

CCT College Dublin

Bachelor of Science in Computing and Information Technology – Year 2

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| Module Title(s): | Integrated Application Development & Research Skills |
| Assessment Title: | Integrated CA: Int. Application Development and Research Skills |
| Lecturer Name: | Marina Iantorno |
| Student Full Name: | Leisly Alitzel Pino Duran |
| Student Number: | 2020303 |
| Assessment Due Date: | 10/04/2022 |
| Date of Submission: | 10/04/2022 |
| The topic of the problem: | Health and daily food waste in a society where time is limited. |

Declaration

By submitting this assessment, I confirm that I have read the CCT policy on Academic Misconduct and understand the implications of submitting work that is not my own or does not appropriately reference material taken from a third party or another source. I declare it to be my own work and that all material from third parties has been appropriately referenced. I further confirm that this work has not previously been submitted for assessment by myself or someone else in CCT College Dublin or any other higher education institution.

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Introduction

The COVID-19 pandemic has disrupted economic stability, stress levels, and daily routines. As we try to return to our daily activities and adjust to a new reality every day, infectious disease and economic experts have indicated that our lives will not simply return to pre-COVID-19 normalcy (Carroll, et al., 2020). Our way of life has fundamentally changed. To identify the best way to support each person in this post-COVID-19 context, we need to understand how these fundamental changes have impacted each person's health, food waste, and the value of time (Lopez Barrera & Hertel, 2021). Food waste has negative economic, social and environmental impacts, and its importance has increased in recent years. Worldwide, the annual amount of food waste is nearly 1.3 billion tonnes, equivalent to about one-third of global food production (Amicarelli & Bux, 2021). The Covid-19 pandemic, among other social and health challenges, has dangerously affected the economy and all industrial sectors, from agriculture to food manufacturing, greatly impacting household food consumption. Since the largest amount of food waste is generated in households, the increase in household food consumption has inevitably translated into the generation of waste, including food waste. But not everything in this pandemic has been bad, one of the benefits it has brought is the technological reach of older adults (Garske, et al., 2020). Research has shown that older adults before the pandemic were limited in their use of technology, but now for the past two years, it has been a critical aid in communicating with family members and shopping online. This has been an opportunity for older adults to feel more comfortable using technology and to have at their fingertips many opportunities that were previously limited (Morrow-Howell, et al., 2020). The main objective of this work is to be able to make an application that allows the three factors: health, food waste, and time, to be implemented and to be able to help people by consuming consciously and saving their time in making decisions about what to eat daily. It is intended to be an attractive application for young people, adaptable for people in their daily routine, and a friendly environment so that older people can easily access it.

“Guess What?” Application Design

An application will be designed called "Guess What?" to help organize the week's menu. The decision was made to make an application to be easier to use and the user interaction is better and be available at all times that he has his cell phone with him. In this application,

you will have a variety of recipes that the user can choose the type of food that they like the most, when the user adds a recipe to be made in the week, this app will automatically generate the things that they need in the supermarket list. This will generate time savings and make necessary purchases, with the items that will be used in the week. To obtain extra profits in the application, it was considered to make a premium plan with an extra cost, where a calorie counter could be carried in the prepared recipes.

Planning

To carry out this application you need to have a team, necessary work, and computer equipment to work. It is estimated that the following team will be needed:

| Members | Members required | Salary per year | Total estimated |
|-------------------|------------------|-----------------|-----------------|
| Project Manager | 1 | €50,000 | €50,000 |
| Programmer | 3 | €45,000 | €135,000 |
| Backend Developer | 3 | €45,000 | €135,000 |
| Web Designer | 2 | €40,000 | €80,000 |
| Marketing Team | 2 | €37,000 | €74,000 |
| IT Sales | 1 | €40,000 | €40,000 |
| Total | | | €514,000 |

Table 1. Estimated salary and team members to develop the app.

The following table shows an estimate of the necessary equipment and the cost:

| Computer equipment | Required equipment | Cost | Total estimated |
|---|--------------------|------------|-------------------|
| ThinkPad E14 Gen 2 (AMD) | 4 | € 882.75 | €3,531.00 |
| ThinkPad C13 Yoga Chromebook Enterprise | 2 | € 769.99 | €1,539.98 |
| Lenovo Legion 5i Gen 6 (17" Intel) | 6 | € 1,149.99 | €6,899.94 |
| Total | | | €18,870.86 |

Table 2. The estimated cost of computer equipment.

Method

In this project, we will be working with essential steps to develop this application in time. When making an app, mistakes and setbacks can be made in the development, an approximate 4 – 10 months is made for the development of this in the following scheme:

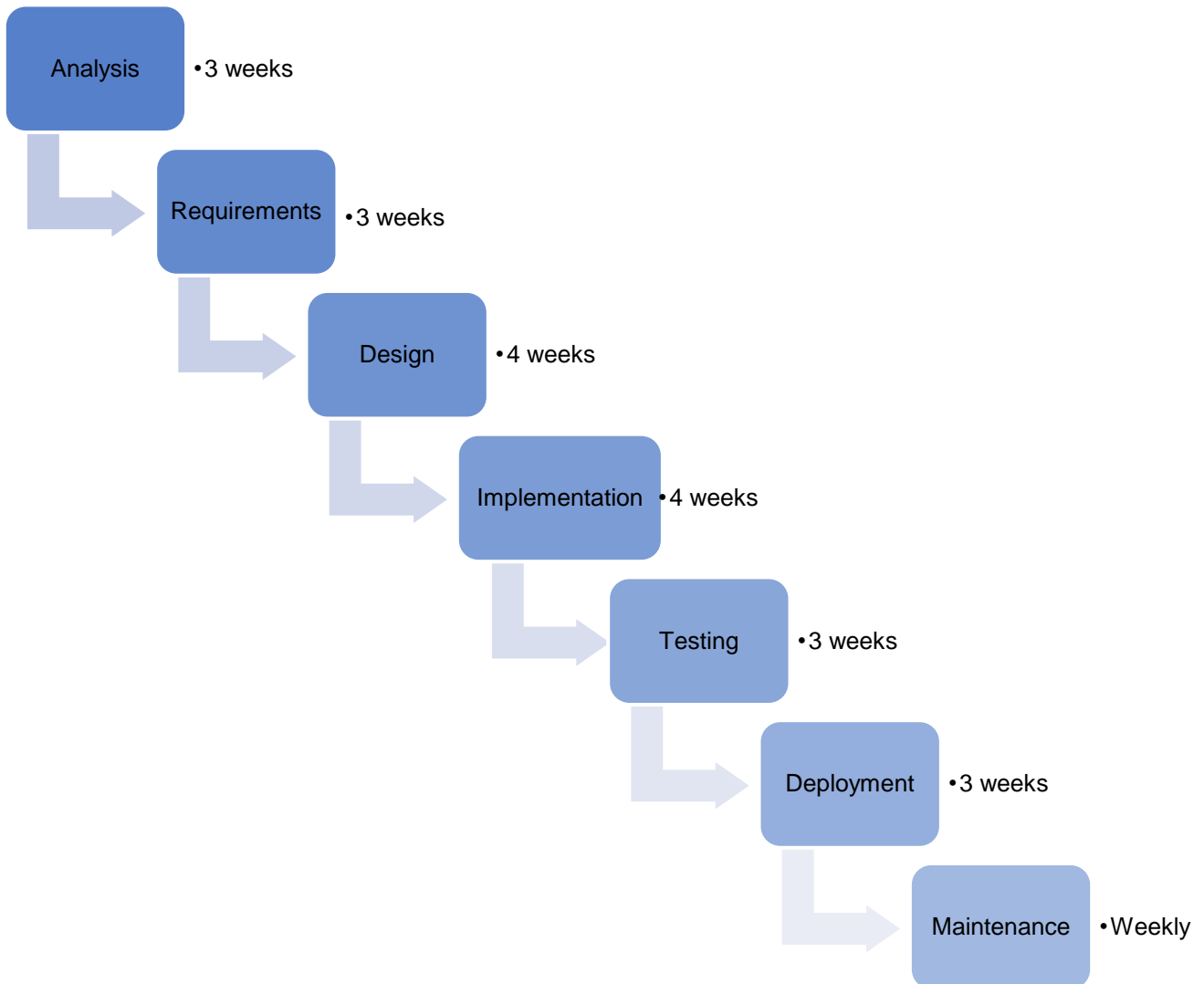


Diagram 1. Time estimation is based on the Waterfall methodology.

Analysis

A survey was conducted on 360 people (Appendix 1) where questions were asked to assess the user's needs, where 92.5% were women and 47.5% are in the age range of 36 - 50 years and 22.5% are older than 50 years. This gives us a result that the people most interested in this application are adults and most of them work full time. These results will help us to make an app with an easy-to-use environment. However, 49.4% would not be willing to pay for a premium service, which could be considered if it is the best option to obtain extra income from this app.

Conclusions

When conducting the survey, graphs were generated (Appendix 1) giving percentages that will help us direct towards which market our app will be more focused on. It was possible to see the importance of people's time and the time they spend going to the supermarket and how it makes it easier to have a shopping list. This will be essential to avoid food waste since 54.7% do it occasionally and it is one of the main reasons why this topic was chosen. This will also help people save by not buying unnecessary things in the supermarket such as fruit or vegetables that they will not consume, these being the most common waste that occurs in the home. They were asked to choose the types of food of their choice and many types of food were obtained that had not been considered. One of the main problems in getting users to take the survey was that they wanted to take in a multicultural variety of people living in Dublin, but unfortunately, it only managed to be carried out mostly by Latin American people and that is why there are certain types of food of preference, but this does not mean that other types of food are not considered for recipes in this app.

Appendix 1

Survey of 360 people with different age ranges and employment statuses. The link for this survey is: <https://forms.gle/4aMeunva1S47muDP6>



GUESS WHAT?

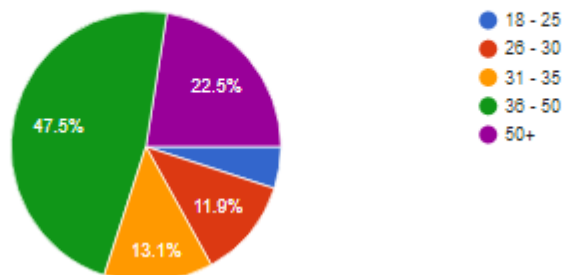
Guess What? It will be an app that will help plan the week's menu with recipes of the style of food that you prefer while making the supermarket list facilitating your purchases and avoiding unnecessary food consumption.

PRIVACY PERSONAL DATA

The following questionnaire will be used for general analytical use only. The answers will be anonymised and your responses will not be connected to you in any way whatsoever. You will not be added to any mailing list afterwards. Only numerical results will be display and with the pure purpose of completing an assessment at the CCT College. Proceeding to the survey implies that you understand and agree to provisions in this disclaimer.

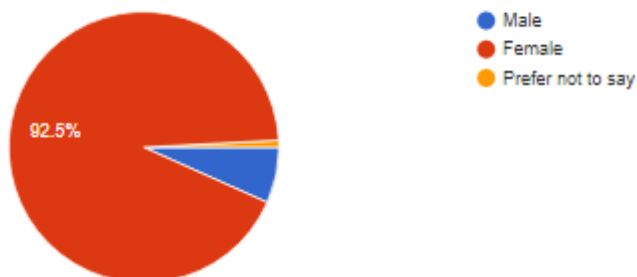
1. What is your age range group?

360 responses



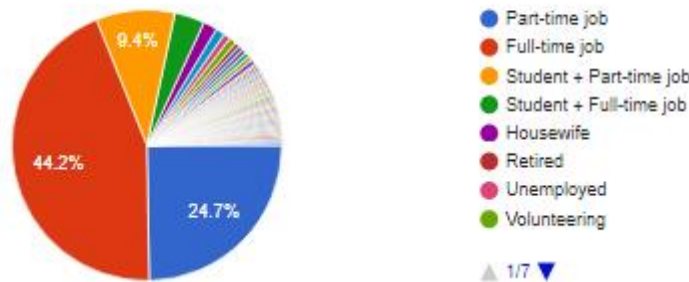
2. What is your gender?

360 responses



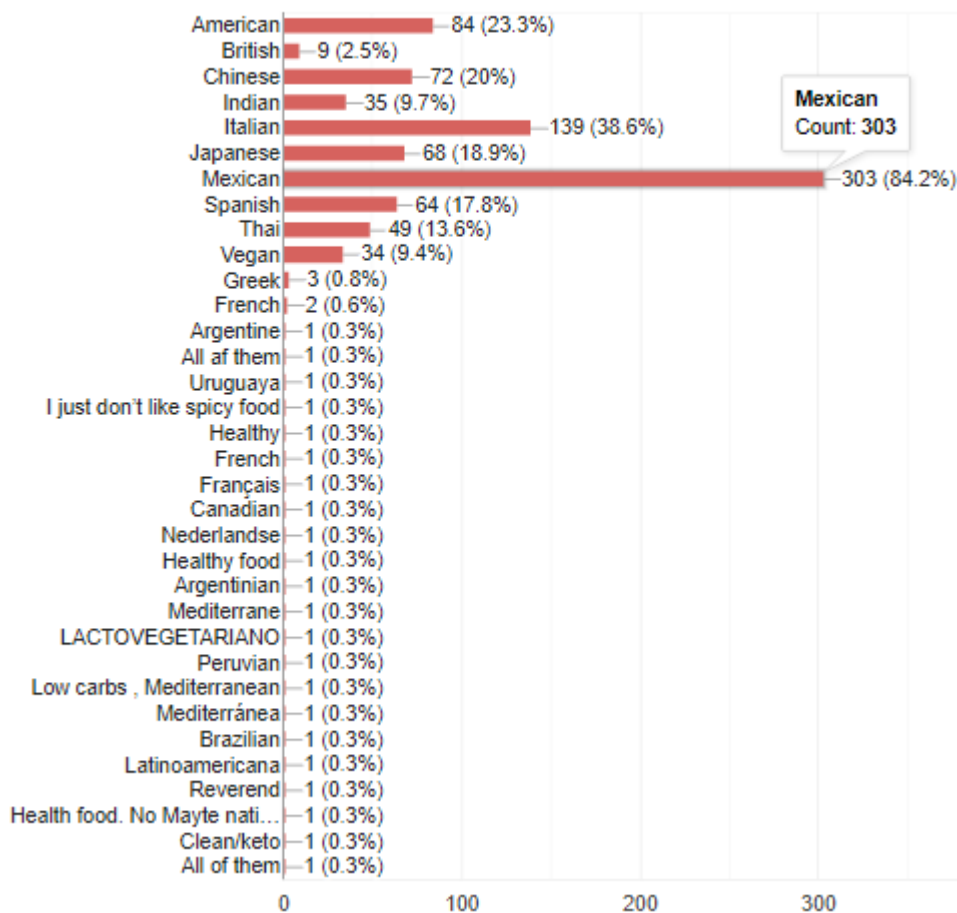
3. What do you do for a living?

360 responses



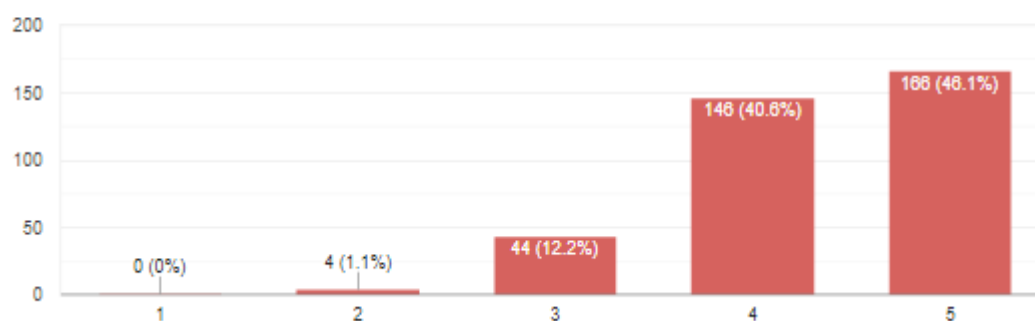
4. What kind of food do you prefer?

360 responses



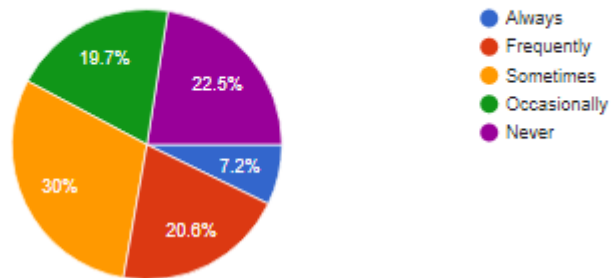
5. From 1 to 5, how important is it for you to eat a healthy diet? 1 not important and 5 very important

360 responses



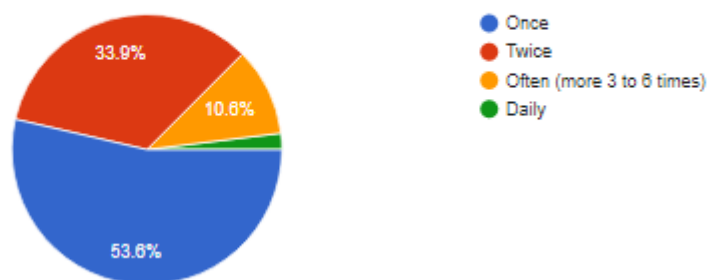
6. Do you plan a weekly menu?

360 responses



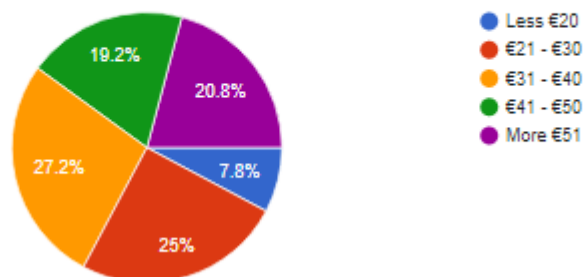
7. How many times a week do you go to the supermarket?

360 responses



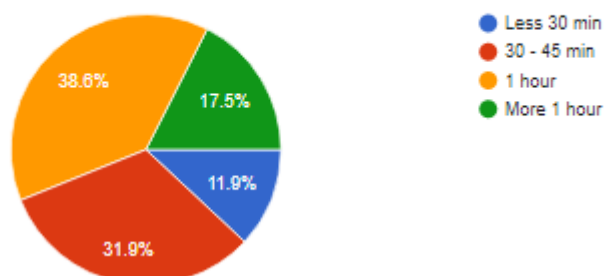
8. On average, how much do you spend on your food in the week? Per person:

360 responses



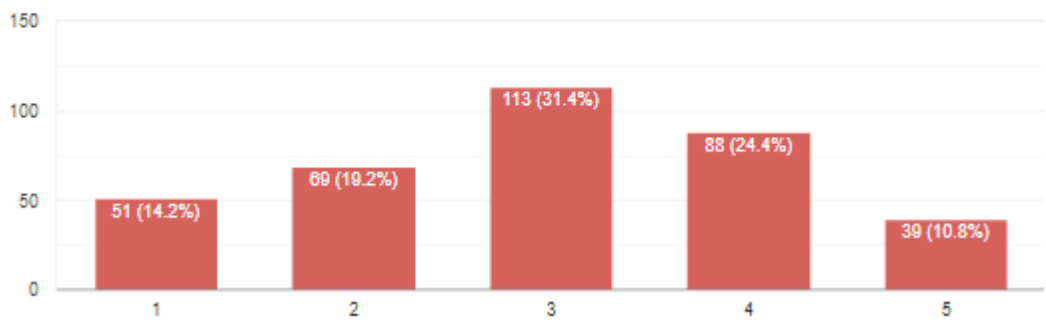
9. What is your average time to do the grocery shopping?

360 responses



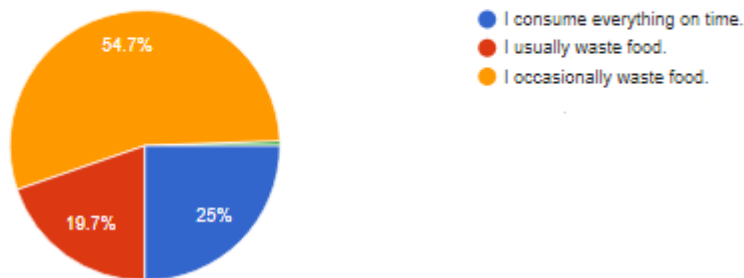
10. From 1 to 5, how difficult is it for you to decide the things you need to eat? 1 not difficult and 5 very difficult

360 responses



11. The food you buy in the week often expire or is unusable, what do you consider to be your case:

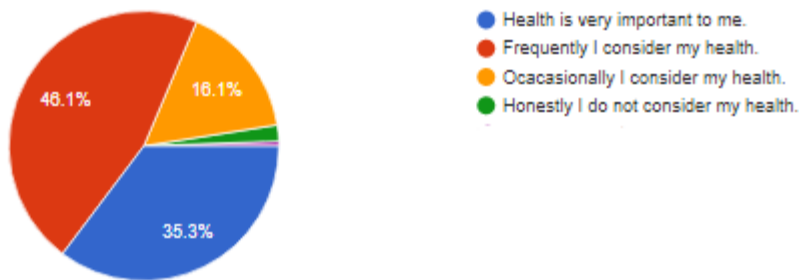
360 responses



When you do your shopping at the supermarket:

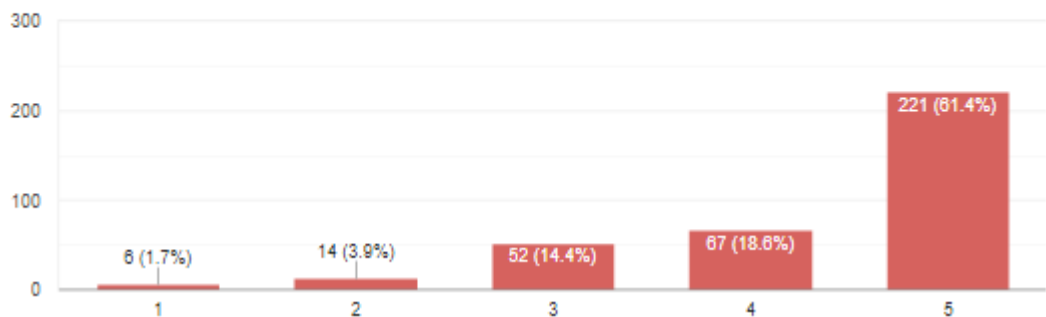
12. Do you consider your health when choosing your products?

360 responses



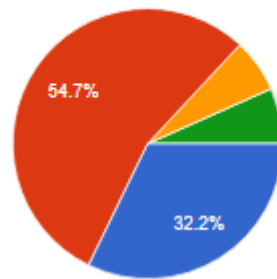
13. From 1 to 5, how much does it help you to have a shopping list? 1 not helpful and 5 very helpful

360 responses



14. By having a shopping list, do you think you save money?

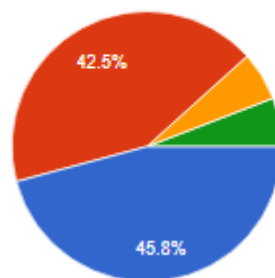
360 responses



- Yes, I only buy what is on the list.
- Sometimes, spend money buying extra things.
- I have not thought about that.
- Make no difference.

15. By having a shopping list, do you think you save time?

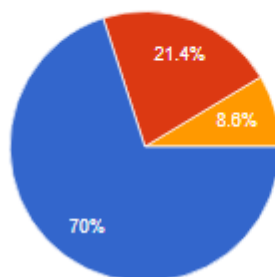
360 responses



- Yes, I just look to pick up what is on the list.
- Sometimes, spend time buying extra things.
- I have not thought about that.
- Make no difference.

16. If there was an app that helped you plan your menus and shopping list for the week, would you give it a try?

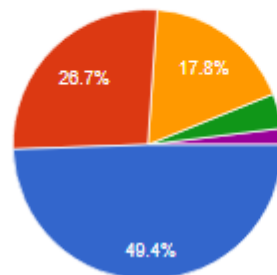
360 responses



- I would download the app and give it a try.
- I would wait to see the reviews.
- No, I like the way I do my shopping.

17. If there was a premium service with a menu with calories per meal, would you pay for this service? Monthly price:

360 responses



- I would not pay for this service
- €1 - €4
- €5 - €9
- €10 - €14
- €15 - €19

Thank you for your time and contribution to this assessment. -Leisly Pino 2020303.

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