

## ABSTRAK

### **RANCANG BANGUN GAME 2D PLATFORMER “WILDLIFE GUARDIANS” MENGGUNAKAN METODE GAME DEVELOPMENT LIFE CYCLE**

Oleh

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Indonesia memiliki keanekaragaman hayati yang tinggi, namun ancaman terhadap populasi hewan endemik terus meningkat akibat perusakan habitat, perburuan ilegal, dan perubahan iklim. Untuk meningkatkan kesadaran generasi muda terhadap konservasi, penelitian ini mengembangkan game edukasi 2D platformer berjudul *Wildlife Guardians* menggunakan metode *Game Development Life Cycle (GDLC)*. Metode ini terdiri dari enam tahap: *initiation*, *pre-production*, *production*, *testing*, *beta*, dan *release*, yang memastikan proses pengembangan dilakukan secara terstruktur dan iteratif. Game ini dirancang untuk anak usia 9-12 tahun dengan menghadirkan petualangan interaktif di mana pemain menyelamatkan hewan endemik seperti Harimau Sumatera, Badak Jawa, dan Jalak Bali dari ancaman pemburu ilegal. Setiap hewan yang diselamatkan memberikan kemampuan khusus untuk membantu pemain menghadapi rintangan berikutnya. Pengujian dilakukan melalui metode *Black Box Testing* dan *User Acceptance Testing (UAT)* untuk mengukur fungsionalitas dan tingkat kepuasan pengguna. Hasil pengujian menunjukkan bahwa game ini berhasil memberikan pengalaman bermain yang menyenangkan sekaligus meningkatkan pemahaman tentang pentingnya pelestarian hewan endemik.

**Kata Kunci:** game edukasi, 2D platformer, pelestarian hewan endemik, GDLC, user acceptance testing.

## **ABSTRACT**

### **"DESIGN AND DEVELOPMENT OF A 2D PLATFORMER GAME "WILDLIFE GUARDIANS" USING THE GAME DEVELOPMENT LIFE CYCLE METHOD"**

**By**

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*Indonesia boasts rich biodiversity, yet the population of endemic animals continues to face threats due to habitat destruction, illegal hunting, and climate change. To raise awareness among younger generations about conservation, this study developed a 2D platformer educational game titled Wildlife Guardians using the Game Development Life Cycle (GDLC) method. The GDLC method comprises six stages: initiation, pre-production, production, testing, beta, and release, ensuring a structured and iterative development process. The game is designed for children aged 9-12, featuring an interactive adventure where players rescue endemic animals such as the Sumatran Tiger, Javan Rhino, and Bali Starling from the threats of illegal poaching. Each rescued animal grants unique abilities to help players overcome subsequent challenges. Testing was conducted using Black Box Testing and User Acceptance Testing (UAT) to evaluate functionality and user satisfaction levels. The results indicate that the game successfully delivers an enjoyable gameplay experience while enhancing understanding of the importance of endemic animal conservation.*

**Keywords:** *educational game, 2D platformer, endemic animal conservation, GDLC, User Acceptance Testing.*