

ABSTRAK

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Judul : Pengembangan Serious Game HealthSim: Simulasi Gizi Berbasis Mobile
untuk Edukasi Perilaku Hidup Sehat pada Usia Dewasa

Gim HealthSim adalah gim simulasi edukasi berbasis Android yang dikembangkan untuk memberikan edukasi kepada masyarakat mengenai pentingnya gizi seimbang dan pola hidup sehat melalui pendekatan yang interaktif dan menyenangkan. Pengembangan gim ini dilakukan sebagai media edukasi digital yang membantu pemain memahami dampak pola hidup sehari-hari terhadap kesehatan jangka panjang. Pengembangan gim dilakukan menggunakan GDLC dengan tahapan yang diterapkan meliputi *Initiation*, *Pre-Production*, *Production*, *Testing*, dan *Beta* sesuai dengan kebutuhan pengembangan. Kebutuhan gim diperoleh melalui wawancara dengan klien. Gim HealthSim diimplementasikan menggunakan Unity 6. Fitur utama gim HealthSim meliputi makan dan minum, bekerja, berolahraga, dan tidur. Pengujian fungsional (*Alpha Testing*) dilakukan menggunakan *Black Box Testing* sedangkan pengujian nonfungsional (*Beta Testing*) dilakukan menggunakan skala likert terhadap 30 responden dari aspek kenyamanan pemain, tampilan gim, dan pemahaman pemain setelah memainkan gimnya. Hasil pengujian menunjukkan bahwa fitur yang diuji berjalan sesuai spesifikasi dan gim HealthSim memperoleh nilai *usability* sebesar 71,41% yang termasuk dalam kategori baik. Hasil tersebut menunjukkan bahwa HealthSim telah memenuhi kebutuhan pengguna dari aspek kenyamanan, tampilan, dan pemahaman pola hidup sehat.

Kata kunci: *HealthSim, game simulasi edukasi, gizi seimbang, pola hidup sehat, Unity 6, Android, C#*

ABSTRACT

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Title : Development of HealthSim: An Android-Based Educational Nutrition
Simulation Game

HealthSim is an Android-based educational simulation game developed to educate the public about the importance of balanced nutrition and healthy lifestyle habits through an interactive and engaging approach. The game was developed as a digital educational medium to help players understand the long-term impact of their daily lifestyle choices on their health. The development process followed the Game Development Life Cycle (GDLC), with the implemented phases consisting of Initiation, Pre-Production, Production, Testing, and Beta. The game requirements were gathered through interviews with the client. HealthSim was implemented using Unity 6. Its main features include eating and drinking, working, exercising, and sleeping. Functional testing (Alpha Testing) was conducted using the Black Box Testing method, while non-functional testing (Beta Testing) was carried out using a Likert scale questionnaire involving 30 respondents. The evaluation focused on three aspects: player comfort, game interface and visual appearance, and players' understanding after playing the game. The testing results indicate that all tested features functioned according to the specified requirements. Furthermore, the usability evaluation showed that HealthSim obtained a score of 71.41%, which falls into the “Good” category. This result indicates that HealthSim has met users’ needs in terms of player comfort, game appearance, and understanding of healthy lifestyle patterns.

Keywords: *HealthSim, educational simulation game, balanced nutrition, healthy lifestyle, Unity 6, Android, C#*