



CREATIONS de UiTM
INTERNATIONAL MEGA INNOVATION CARNIVAL **2023**
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20th MAY 2023

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SalahSnooz

Haiqal Qizra Hizwan Fizri, *Arif Aiman Mohd Azral, Muhammad Wahiduddin Azmi, Muhammad Arif Fahmi Mohd Anuar, Norakmal Abdul Hamid

Centre of Foundation Studies, Universiti Teknologi MARA, Cawangan Selangor, Kampus Dengkil 43800 Dengkil, Selangor, Malaysia

*E-mail: 2022476156@student.uitm.edu.my

ABSTRACT

Introducing SalahSnooz, a ground-breaking solution that addresses two significant issues: the challenge of maintaining a regular sleep schedule and mistakenly skipping prayers as a result of oversleeping. This product's objective is to improve customers' ability to concentrate while praying, leading to a more satisfying spiritual encounter. Although maintaining a regular sleep pattern is important for overall health and wellbeing, many people find it difficult, which makes them tired all day. SalahSnooz provides a cosy pillow that gently awakens customers with an integrated alarm clock or vibration motor. It not only fixes the oversleeping issue, but also gets rid of the bad sentiments and spiritual restlessness brought on by skipping prayers. SalahSnooz is a cheap, easy-to-use tool that is perfect for people of all ages, from young children to the elderly. It distinguishes out from other alarm clocks and sleep aids on the market because to its distinctive characteristics, making it a desirable choice for anyone looking for a practical and efficient remedy to their sleep issues. SalahSnooz has a significant economic potential due to its unique design and potential market appeal. People can live more happy lives, get better sleep, and strengthen their spiritual practices with the aid of this revolutionary tool.

Keywords: Pillow; vibration; solat; sleep schedule; missed prayer

INTRODUCTION

Sleep is essential for overall health and well-being, but many people struggle to get a good night's sleep. Aside from affecting physical health, a lack of sleep can make it difficult to maintain a consistent sleep schedule, resulting in difficulties waking up in the morning. Oversleeping can also cause feelings of guilt due to unintentionally missed prayers, as well as a lack of focus during prayer, which can diminish the spiritual experience for people who practice a religion.

To address these issues, SalahSnooz, a novel product, has been designed to assist individuals who have difficulty waking up in the morning, feel guilty about missed prayers, and lack focus during prayer. SalahSnooz is a pillow with an alarm clock or vibration mechanism that gently and effectively awakens users. The product is simple to use, comfortable, and inexpensive, making it suitable for people of all ages, including children, adults, and the elderly. SalahSnooz is a one-of-a-kind solution to common sleep-related issues that many people face.

According to a National Sleep Foundation study, 35% of American adults say their sleep quality is "poor" or "only fair," and 20% say they don't feel well-rested on most days of the week [1]. Furthermore, a Pew Research Center survey found that 63% of adults worldwide identify with a religion, highlighting the potential market appeal of a product like SalahSnooz that can help individuals who feel guilty about missed prayers and lack focus during prayer [2].

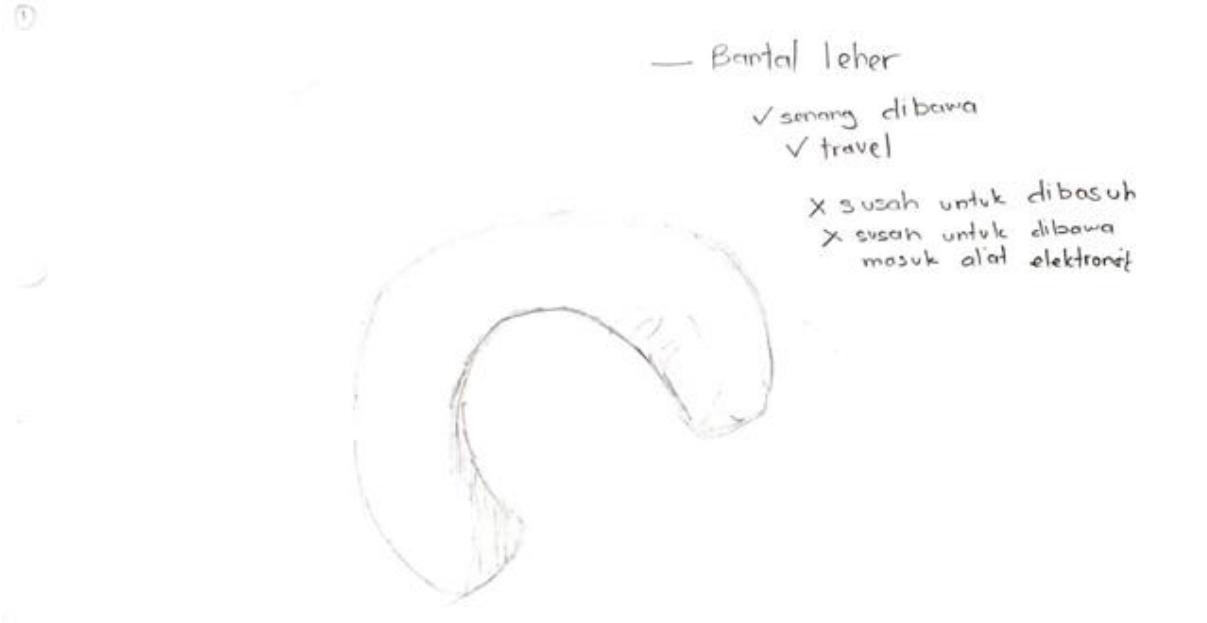
SalahSnooz, with its innovative design and potential to improve the spiritual and religious practices of individuals, has the potential to revolutionize the sleep aid market. The user-friendly, comfortable, and affordable product is suitable for people of all ages, making it a popular item on the market.

Sleep is crucial for maintaining overall health and well-being, yet many individuals struggle to achieve a sound night's sleep. In addition to negatively impacting physical health, sleep deprivation can also lead to difficulty establishing a consistent sleep schedule, resulting in difficulty waking up in the morning. Oversleeping can also cause feelings of guilt for missed prayers and a lack of focus during prayer, reducing an individual's spirituality. [3,4,5]

Addressing these issues, SalahSnooz is a novel product designed to help individuals who find it challenging to wake up in the morning and maintain focus during prayer. The pillow features an alarm clock or vibration mechanism that gently and effectively wakes the user up. The product is user-friendly, comfortable, and cost-effective, making it suitable for all ages. With 35% of American adults reporting poor sleep quality and 20% stating they don't get enough rest, SalahSnooz has the potential to revolutionize the sleep aid market. Additionally, with 63% of adults worldwide identifying with a religion, products like SalahSnooz that can aid with prayer focus and reduce guilt for missed prayers have a broad market appeal.[6]

INNOVATION DEVELOPMENT

Sketches:



2

-Bantal petak

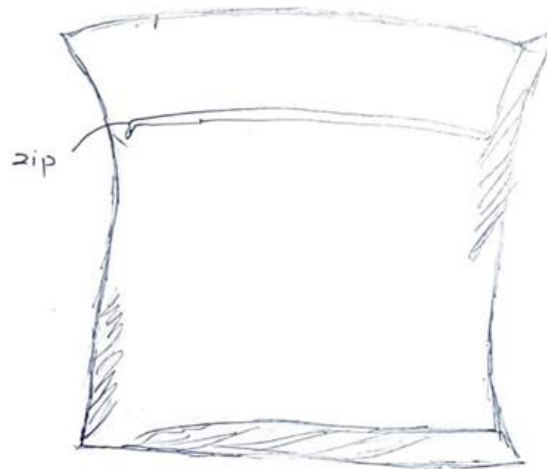


Figure 1: Pillow sketch

ArduinoCircuit:

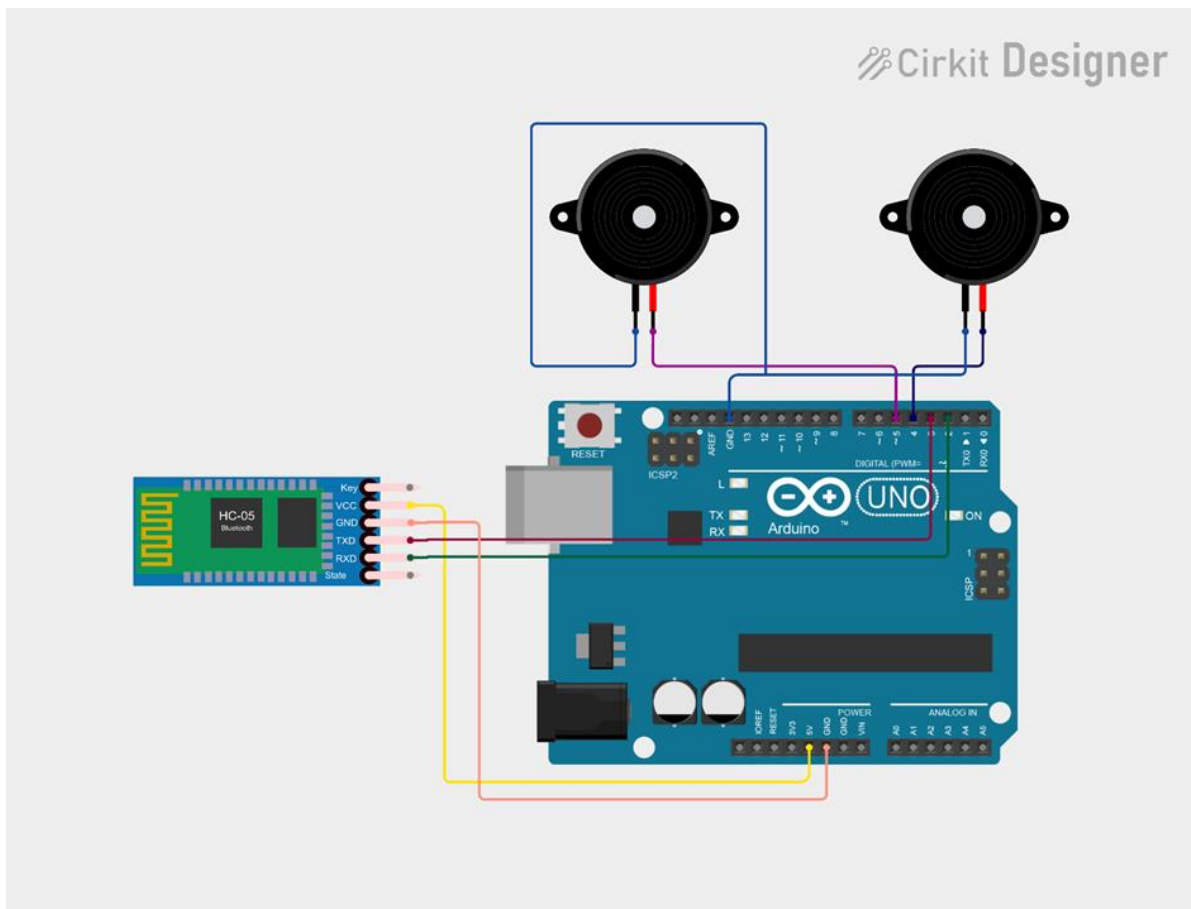


Figure 2: Arduino Circuit

Application Development:

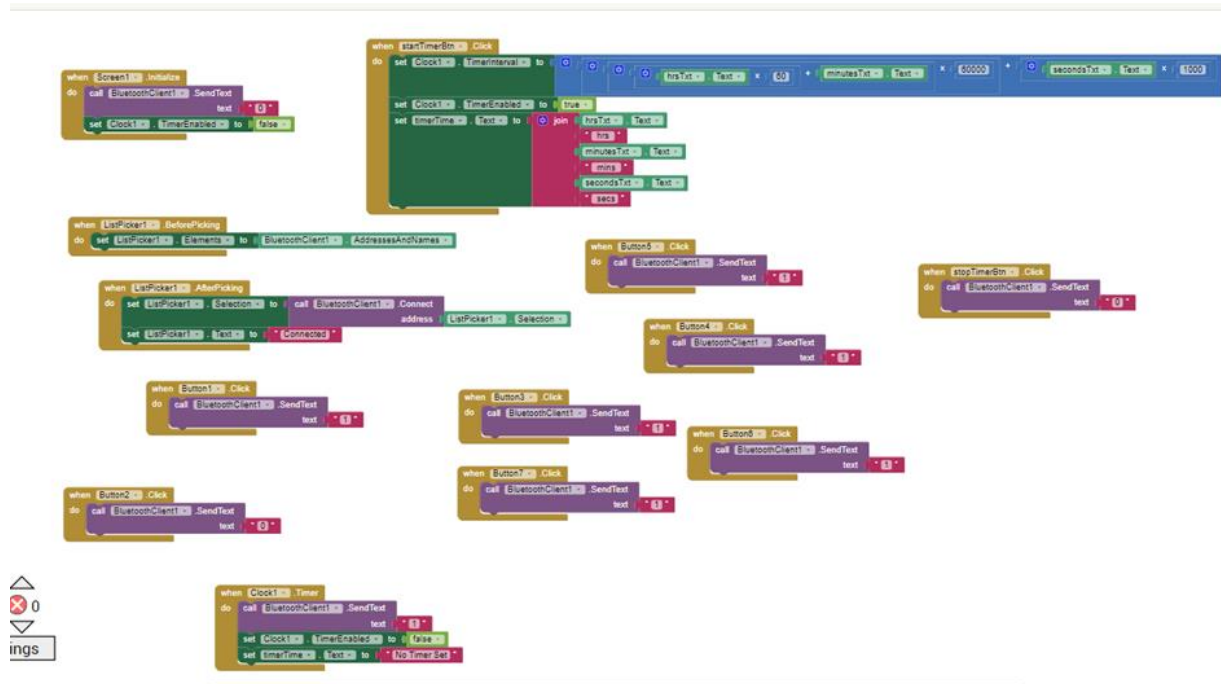


Figure 3: Application Development

Coding for application:

```

BLUETOOTH_CTU
#include <SoftwareSerial.h>

/* Create object named bt of the class SoftwareSerial */
SoftwareSerial bt(2, 3); /* (Rx,Tx) */

const int buzzerPin1 = 4; // set the first buzzer pin
const int buzzerPin2 = 5; // set the second buzzer pin

void setup() {
  bt.begin(9600); /* Define baud rate for software serial communication */
  Serial.begin(9600); /* Define baud rate for serial communication */
  pinMode(buzzerPin1, OUTPUT); // initialize the first buzzer pin as an output
  pinMode(buzzerPin2, OUTPUT); // initialize the second buzzer pin as an output
}

void loop() {
  if (bt.available()) /* If data is available on serial port */
  {
    char c = bt.read(); // read the incoming data from Bluetooth module
    Serial.write(c); /* Print character received on to the serial monitor */
    if (c == '1') {
      digitalWrite(buzzerPin1, HIGH); // turn on the first buzzer
      digitalWrite(buzzerPin2, HIGH); // turn on the second buzzer
    } else if (c == '0') {
      digitalWrite(buzzerPin1, LOW); // turn off the first buzzer
      digitalWrite(buzzerPin2, LOW); // turn off the second buzzer
    } else if (c == '2') {
      delay(10000);
      digitalWrite(buzzerPin1, HIGH); // turn on the first buzzer
      digitalWrite(buzzerPin2, HIGH); // turn on the second buzzer
    }
  }
}
    
```

Figure 4: Application's coding

COMMERCIAL POTENTIAL

Our objective in developing this product was to create a solution that would benefit individuals of all ages and social classes. Our product is affordable, with a reasonable price of RM50, making it accessible to everyone. Despite its low cost, the product's comprehensive functions make it a valuable investment for anyone looking to improve their sleep schedule and prayer routine. With our innovative product, users no longer need to worry about waking up late, missing prayer times, or struggling with irregular sleep patterns. Our product is designed to effectively address these issues and provide a solution that is helpful for all.

Cost Of Material Used:

Material	Price (RM)
Pillow	7.00
Bluetooth Device	10.00
Arduino Set	25.00
Battery	3.50
Buzzer	3.00
Total price	43.50

Table 1: Price material used

Profit Margin

$$\begin{aligned} \% \text{ profit} &= \frac{\text{Selling price} - \text{Price cost}}{\text{Price Cost}} \times 100\% \\ &= \frac{\text{RM } 50 - \text{RM } 43.50}{\text{RM } 43.50} \times 100\% \\ &= 15\% \end{aligned}$$

CONCLUSION

To sum up, Salahsnooz is a highly effective product that successfully meets its objectives of helping people wake up on time. Looking towards the future, we plan to explore the potential of developing an application that can be downloaded on electronic devices, allowing us to expand our reach to an international audience.

We also plan to seek advice from the Malaysian Industrial Research and Standards Institute (SIRIM) to ensure that our product meets all safety standards, thereby increasing consumer confidence in our brand. Additionally, we aim to diversify our pillow designs, offering a variety of sizes to cater to different preferences. Finally, we are committed to replacing the alarm (buzzer) with a motor to reduce noise pollution and introduce a vibration function that gently wakes the user without disturbing those around them.

ACKNOWLEDGEMENT

First and foremost, we express our deepest gratitude to Allah S.W.T for His abundant grace, which has enabled us to successfully develop our product. We are also immensely grateful to our parents for their unwavering support, both financially and emotionally, throughout the entire production process. Additionally, we extend our heartfelt thanks to our lecturer, Ustazah Norakmal, for providing us with invaluable guidance and support throughout the development of our product. We also want to express our appreciation to our housemates for their willingness to dedicate their time and energy towards helping us brainstorm ideas and find solutions to any challenges that arise. Lastly, we would like to extend our sincere thanks to all those who have contributed to our success. Thank you very much for your help and support.

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