RANCANG BANGUN *GAME* SIMULASI TERTIB BERLALU LINTAS RODA DUA MENGGUNAKAN UNITY BERBASIS ANDROID

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ABSTRAK

Kesadaran masyarakat Indonesia akan keselamatan berlalu lintas masih rendah, dapat ditunjukkan dengan tingkat kecelakaan lalu lintas di Indonesia yang terus meningkat di sepanjang tahun 2024. Oleh karena itu, peneliti merancang dan membangun game simulasi tentang tertib berlalu lintas menggunakan unity berbasis android dengan menggunakan bahasa pemrograman C#. metode yang digunakan dalam merancang *game* ini, yaitu *Game Development Life Cycle* (GDLC). Pada *game* ini, digunakan sebagai edukasi untuk tertib berlalu lintas, dan dimainkan oleh satu pemain. Terdapat beberapa level pada game ini, yaitu level 1 tentang aturan berhenti di belakang garis zebra cross, level 2 tentang aturan berhenti di lampu merah, level 3 tentang aturan berjalan dengan kecepatan 30 km/jam, level 4 tentang aturan berkendara dalam kondisi macet, level 5 tentang aturan berkendara dalam kondisi hujan. *Game* Simulasi Tertib Berlalu Lintas Roda Dua Menggunakan Unity Berbasis Android mendapatkan respon positif oleh responden dengan nilai 85,5%, dari rata-rata keseluruhan pertanyaan yang terdapat dalam kuesioner sehingga game tersebut di terima sangat baik oleh responden.

Kata kunci: *Game Development Life Cycle,* Unity, *Game*.

DESIGN AND CONSTRUCTION OF A SIMULATION GAME FOR TWO-WHEELED TRAFFIC USING ANDROID-BASED UNITY

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ABSTRACT

The awareness of traffic safety among Indonesian society remains low, as indicated by the continuously increasing traffic accident rate throughout 2024. Consequently, researchers designed and developed an Android-based traffic order simulation game using Unity and the C# programming language. The Game Development Life Cycle (GDLC) methodology was employed in designing this game. This game serves as an educational tool for traffic order and is designed for single players. It features several levels: Level 1 focuses on the rule of stopping behind the zebra crossing line, Level 2 on stopping at traffic lights, Level 3 on adhering to a speed limit of 30 km/h, Level 4 on driving in traffic congestion, and Level 5 on driving in rainy conditions. The "Two-Wheeled Vehicle Traffic Order Simulation Game Using Android-Based Unity" received a positive response from respondents, with an average score of 85.5% across all questionnaire questions, indicating that the game was very well-received.

Keywords: *Game Development Life Cycle, Unity, Game.*