ABSTRACT

Cycling is now not only done outdoors there are also bikes that can be used indoors such as Static Bicycles. Cycling is also good for maintaining a healthy body. Cycling indoors is usually done by people who participate in bicycle championships because routine exercise cannot be done outdoors if conditions are not possible such as rain or what is now being experienced by residents around the world, namely the Covid-19 outbreak which requires everyone to stay at home. However, people cycling indoors will certainly feel bored with the monotonous situation.

The game in this proposal leads to a simulation where cyclists perform bicycle races on the theme of mountains. This game simulation uses the Finite State Machine (FSM) and Event-Driven methods and can later be connected and played with Static Bicycle support devices. This game was made for the desktop using the Unity application in C # and it is hoped that this application can be used by trainers or people who want to exercise when the weather is not possible.

Based on the research result, the bicycle simulation game that can be played using the Static Bicycle tool has been running well and is added with the Finite State Machine on the NPC and at a certain time of 2 minutes 45 seconds which can make the player lose if the time runs out so that makes the game less monotonous.

Keyword : Finite State Machine (FSM), Event-Driven, Static Bicycle, Unity and C# Language.