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Vector Hunt'S Game App

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ABSTRACT

This is a compilation of Vector Hunt Game's invention and introduction. This will help us understand an easier manner to comprehend vector-related things. Briefly, this effort was started at a time when it was evident that students, lecturers, and their grading had issues due to the pandemic. There is no other way to put it, but students find the subject of vectors to be very perplexing, especially those who have lost interest in the course material. The creation of graphics, range of solutions, and various levels might be able to ignite the target group's attention. Before we can successfully declare our prototype to be an app that can be utilized globally, there are a lot of ideas that we need to underline. We examined and talked about the innovation's commercial possibilities before we settled on the design of this prototype. We chose students and educators as our target audience to succeed in this project, and it goes without saying that we had to employ some expensive techniques. After the debate, we took this issue seriously in the hopes of catching the attention of individuals and organizations that could assist us in furthering the development of our project.

Keywords: Vector; Vector Hunt Game; students; prototype; development

INTRODUCTION

Innovation is one of the most important components of most academic institutions' efforts to attain their goals and objectives. It causes a change from traditional learning methods to more advanced ones. All of these tactics will make an effort to address questions that instructors regularly ask regarding the value of lecture results and the services offered by these organizations. The success of an academic depends on the development of qualities that foster creativity. Additionally, a conducive learning environment is needed in order for such innovators to succeed. Students must also devise strategies or practical techniques for differentiating priorities when it comes to resource allocation. The question of original models and theories of innovation, as well as their evolution, will be the main topic of this study. The paper will also address how the innovation process has an impact on pupils.

When students attempt to study and comprehend the concepts of vectors, they run into a number of issues. Students must first overcome the difficulty of comprehending the fundamental concepts of size and direction in vectors. They overlook the fact that a vector is a movement between two points where a vector quantity has both direction and magnitude. Second, issues here develop when students lose interest in studying the vector-based curriculum due to the unappealing images. This innovation not only adds fresh images but also different routes and difficulty levels for each question. Last but not least, the sources of vector learning may be limited and the questions may also not be updated, so with our Vector Hunt game, it will ease the path to better understanding.

In order to aid students in comprehending better concepts, we integrated our product, Vector Hunt game, which is based on the game of treasure hunting. Since PowerPoint would be a user-friendly application, it was chosen to produce this breakthrough. However, by using PowerPoint during the project's production, development costs might be cut, enabling this product to be distributed to the project's intended audience of students. We produced this prototype using Microsoft PowerPoint to communicate the specification and characteristics of our product since we need to broaden the scope and speculative nature of our ideas to capture the full attention of the students. We integrated our product, Vector Hunt Game, which is based on the game of treasure hunting, to help pupils understand topics more clearly. This innovation was made possible since PowerPoint is a user-friendly programme. However, production costs for the project could be decreased by using PowerPoint, allowing it to be distributed to the project's target audience of students. Since we needed to expand the scope and speculative nature of our ideas to fully engage the students, we created this prototype using Microsoft PowerPoint to illustrate the specification and qualities of our concept.

To comprehend the objectives of these developments, we can look at three mechanisms. By utilizing various teaching methods, such as the Vector Hunt Game, we hope to ignite students' interest in learning about vectors. Our next goal is to support lecturers and all teachers in their endeavors to teach. Thirdly, we examine the process of a student's grade, where these goals are concentrated to assist them in raising their marks. We need a quick way that is also engaging to make it better. We are aware that we are in a digital age. By creating this feature, we hope to apply the benefits of a technologically oriented educational system to it. It will start out as a prototype, but if it attracts interest from others, it may be developed further and turned into an app. Regarding Online Distance Learning (ODL), which has been going on for the past two years, it is obvious to us that innovation motivation happens when teachers struggle to instruct students who all live in different areas. We anticipate that these improvements will enhance the teaching and learning process on both sides. Students had a lot of difficulties learning, comprehending, and mastering the vector chapter as well. Therefore, we are hoping that by creating this Vector Hunt Game prototype, it can assist more students and professors in enhancing our educational system. This project was created particularly for students like us with the intention of preventing future issues.

INNOVATION DEVELOPMENT

PowerPoint was used in the design of Vector Hunt Game so that it would be a user-friendly app. However, by utilizing PowerPoint during the project's development, costs can be minimized, allowing the product to be distributed to the project's intended audience of students. Students can select the game's difficulty level based on their knowledge when they first start the app. They are given notes so they can identify the levels that are appropriate for them and correspond to their level of topic expertise.

Upon selecting the level, a map will show up. Even at an easy level, there are four alternative paths that contain various configurations of destinations that students must choose from. This is one of the application's distinctive features because it will assist users in gradually mastering the vector topic as they must accomplish four different activities in order to move on to the medium level. Students must master this method in order to comprehend the fundamentals of vectors. Because most students struggled to understand the vector's components and the vector itself, according to earlier studies, most students did not master the vector. Students sometimes confuse the magnitude of the vector and the magnitude of each component.

Next, a hint will be given on how to move on to the following checkpoint. This hint will make the game more enjoyable and may help you learn more in general. Students will be taken to the vector question by the correct response.

Since the goal of this application is for students to do reinforcement rather than assessment, there is no punishment and no time limit so students can take their time to solve the questions. If the students' answer is incorrect, solutions with explanations are given to them so they may understand the material better.

They must compute the vector between their starting point and their destination at the latest checkpoint. The right response will lead to a treasure, one of which is a key to the next level or path. Besides, the app has a monitoring function that will keep users on track in order to strengthen the concepts.

COMMERCIAL POTENTIAL

Understanding vectors is crucial if you want to excel in physics since the concept is going to be utilized in practically all other physics topics. But occasionally, especially with online schools, classes can be so dull that students find it difficult to concentrate. Students will eventually develop a dislike for physics as a result of this and be unable to comprehend other physics topics. Therefore, the issue can be gradually solved with this invention. This application allows students to test their knowledge of the topic vector. To make learning more enjoyable, teachers can also present this application to their students in class.

The only thing left to do now is to publish this idea as an application on Google Play or the Apple Store since we already have a prototype. Every mobile device may get it, and you can also look for it online. With the help of this innovation, students will be able to practice physics vector problems whenever and wherever they like. Students will experience less stress while learning as a result. We anticipate that this application will be warmly appreciated by the secondary school students, foundation and matriculation students, first-year bachelor's in physics students, teachers, lecturers, and even preschoolers who make up our target audiences.

As a registration fee, this application will cost $25 or RM105 once it is published on Google Play Store, and it will cost $99 or RM416 annually to publish on Apple Store [1]. Our primary motivation for creating this application, which is available for free download on the Google Play Store, was to aid students who were having difficulty understanding the topic vector.

This idea has been used in various contests and has received a silver award from IIDEX 2021 and a gold award from AICD 2021. Additionally, the MyIPO IP Online System has recognised it in case LY2021E03379, type Copyright Voluntary Notification.

CONCLUSION

In conclusion, students can somewhat conquer their topic vector challenges with this Vector Hunt Game while experiencing less stress. This is due to the fact that kids can study and apply the material while engaging in a virtual treasure hunting-like activity. In order to improve gameplay and include features like a timer, more tips, and flashcards for taking notes, this programme is anticipated to be built utilizing a coding system in the future. Furthermore, this application can be improved by including additional physics-related issues like torque, electric

charges, and optics utilizing a different methodology. We anticipate that this innovation will make student life less stressful and more enjoyable to look back on.

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