
    <step>5. Reduce heat, add pepper and parsley.</step>
    <step>6. Turn off the stove before the mixture boils.</step>
    <step>7. Blend the mixture.</step>
  </method>
</recipe>

```

4. Initial Case/Function diagrams



WORKING WITH NATHAN AND(OR) JAMES ON THURSDAY?FRIDAY

For more info i'd recommend just googling UML diagrams to be honest.
Main ones i'm thinking of looking at are case & Function diagrams