**Mastermind Project Plan**



**Project Name:** Mastermind

**Department:** IT

**Project Manager:** Coltin

**Date:**  2017-10-13



**Prepared By**

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| --- | --- |
| **Document Owner(s)** | **Project/Organization Role** |
| Jes | Programmer |
| Coltin | Project Manager |
| Ben | Programmer |

**Project Closure Report Version Control**

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change Description** |
| 1 | 2017/11/12 | Jes | Project Product / deliverables (items in scope)  Items not in scope  Detailed client requirements |
| 1.2 | 2017/11/12 | Jes | Summary  Derived requirements  Team organization  Policies and Guidelines |
|  |  |  |  |

| **Overall Project Priority:**  X High Medium Low |
| --- |
| **Comments:** |
| **Approved By:**  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Project Manager:**  Coltin  **Date:**  2017 / 11 / 12. |

Executive Summary

The Mastermind game application are high quality applications that carries out fun by using problem solving and logical thinking in a game. Such a game will be entertaining for all ages. The Mastermind Project requires that a working user interface and AI logic is constructed. The goal of the application will be for functionality as well as an appealing interface.

Individual components of the application will be designed separately. Team members will then brainstorm and integrated ideas for the components. Discussions will be held regarding the purpose and function of the components for the overall application.

Our team will develop an intricate design that not only meets all of the application requirements but it also appealing and user friendly for all ages.

Scope Statements

**Project Object & Justification**

Create a Mastermind game.

**Project Product/Deliverables (items in Scope)**

Mastermind game which is Human vs AI.

**Specific Items Not in Scope**

2 players, our version of Mastermind will have the computer set the code to be guessed.

**Assumptions/Limitations**

There will be 3 difficulties, Hard Medium and easy corresponding to the number of guesses in a game. Eight, ten or twelve respectively.

Detailed Client Requirements

The game is played using:

* A ***decoding board***, with a ***shield*** at one end covering a row of four large holes, and twelve (or ten, or eight) additional rows containing four large holes next to a set of four small holes;
* ***code pegs*** of six different colours, with round heads, which will be placed in the large holes on the board.
* ***key pegs***, some colored or black, some white, which are flat-headed and smaller than the code pegs; they will be placed in the small holes on the board.
* After each run (successful or unsuccessful) the game should pause and permit the user to continue or exit
* The codemaker (computer application) chooses a pattern of four code pegs is chosen. Duplicates are allowed.
* chosen pattern is placed in the four holes covered by the shield.
* The codebreaker tries to guess the pattern, in both order and color, within twelve (or ten, or eight) turns.
* Each guess is made by placing a row of code pegs on the decoding board.
* Once placed, the codemaker (In this case the computer application.) provides feedback by placing from zero to four key pegs in the small holes of the row with the guess.
* A colored or black key peg is placed for each code peg from the guess which is correct in both color and position.
* A white key peg indicates the existence of a correct color code peg placed in the wrong position.
* are duplicate colours in the guess, they cannot all be awarded a key peg unless they correspond to the same number of duplicate colours in the hidden code
* Once feedback is provided, another guess is made
* guesses and feedback continue to alternate until either the codebreaker guesses correctly, or twelve (or ten, or eight) incorrect guesses are made.

Derived Business Requirements of Application

The game has:

* A ***decoding board***, with a ***shield*** at one end covering the answer
* Code pegs with 6 different colours
* ***key pegs***, some colored or black, some white, which are flat-headed and smaller than the code pegs; they will be placed in the small holes on the board.
* Game has 1 player vs computer
* After each run (successful or unsuccessful) the game is to pause and permit the user to continue or exit
* Player tires to guess the pattern
* In twelve, eight, or ten turns.
* Duplicates are allowed within pattern
* If there are duplicate colours in the guess, they cannot all be awarded a key peg unless they correspond to the same number of duplicate colours in the hidden code
* After each guess the computer will evaluate it and supply the visual peg feedback

Derived Technical Requirements for each Business Requirement

* Application has a AI for the player to guess from.
* AI will set the code to be guessed.
* Game is to provide feedback after each guess.
* Once feedback is provided, another guess is made.
* Guesses and feedback continue to alternate until either the codebreaker guesses correctly, or until total allotted number of guesses have be made.
* Game board User Interface which is comprised of:
  + A ***decoding board***, with a ***shield*** at one end covering a row of four large holes additional rows containing four large holes next to a set of four small holes;
  + ***code pegs*** of six different colors, with round heads, which will be placed in the large holes on the board; and
  + ***key pegs***, some colored or black, some white, which are flat-headed and smaller than the code pegs; they will be placed in the small holes on the board.
* Game has 3 difficulties based on the number of guesses allotted
  + Hard (8), Medium (10), easy (12)

Project Team Organization

**Coltin**

Project Manager

* Create burndown charts
* UI design
* Writing scripts

**Ben**

Project team member / Programmer

* Create project schedule
* Assisting in requirements
* Writing scripts

**Jes**

Project team member / Programmer

* Taking meeting minutes
* Gathering derived requirements
* Writing scripts

\*Note team organization will be added to as more parts of the project are to be completed.

Project Policies and Guidelines

**Policy Title: Project responsibilities**

**APS Number**: pr 000-1 **APS Functional Area:** Mastermind Project

**Breif Description**: Ensuring Effective and complete project.

**Effective**: 2017-11-1

**Responsible office**: IT

**Policy Contact**: w0303260@nscc.ca

**Supersedes**: N/A

**Last Reviewed/Updated:** 2017-10-8

**Applies to:**  All team members involved in the creation of the Mastermind project.

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Reason for policy: To ensure all work is completed in an effective and timely manner.

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**I.** **INTRODUCTION**

Policy pr 000-01 is to ensure the completion of this project. As well that each member does their part.

**II.** **POLICY STATEMENT**

All member involved in this project are obligated to ensure that the project is completed effectively and in a timely manner.

**III.**  **DEFINITIONS**

N/A

**IV.**  **RELATED POLICIES, PROCEDURES, FORMS, GUIDELINES, AND OTHER RESOURCES**

a. Administrative Policy Statements (APS) and Other Policies

N/A

b. Procedures

Each Tuesday at 2pm there will be a project meeting.

Project meeting will entail:

Each member will update the team of their current progress with the project.

Each Wednesday at 12pm there will be a project meeting:

Project meeting will entail:

Review of team members assigned responsibilities, and that tasks are being completed as scheduled.

c. Forms

N/A

d. Guidelines

Project should be:

simple enough to be understandable, but

complex enough to be unique and interesting

Documentation should be:

Font Consistent

Standard text as size 12 font

e. Other Resources (i.e. training, secondary contact information)

N/A

f. Frequently Asked Questions (FAQs)

N/A

**V.**   **HISTORY**

N/A

**VI.**  **KEY WORDS**

Responsibilities, Completed, Effectively, Scheduled

Citations

**N/A**