



WEIGHT SENSING ALARM CLOCK

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ABSTRACT

This Weight Sensing Alarm Clock is a new device that will help people to wake people more efficiently in the morning. Our objectives of doing this project are to develop a device with a PIC and implemented it with a load sensor and ISD1790 record/playback chip. We're also want to create a device that the user can customize their desired alarm sound. The scope of our project includes the theoretical study on how to develop this weight sensing alarm clock. The highlighted components are PIC16F877A as the brain of our device, PR17B with ISD1790 chip will be used to record a custom audio, LCD to display the time and the load sensor as a switch to turn off the alarm by sensing the user on the bed. This Weight Sensing Alarm Clock will give us a new knowledge on how to program a microcontroller and the device will be a helpful device to waking people up in the morning. The device will ask the user to input the time, alarm time and a desired audio as an input to the device. All the data will be stored in the PIC and will be interpret to display on the LCD and activate the speaker. Next, the alarm will be triggered and the load sensor will checked if there is a person in bed, if yes the alarm will continue to ring, if not it will shut off. The alarm will continue to buzz as long as there is a person on the bed. It will only shut off if the person get off the bed. In this project, unfortunately, we didn't accomplished to make an alarm clock. However, we were able to make a device to record an audio and playing it back. We can conclude that this project have given us the knowledge needed to thrive for success in the future. A failure will much less hurt, however, the experience we gain from this project will sure be a lesson for us in the upcoming time. The improvement that can be made to this project, The Weight Sensing Alarm Clock is that it'll be much easier to use an Arduino kit such as the Arduino Uno. The use of Real Time Clock (RTC) can be a turning point in the future development of this device as he RTC can keep track of the time even the power source is shut off.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Conventional alarm clocks nowadays is a common tool for every households. It is the uttermost important device to wake up human in the early morning. However, most of the people often snooze the alarm when they woke up and continue to sleep. Because of that, they may get late to work or school and even skip the day. Thinking of that, we have create an idea to wake up people more efficiently. So, we have come up with this weight sensing alarm clock that will never turned off until they get out of the bed.