PANGASINAN STATE UNIVERSITY
Urdaneta City Campus

College of Computing
INFORMATION TECHNOLOGY DEPARTMENT

Elective 2 (MAD 2) Mobile Application Development 2
Midterm Project

GameDev using Flutter Casual Games Tookit

Title **: Lipad Adarna**

Game genre**:** Casual Arcade

BACKGROUND

Lipad Adarna is a game inspired by the Filipino folklore of the ibong adarna, a magical bird in Philippine mythology. The game is based on the popular Flappy Bird gameplay mechanics where the player taps to make the bird fly and avoid obstacles.

DESIGN AND DEVELOPMENT PROCESS

The design and development process of this game comes with conceptual planning. First, we define the game concept which our basis is the ibong adarna and we plan the mechanics of the game and on how do it works. We come up with the mechanics of the game to be alike with flappy bird game. Through constant brainstorming and planning we develop the game Lipad Adarna.

- **Conceptualization**
  The game's storyline revolves around the player taking control of the magical bird Adarna, navigating through mystical landscapes while evading obstacles. Obstacles include trunks. The goal is to reach highest score as possible.

- **Gameplay Mechanics**

  The gameplay mechanics is easy to follow. The player controls Adarna's flight by tapping the screen, causing the bird to flap its wings and ascend. Gravity pulls Adarna downward constantly, requiring the player to tap rhythmically to maintain altitude and avoid obstacles(trunks).

- **Character Of The Game**

  There is only one character you can play in this game, which is the ibong adarna itself.

FILIPINO ELEMENTS

Images/Backgrounds
Images comes with Filipino inspired bird “adarna” backgrounds is a wonderful scenery of the sky comes with a visual of tree trunks

Language and sounds
Filipino language is integrated into the game to ensure that local players feel the culture of the Filipino. And a sound comes from a bird popular in the Philippines the Philippine eagle.

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TECHNICAL DECISIONS

In Lipad Adarna, we integrate flame for its simplicity and suitability for 2D games, which aligns with your Flappy Bird-style gameplay. Utilize Flame's sprite animation capabilities to animate the ibong adarna and the obstacles, keeping the visuals simple yet engaging. Implement basic physics for the bird's flight and gravity. We also integrate flame's collision detection system to detect when the bird collides with obstacles, triggering the end of the game. We added the sound of the Philippine eagle using Flame's audio capabilities. We also develop a scoring system based on the distance traveled by the bird, similar to Flappy Bird. Increase the score as the bird passes obstacles successfully. Since the game is focused on Filipino folklore we made almost all the language turned into filipino/tagalog to enhance the cultural immersion for local players.

Arni-Rie Felix Tamayo
Instructor

Leader: Bascos, Alvin C.

Members:
Llamas, Jesus Emmanuel P.