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Drop the Code

<https://github.com/petetetete/cs386-project>

D2.1 – Vision

CS 386 – Software Engineering

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Marco Gerosa

Drop the Code Vision

- **Introduction**

The amount of programmers is rising throughout the world but most who have an interest in programming are usually intimidated by it and are unfortunately swayed away. Our product, *Drop the Code*, is meant to attract new programmers and keep them interested in programming while actually learning how to do it through the use of puzzles. Looking at advanced programming can be overwhelming for newcomers but with our product it eases the users into programming and provides a fun and less-stressful environment for them to learn. The application utilizes the drag and drop method to give the users an idea of how to properly format their programs without the difficulty of actual programming. When all of the puzzles have been completed the user can go back and actually try writing those programs following the format they've already done on their first time through. In *Drop the Code* there will be many different features including: difficulty levels, competitive play with other programmers, and many others to give the user variation in how they learn the material. This product is not limited to only new users; it's also for experienced users who are looking to refine their skills even more. Furthermore, people who are not interested in programming but like to work with puzzles are able to use it as well. Our main goal with this product is to get more people into the field of programming and hopefully increasing the rate of people getting into the workforce in the future. With *Drop the Code* more people can be introduced to programming without the rigorous look and feel to it while still learning the proper basics to push them further into their programming career.

- **Positioning**

- **Problem Statement**

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|--------------------------------|--|
| The problem of | Programming is intimidating; and the barrier to entry is a large part of that. |
| affects | The individuals who are looking to get into learning programming either for personal or monetary reasons. |
| the impact of which is | Newcomers to programming are often immediately discouraged due largely to the fact that everything is “new and different.” Programming isn’t something that everyone has experienced at a young age such as math or English. |
| a successful solution would be | A successful solution means a successful future workforce. A larger percentage of students would graduate from computer science programs and in turn, affect the technology of the future. A solution would provide a valuable resource to not only those looking to graduate, but those currently in the workforce looking to educate themselves further. |

- **Product Position Statement**

| | |
|--------------------|---|
| For | New Programmers |
| Who | Are looking for an introduction to programming/logical thinking |
| The (product name) | Is a logical puzzle game |
| That | That is fun and intuitive |
| Unlike | Overly complicated alternatives |
| Our product | Will utilize an easy-to-learn drag and drop coding method that gradually introduces new concepts to the user at a pace that is challenging yet rewarding. |

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- **Stakeholder Descriptions**

- **Stakeholder Summary**

| Name | Description | Responsibilities |
|-----------------------|--|---|
| Beginning programmers | This stakeholder is going to be the person who just starts out with code and programming. This will get the user to know how to program and problem solve. | The stakeholder’s role within the product is to make sure that the puzzles are programming problem-solving puzzles. They should also make sure that people will enjoy the product for what it is used for and not an easy get away app. |
| People in education | This stakeholder would be teachers in education who would use this app as a tool for problem solving within school. | This stakeholder’s role is to make sure that students at a young age will understand problem solving and get to learn how think hard for a solution is better than having it handed to them. |

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|---------------------|---|--|
| Puzzle game players | This stakeholder is someone who is into the strategic and puzzle part of games. | This stakeholder's role is to make sure that the puzzles stay difficult for users and that the puzzles have an exponential increase in difficulty. These stakeholders also need to make sure that the puzzles are always getting harder and that they don't stay easy forever. |
|---------------------|---|--|

- **User Environment**

- Working Environment: Users will usually use this app by themselves, though they may, if they wish, use the app with others. This is not expected, however, and will not be accounted for in the design of the app.
- A task will be defined as one puzzle, which, depending on the difficulty and the user's prior experience with programming, will take anywhere from 1 minute to 10 minutes. As the difficulty of the puzzles increase, so should the time spent solving them.
- There is only one environmental constraint, and that is that the app will be mobile only. As per the current plans, in-app features will not need access to the internet at any time.
- We do not have any plans on integrating with other features at the moment.
- However, in the future there may be integration with social media sites such as Facebook or Google; these features will require an internet connection.
- The user's role will be to solve the puzzles given to them and in doing so, will unlock additional puzzles using the skills they have gained in the puzzles they solved thus far.

- **Product Overview**

- **Needs and Features**

| Need | Priority | Features | Planned Release |
|---|----------|---|-------------------------|
| Intriguing narrative with room for growth | Medium | Gripping initial hook and likeable characters | On app release |
| In depth and intuitive tutorial | High | Incremental learning and eye-catching | On app release |
| Difficulty/level selection | High | Either a difficulty slider or separate challenges level types | On app release |
| Challenging level design | High | Provide multiple clever solutions | On app release |
| Character and background selection | Medium | Collection of rare or unique characters/backgrounds | On or after app release |
| Player vs player challenging | Medium | Friend challenges using time trials or real-time competition | On or after app release |
| Arcade mode | Low | Randomly generated challenges and time trials | On or after app release |

- **Other Product Requirements**

| Requirement | Priority | Planned Release |
|---|----------|-----------------|
| Reliable performance even on complex levels | High | On app release |
| Intuitive syntax controls | High | On app release |

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|---|--------|-------------------------|
| If mobile release, app must be cross platform | High | On app release |
| Large click fields to accommodate smaller screens | Medium | On app release |
| Secure account system for cross platform play | High | On app release |
| Aesthetically pleasing art style | Medium | On app release |
| If mobile release, banner ads to fund development | Low | On or after app release |

Group Participation:

Peter – Created initial document layout and filled in the problem statement, product position statement, needs/features, and other product requirements sections.

Hayden – Wrote the Introduction Section

Garrison – Wrote the Stakeholder Section

Gage – Wrote the User Environment Section