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Searching for Animal Names Through Games

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Abstract. Children are the next generation of the nation where children must have provisions in the form of knowledge. And knowledge can be obtained through learning. The basic nature of children is playing with the introduction of these animal names through games. The purpose of this research is to create a mobile game for children aged 5-7 years that simulates animal name recognition. The research method used in this research is descriptive with a quantitative approach. The results of the research conducted so that children recognize the names of animals. The main concept of this product is game. In the end this game was created to educate children. This simulation is made for children to know the names of existing animals. The game scheme is made in several levels. This research was conducted with the aim of developing games so that they can be a means of learning for children on Android-based mobile devices, to broaden children's horizons, and to determine the feasibility of Android-based learning. With this game can shape the character and development of children.

Keywords: Gamification, Animal Names, Games

1. Introduction

Children are the next generation of the nation where children must have provisions in the form of knowledge. And knowledge can be obtained through learning. Play is a necessity for early childhood. Children can play and explore and finally children can find new experiences. The ability to recognize letters is the stage of child development from not knowing to knowing about the relationship between the shapes and sounds of letters, so that children can know the shapes of letters and interpret them [1,2]. Game Search Method is one of the implementations of Artificial Intelligence. Artificial Intelligence or Artificial Intelligence (English: Artificial Intelligence or just abbreviated AI) is defined as the intelligence of scientific entities [3-6]. Such systems are generally considered computers. Intelligence is created and put into a machine (computer) in order to do work like humans can. Several kinds of fields that use artificial intelligence include expert systems, computer games (Games), fuzzy logic, artificial neural networks and robotics [7]. There are many search algorithms that can be applied. This application has several letter and number games, name guessing games. The purpose of this research is to create mobile-based educational games for children aged 5-7 years that simulate the introduction of animal images. The research method that we use in this research is descriptive with a quantitative approach.



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2. Method

The research method that we use in this research is descriptive by using a quantitative approach to convey the research design. In making games, we use a web browser with the waterfall system development method. The waterfall development method that we use is that it can be used to design these simple games because the waterfall method is like a waterfall, each stage is carried out or done sequentially from start to finish [8, 9].

The initial stages used in the waterfall method, namely Requirement at this stage, must know all information regarding software requirements. Design, namely the design stage, this stage aims to provide an overview of what must be done and how it looks. Implementation. At this stage, it is carried out to check whether it is complete or not. Integration and testing at this stage aims to check whether the application is complete or there are still shortcomings [10].

3. Results and Discussion

3.1. Identifying Requirements

This game application is designed for children aged 5-7 years to be able to recognize animal names through this medium. The research was conducted for children to be able to use this game application. The initial appearance of this game is shown in Figure 1.



Figure 1. Main Menu Display

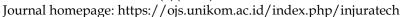
Figure 1 shows that before the child plays this game, the first display that exists is the main menu display.

3.2 Developing Waterfall Initial Requirements

In the early stages of creating a waterfall, the developer designs the main page of the game application. The home screen contains the initial game logo display (see Figure 2).



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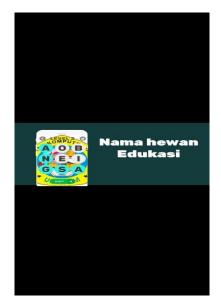


Figure 2. Game Main Page

Figure 2 shows the game application start page before the user enters the game main page. On this main page will be displayed the logo and the name of the game.

3.3. Analysis

Before making the game, we must first analyze what we will need when making the game, such as:

- 1. Setting up the Animal Name
- 2. Preparing the Web
- 3. Preparing the icons
- 4. Finding Backsound

3.4. Design

The following game design will be displayed in figure 3.

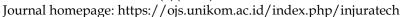




Figure 3. Game Display



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3.5. Waterfall Testing

After the initial waterfall has been successfully created, as an initial stage of discussion from developers to users, waterfall testing is carried out to test the first initial waterfall before the game is started, we get random words that have not been answered, after that we assemble the correct words and then there is the correct display.



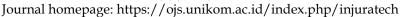
Figure 4. Display of Unselected Answers



Figure 5. Display of Selected Answers



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4. Conclusion

This game application is designed to be a simple game model consisting of several levels from easy to difficult. In this game application there is information on the names of animals that are around us. Children can play the game.

References

- [1] Curby, T. W., Brown, C. A., Bassett, H. H., & Denham, S. A. (2015). Associations between preschoolers' social–emotional competence and preliteracy skills. *Infant and Child Development*, 24(5), 549-570.
- [2] Gerde, H. K., Bingham, G. E., & Pendergast, M. L. (2015). Reliability and validity of the Writing Resources and Interactions in Teaching Environments (WRITE) for preschool classrooms. *Early Childhood Research Quarterly*, 31, 34-46.
- [3] Pannu, A. (2015). Artificial intelligence and its application in different areas. *Artificial Intelligence*, 4(10), 79-84.
- [4] Samek, W., & Müller, K. R. (2019). Towards explainable artificial intelligence. In *Explainable AI: interpreting, explaining and visualizing deep learning* (pp. 5-22). Springer, Cham.
- [5] Iida, H., & Khalid, M. (2020). A Paradigm Shift from Optimal Play to Mental Comfort: A Perspective from the Game Refinement Theory. *International Journal of Informatics, Information System and Computer Engineering (INJIISCOM)*, 1(1), 47-78.
- [6] Harapan, A., Indriani, D., Rizkiya, N. F., & Azbi, R. M. (2021). Artificial Intelligence in Architectural Design. *International Journal of Design (INJUDES)*, 1, 1-6.
- [7] Aprilia, K., & Wantoro, W. (2021). Information on How to Interact and Love Dogs for Children Through Illustration Books. *International Journal of Design (INJUDES)*, 1, 27-36.
- [8] Lucitasari, D. R., & Khannan, M. S. A. (2019). Designing Mobile Alumni Tracer Study System Using Waterfall Method: an Android Based. *International Journal of Computer Networks and Communications Security*, 7(9), 196-202.
- [9] Aleem, S., Capretz, L. F., & Ahmed, F. (2016). Critical success factors to improve the game development process from a developer's perspective. *Journal of Computer Science and Technology*, 31(5), 925-950.
- [10] Beard-Gunter, A., Ellis, D. G., & Found, P. A. (2019). TQM, games design and the implications of integration in Industry 4.0 systems. *International journal of quality and service sciences*.