**“DAMPY: Damath in Python | Documentation**

In Partial Fulfillment of the Requirements in the Major Subject

Modeling and Simulation

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**PROJECT DESCRIPTION**

‘Dampy’ is a game essentially based of off “Damath”, a math board game that comes from the Philippine checkerboard game called “dama” and mathematics. This game allows two players to compete seamlessly in one device without the limitation of needing an actual board game before the users are able to play.

1. Rules

Short introduction for the Dampy game. Etymology, origin, etc.

* 1. Board

Describe board, the numbers on the side, size, and symbols used.

<image>  
*Fig. 1: Game board*

* 1. Pieces

Describe pieces along with their values.

<image>  
*Fig. 2: Pieces used with numbers*

* 1. King Pieces

Describe king pieces, how they are attained, and what they do.

<image>  
*Fig. 3: King pieces*

* 1. Scoring

Describe how players score, and how the scoreboard is used.

<image>  
*Fig. 4: Sample scoring*

* 1. Winning Condition

Describe winning conditions.

**PROJECT SCOPE**

**WORK TO BE ACCOMPLISHED**

A game for desktop computers made for entertainment and numeracy exercise in mind, “Dampy,” as compared to the conventional “Damath” game, is integrated with digital technology, making it convenient and easily accessible at any time of the day.

**PURPOSE**

The chief purposes for which this game is made are to entertain the users by engaging them into a 2-player game of combined strategy and mathematics, thereby enhancing their grasp of the four fundamental operation of integers, as well.

**STAKEHOLDERS/USERS**

Having a wide spectrum of potential users, this game is primarily intended from those who fancy mathematics and want to hone their basic skills even more, to people who just wants to play a quick virtual board game with their friends.

**OBJECTIVES**

**SCHEDULE**

Introduction.

1: to be able to fully develop and implement a “Damath” PC video game within Prof. Angelica Payne’s given timeframe.

**TECHNICAL**

Introduction.

(1) to develop a pc game with little to no bugs,

(2) to fully build a functional playable math PC game, and

(3) to allow two players to seamlessly compete with each other in the game.

**DELIVERABLES**

**INTERNAL**

Introduction**.**

1. Initial system code in “.py” format
2. Testing & debugging results
3. Final system code in “.py” format
4. Executable file
5. Documentation
6. Flowchart
7. System logo

**EXTERNAL**

Introduction**.**

1. Toss coin

2. Two players take turns in moving a piece

3. The game ends either after the 20-minute game period or when a player has no more chips to move or when an opponent's chip is cornered.

4. The player with the greater accumulated total score becomes the winner of the game.

**SUCCESS FACTORS**

Introduction.

(1) the schedule and technical objectives is satisfied and are met on time,

(2) the game is fully developed and to be played without the occurrence of any bugs and errors, and

(3) the end-users are all satisfied after having played the game.

**CLIENT/USER REQUIREMENTS**

Introduction.

(1) two players willing to compete with each other, and

(2) a desktop computer on the Windows operating system.

**IMPLEMENTATION**

**TASKS/ACTIVITIES**

Task (produce system), Design, Development, and Presentation.

**PROCEDURES**

Lorem.

**TOOLS/TECHNOLOGY**

Introduction.

1. Microsoft Visual Studio Code
2. Python 3.11 with the following libraries:
   1. Pygame
   2. Sys
   3. Random
3. GitHub Desktop
4. Adobe Photoshop CC
5. Adobe Illustrator CC
6. Paint Tool SAI Ver. 2
7. Canva
8. Ableton Live
9. Audacity

**PROJECT CHANGE CONTROL PROCESS**

What in the crazy section?

**FLOWCHART**

**INSTRUCTIONAL MANUAL**

Short introduction for Dampy, the game inspired by Damath.

1. Program

Introduce program specifications, language used, operating system, etc.

* 1. Interface
     1. Title Screen

Describe what is on the title screen.

<image>  
*Fig. 5: Main title screen*

* + 1. Start

Describe what the start button does.

<image>  
*Fig. 6: Start button*

* + 1. Options

Describe options screen.

<image>  
*Fig. 5: Options button*

* 1. Game Scene.

1. Scoreboard

Describe.

<image>  
*Fig. 5: Scoreboard*

1. Resume

Describe.

<image>  
*Fig. 6: Resume button*

1. Restart

Describe.

<image>  
*Fig. 5: Restart button*

1. Quit Game

Describe.

<image>  
*Fig. 6: Quit Game button*

**PROJECT TEAM**

**PROJECT MANAGER**Buenconsejo, Gian Paolo

Responsibility.

**TECHNICAL WRITERS**Masarque, Andy D.  
Famoso, Nina Grace D.

Responsibility.

**LEAD PROGRAMMER**Velano, John Kenneth M.

Responsibility.

**TECHNICAL ARCHITECT**Gavino, Bien D.

Responsibility.

**SYSTEM ANALYST**

Malabanan, John Russelle B.

Responsibility.

**PROJECT MILESTONES**

* Project Identification: December 9, 2022
* Project Design: December 12, 2022
* Project Development: December 13, 2022
* Project Presentation:

**ACKNOWLEDGEMENT**

We, as a group, would like to acknowledgment each and every member of our team as they have contributed significantly to the “Dampy: Damath in Python” project. Without them, this project would not have been possible.

We also like to extend our thanks to John Paul M. Beltran for providing our program with two (2) musical scores. These tracks are used in the program’s Title Screen, and Game Scene, and are named “x” and “y” respectively.

**REFERENCES**

https://www.youtube.com/watch?v=vnd3RfeG3NM

http://nebula.wsimg.com/1928d6652163924ff1bc8212f9ef1d0f?AccessKeyId=2E307E195F801D332374&disposition=0&alloworigin=1

https://www.academia.edu/44629148/Mobile\_DaMath\_a\_game\_for\_basic\_numeracy\_exercise