

ABSTRACT

Technology is developing rapidly, one example of technological development is the development of the use of educational robots in the world of education. Generally the use of educational robots in the world of education is still very minimal, especially in primary school education. In the world of elementary school education students still find it difficult to understand the programming language used to make robots. Based on these problems, an educational robot was made using Arduino programming. Arduino programming used in the form of a function block combined with a script can make it easier for students to make programs. Where in the use of this programming, students just drag and drop in accordance with the function components used and will be run. The system can be controlled using an Android application and Bluetooth module, can detect black lines using a photodiode sensor and can avoid obstacles using an Ultrasonic sensor. Based on the results of testing this robot can be controlled using an Android smartphone, can detect black lines, and can avoid obstacles.

Keywords: Educational Robot, Photodiode, Ultrasonic Sensor, Bluetooth Module.