

DESIGN AND BUILD A EXERCISING ROBOT

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ABSTRACT

Recent years, robotic technology has grown rapidly, as technology advances, in terms of research, design, and building of new robots in various practical purpose either domestically, commercially, entertainingly or militarily. However, the ultimate goal of this project is to design and build a robot that is able to do exercises such as squatting, jumping and catching a bar to do chin-up.

According to the aim of this project, the robot is to mimic human doing physical exercise. Therefore, the design of the robot plays an important part in this project. The design of the robot involves motor, material and components.

The brain of the robot is the microcontroller which controls every single movement of the motors as well as the notification system. By proper programming, proper control of the rotation of the servo motors can be adjusted in order to perform the tasks. The robot will continue repeating the exercise until a voice command is given to it to cease operation. An IC/computer needed to be programmed to receive a voice command in order to stop the robot movement.

This final year project report states the introduction and objectives of this project. The pictures and block diagrams show the design of robot and the robot movements. The report can be divided into two namely hardware and software design of robot and is explained both in the literature review and methodology. The report is then followed by the result, discussion and conclusion of the project in sequence.