1. INTRODUCTIONS

Rapid technological advancements make information flow faster, especially in the electronic sports industry (esports). Based on data from the Global Games Market Report 2021, Indonesia occupies the 17th position as the largest game market with very fast growth with a total of 62.1 million active gamers[1]. Therefore, the electronic sports industry in Indonesia is growing very rapidly. This makes information related to esports more needed by gamers.

Game tournament information is essential to gamers since they strive to obtain accurate and easy-to-understand information about esports. GGWP Tourney is an application that provides information about game tournaments. The GGWP Tourney application is a mobile-based application that provides information and facilities for procuring online electronic sports competitions under the supervision of PT Inspirasi Dunia Media[2]. The GGWP Tourney application can also be used by competition organizers to create their own tournaments. However, the GGWP Tourney application is still in the development stage so there are still many problems in terms of user experience, especially in the usability and journey of the application. Based on the results of interviews with IT staff from GGWP Tourney, there are shortcomings in terms of usability and journey based on the amount of feedback from users who have difficulty using the application according to the workflow provided. The data shows that the user experience of the GGWP Tourney application has not met the needs and satisfaction of users. Usability can affect the quality of applications in maximizing features, appearance, security, and performance in terms of interaction with humans[3]. User Experience (UX) is an exploration of how someone perceives and interacts with a product, including every aspect of user interaction with the company dan its service[3]. Thus, it is necessary to analyze and evaluate the usability of the GGWP Tourney application in order to ensure it meets users expectations. In this study, an evaluation will be carried out using the Heuristic Evaluation method. Heuristic Evaluation is a usability evaluation method that can be used to evaluate usability deficiencies and errors in a mobile application.

There are several literature studies that discuss the problems in this research. According to ISO 9241-210, UX is defined as a person's perception and response resulting from the use and/or anticipated use of a product, system, or service[4]. It states that UX includes all user emotions, beliefs, perceptions, physical and psychological responses and behaviors, and achievements that occur before, during, and after use. UX focuses on the convenience of a product in the eyes of the user in order to create a comfortable relationship between human and computer interactions. In another study, Nielsen J stated that Heuristic Evaluation is an evaluation method that measures the usability level of a system to find functionality problems in the interface design of a system[5]. In its implementation, Heuristic Evaluation usually involves more than one evaluator, because it is not enough for one individual to have all the ability to find many errors in a system. Thus, it takes approximately three to five individuals with different experiences when using the system to be able to find many user experience problems from different and comprehensive perspectives in a system[6],[7]. In this study, Heuristic Evaluation was used to maximize the user experience of the application related to how to find errors from various user points of view by heuristic principles. There are ten heuristic principles used as parameters in measuring the usability of a system, namely Visibility of System Status, Match between System and The Real World, User Control and Freedom, Consistency and Standards, Error Prevention, Recognition rather than Recall, Flexibility and Efficiency of Use, Aesthetic and Minimalist Design Help Users Recognize, Diagnose and Recover from Errors, and Help and Documentation[8].

In another study, Nielsen J suggested that Severity Ratings are a parameter representation of usability problems that are found based on their severity to be corrected first before being used and followed up[9]. The severity rating is used in determining the assessment of the results of the heuristic evaluation by allocating a system that must be repaired first based on its severity. The main factors of Severity ratings in measuring the severity and assessment are the frequency of occurrence of problems, the impact of problems if they occur, and the persistence of problems[9].

According to ISO 9241-210 (2010), Human Centered Design (HCD) is an approach to system design and development that focuses on humans[4]. Basically, Human Centered Design (HCD) and User-Centered Design (UCD) are similar methods, however, HCD does not only focus on users but also on user backgrounds, and takes into account the impact on stakeholders, while UCD is only limited to ordinary users [4],[10],[11],[12]. According to Don Norman 2018, HCD has 4 main principles, namely, Focus on Humans, Focus on the Right Problems, Everything is Connected to The System, and Keep the End Result in Mind. The main stages in HCD are to Understand and Specify the Context of Use, Specify the User Requirements, Produce Design Solutions to meet User Requirements, and Evaluation Designs against Requirements[13].

This study focuses on evaluating usability using Heuristic Evaluation as an evaluation method and designing a solution design using the Human Centered Design (HCD) method according to user perceptions based on the results of the evaluation carried out. The evaluation and design were carried out on the GGWP Tourney application to determine the effect of the heuristic evaluation method on the usability value in improving the user experience of the

GGWP Tourney application and to design a solution design based on the results of the evaluation carried out as recommendations and comparisons with the initial design of the GGWP Tourney application.