**Project Description:**

**CraveCompass** is a basic IOS application developed and implemented by Andal, Andoy, and Mayo of MA Solutions to address the problems in the food market which revolves around economic and location data with regards to running establishments. The application’s intended function is to provide information about establishments, menus, and prices that would help provide information for people who want to explore the food market. The intended users of this program are the general population and tourists.

**Requirements Summary:**

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| --- | --- | --- | --- |
|  | Processor Cores | Dual Core |  |
| **MINIMUM REQUIREMENTS** |  |  |  |
| OS | IOS 12 |  |
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|  |  |  |  |
|  | RAM | 2 GB |  |
|  |  |  |  |
|  | Processor Cores | Quad Core |  |
| **RECOMMENDED REQUIREMENTS** |  |  |  |
| OS | IOS 17 |  |
|  |  |
|  |  |  |  |
|  | RAM | 4 GB |  |
|  |  |  |  |
| **OTHER REQUIREMENTS** | Permissions | 4G Data, Storage Permissions, Notification Permissions |  |
|  |  |  |  |

*Table 1. System Requirements IOS*

This application is designed for IOS devices which is designed for optimization and a lightweight framework. A minimum of 5 generations from the current IOS version is to be required while recommended requirements opt for IOS 17 which offers a smooth process.

**Overview**

Due to conflicts in schedules, availability of the members, and limitations in time, the team is unable to conduct this physically or online. Instead, the evaluation is to be conducted asynchronously, through Forms with guidance from the development team. While this limits the effectiveness of evaluations, this creates another factor which is how users are to be expected when there’s no guidance from the developers.

Moving on, the evaluation plan is split into three sections: Functionality and Applicability of the prototype, Heuristics Evaluation, and Participants survey and Feedback. Below is presented a description of each section.

|  |  |
| --- | --- |
| TECHNIQUE | DESCRIPTION |
| Functionality and Applicability of the Prototype | The prototype's desired functionality is to be fluid enough that there should only be one navigation that leads directly back to the main page, hence the duties for this prototype are ongoing. The tasks that users must complete in order to evaluate the functionality are listed below. They fall into three categories: Manipulation, Navigation, and Main. |
| Heuristics Evaluation | As per regular procedure, CraveCompass will use the 10-usability heuristic method to evaluate the application and establish a baseline for its functionality. |
| Participants survey and Feedback. | A survey will be provided to participants after conducting the prototype. The survey will contain quantitative questions that are interpreted into a 5-point Likert Scale as well as Qualitative questions in the form of Feedback. This will ensure that no designer bias will be done to the *result* of this evaluation. |

*Table 1. Evaluation Plan*

The tasks for this prototype are continuous as the intended function of the prototype is to have the functionality to be fluid enough that at most there’s 1 navigation that can head straight back to the main page. Provided below are the tasks that users are required to perform to consider the functionality. These are categorized as Main, Navigational, and Manipulation:

* Enter the Program (Navigation)
* View Food Map (Navigation)
* View Item Price (Main)
* Add Item to Meal Plan Checkout (Main)
* Save Meal Plan (Main)
* View Meal Plan (Manipulation)
* Edit Meal Plan (Manipulation)
* Delete Meal Plan (Manipulation)

These tasks are selected to be able to test all functional features of the prototype which provides:

* Navigational Challenges
* Memorization

Method of Conducting Online Test:

Due to the unavailability of the developers, and the time constraints. Asynchronous means were conducted where the participants were given instructions which they could do so at their own pace. This is guided by remote guidance with the developers in case of unexpected developments which there were none. Google Forms was the main platform for evaluation.

A screenshot of a computer

Description automatically generated

*Figure 1. Image of Online Test.*

**Data Presentation**

**Data Analysis**

***Usability Specifications.***

During the testing phase with the participants. MA Solutions has found that there was a pattern with the results, Navigating the application never reaches the 30-second mark, manipulating the data consumes 30 seconds on average, while the main functionality took the most spending more than 40 seconds on average. This presents a possibility where the familiarity of the UI to existing applications made it much easier to follow while the longer time is due to having to navigate to multiple pages but can be directly accessed through the menu.

|  |  |  |  |
| --- | --- | --- | --- |
| ***TASK*** | ***MEAN*** | *INTERPRETATION* | *CLASSIFICATION* |
| ***Navigation*** | *25.4 Seconds* | *Highly Acceptable* | *Successful* |
| ***Main*** | *48.8 Seconds* | *Highly Acceptable* | *Successful* |
| ***Manipulation*** | *30 Seconds* | *Highly Acceptable* | *Successful* |

*Table 2. Task to Perform.*

Table 2 presents the results of the timed tasks during the testing phase. The data shows that all tasks were performed under the recommended time which results in all three tasks as highly acceptable. With this, the prototype was interpreted as successful in all 3 accounts.

**Heuristic Evaluation**

The **CraveCompass** prototype will be evaluated with each type of Heuristic Evaluation where:

**Visibility of System Status**

The prototype was able to display adequate information within the prototype.

**Match Between System and Real World**

The prototype uses modern English which can be easily understood by all users within the participants. Stated words and phrases can be easily understood.

**User Control and Freedom**

The flexibility of the application is that it provides buttons and navigation areas to move within the prototype. Using common universal symbols allows for the understanding of functions without much understanding.

**Consistency and Standards**

The application was consistent albeit with some features not implemented as of the current prototype. Buttons and design are consistent.

**Error Prevention**

The basic functionalities of the application allow for basic error prevention, but more complexities can be encountered.

**Recognition rather than recall.**

Strategic button placements and symbols allow users to directly interact and are easy to navigate through.

**Flexibility and Efficiency of Use**

The prototype uses a similar UI to various established applications allowing for easier learning curve and understanding.

**Aesthetic and Minimalist Design**

The Prototype has a more utilitarian design but incorporates modern designs as well. However, clutter can be observed at some places.

**Help Users Recognize,** **Diagnose,** **and Recover from Errors**

The simplicity of the design is an oversight from this as there was no implementation of this functionality especially with the unimplemented functionality on some buttons.

**Help and Documentation**

The prototype is documented through diagrams and instructions that is well implemented.

**Heuristic Conclusion**

Overall, the prototype managed to perform most of the heuristic requirements but failed at one which can be addressed in future iterations.

**Participants Survey and Feedback**

|  |  |  |  |
| --- | --- | --- | --- |
| **SECTION 1** | | | |
| **QUESTION** | **MEAN** | **INTERPRETATION** | **CLASSIFICATION** |
| On a scale of 1 to 5 how would you rate your experience with the Sasha Prototype | 4.4 | Acceptable | Successful |
| On a scale of 1 to 5 how was the UI design of the prototype | 4.4 | Acceptable | Successful |
| How easily were you able to follow the tasks provided | 4.2 | Acceptable | Successful |
| **SECTION 2** | | | |
| Enter the Program (Navigation) | 4.8 | Highly Acceptable | Successful |
| View Food Map (Navigation) | 4.6 | Highly Acceptable | Successful |
| View Item Price (Main) | 4.4 | Acceptable | Successful |
| Add Item to Meal Plan Checkout (Main) | 4 | Acceptable | Successful |
| Save Meal Plan (Main) | 4.8 | Highly Acceptable | Successful |
| View Meal Plan (Manipulation) | 4 | Acceptable | Successful |
| Edit Meal Plan (Manipulation) | 3.6 | Acceptable | Successful |
| Delete Meal Plan (Manipulation) | 4.4 | Acceptable | Successful |

*Table 3. Survey Results, Interpretation, and Classification.*

Table 3 presented above shows the results of the survey conducted by the developers. The result shows that the application is successful with acceptable-highly acceptable records in some areas. However, some parts require attention such as the edited meal plan which requires design changes to make it more coherent with the overall functionality and design. Also, based on some answers on the Heuristic approach, the aesthetics of the application requires a bit more attention as while functionality is focused on the prototype, its design can be a bit outdated on some parts.

***Feedback***

Based on the comments in the survey, UI design and smoothness of the application need to be updated as these two factors affect the overall results of the survey.

**Design Implications:**

* **Does your prototype need to be altered to address the results of the analysis, or was it completely successful?**

The results show an acceptable result and are classified as successful; however, this is only a prototype, and important functionalities were only implemented as some parts have unimplemented functions such as in the account information which will be implemented at a later iteration if this project is continued. Furthermore, UI design can be improved and some parts can be redesigned for a much more coherent look and feel.

* **What improvements could be made to the design to address any shortcomings?**

As for the design issues, a redesign for the edit meal plan with the repositioning of buttons and resizing of spaces to further improve the looks of the page.

|  |  |
| --- | --- |
| Before Changes | A screenshot of a phone  Description automatically generated  After Changes |

As for the other parts of the application, minor changes to the positioning and changes to the font were observed but found to be negligible changes to the outcome.

* Did you discover any major flaws that would suggest a completely different type of design?

Since the Save Meal plan was an unintended feature to replace the delivery/ pick-up, some parts might confuse the user when it comes to navigating as the UI is like existing food delivery apps. Furthermore, the local account is not necessary and can be replaced with live account usage at the cost of increased server maintenance and user requirements.

**Critique and Summary:**

**What were the advantages and disadvantages of your evaluation?**

* The advantages of the conducted evaluation were that it was able to demonstrate most of the functionalities of the program and gather more comprehensive data in various situations and levels of the application. The downside is that it was conducted online, asynchronously, which hindered live demonstrations and real-time communication with the developers. Also, the data collection part is slow as the participants gathered opted in and out at any time requiring a do-over on the tasks at hand. Overall, the evaluation went almost smoothly but required some oversight on some crucial parts of the session. Lastly, the population size is small the results can be biased based on user preferences.

What would you have done differently knowing what you know now (both design-wise and evaluation-wise)? Given more resources, what could you have done that would have produced significantly more insightful evaluation results (again, whether this is an improved prototype or a different evaluation path)?

If given more time and resources, the team would conduct a physical evaluation with more tasks and present various cases that could test the limits of the prototype. This would result in more comprehensive information compared to before and will utilize a different application to do so for better integration.

**Summary of the Project.**

In conclusion, the team found during the conduct of this study that while the food market lacks an application similar to the one being currently designed, the oversaturation of various applications can be an undesirable path in creating a dedicated one. However, first-hand accounts of the difficulties, the knowledge of food economies, and also understanding of existing applications, have led to the production of this prototype which while looks like a clone of existing applications, its purpose has implications for the current food market, finding potential to benefit a lot of users based on the results on this study. Overall, the current design requires lots of improvements but the plans and functionalities are effective and have found potential that it is classified as a success.