ABSTRACT

Raspberry Pi, often also abbreviated as Raspi, is a single board computer (Single Board Circuit / SBC) which is the size of a credit card. Raspberry Pi can be used like an ordinary computer, for making reports, playing games, browsing and even being used as a media player because of its ability to play high definition videos. With this ability that Raspi has, it can be used to create an emulation system for playing games. In this final project, the writer will design a Game emulation prototype using Raspberry Pi with RetroPie Operating System. This prototype can be controlled with a controller that has been set up with Arduino so that it can send input data.

After designing and implementing and testing, it can be concluded that Raspberry with its hardware capabilities and RetroPie OS can be used to build Game emulation. Raspberry will be compared to consoles that have better performance with an average FPS console of 25-30 FPS. The consoles are like the Playstation 1, Playstation Portable, and Nintendo 64. The data being compared is in the form of frames per second (FPS). The amount of FPS data from Raspberry has an average of 10-30 FPS before overclocking. So Raspberry requires overclocking to get an average of 25-30 FPS or 25-60 FPS.

Keywords: raspberry pi, console, FPS, RetroPie.