MINOR PROJECT REPORT

ALARM CLOCK USING PYTHON

Submitted by:

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DECLARATION

This is to declare that this report has been written by Jonnalagadda Padma. No part of the report is plagiarized from other sources. All information included from other sources have been duly acknowledged. I aver that if any part of the report is found to be plagiarized, I are shall take full responsibility for it.

Jonnalagadda Padma

Place:Guntur

Date:07-11-2023

CERTIFICATE

This is to certify that this project report entitled "……….ALARM CLOCK USING PYTHON…………….." submitted toVignan's Lara Institute Of Technology And Science For Women,Guntur, is a bonafide record of work done by "…………..JONNALAGADDA PADMA…………" under my supervision from "…01-11-2023.." to " …07-11-2023.."

ACKNOWLEDGEMENT

Apart from the efforts of myself, the success of any project depends largely on the encouragement and guidelines of many others. I take this opportunity to express my gratitude to the people who have been instrumental in the successful completion of this project. I would like to show my greatest appreciation to Prof. James Geller. I can't say thank you enough for his tremendous support and help. I feel motivated and encouraged every time I attend his meeting. Without his encouragement and guidance this project would not have materialized. The guidance and support received from all the members who contributed and who are contributing to this project, was vital for the success of the project. I am grateful for their constant support and help.

ABSTRACT

The usual excuse given by the student when the missed classes is that they overslept. Due to this problem, we have come out with the idea of smart alarm clock that can switch off the fan and switch on the light simultaneously. The main objective of this project is to design, searching for alternatives and make innovations to the existing alarm clock. This project applies mainly the concepts of physic and electrical. Later, we will discuss about how the alarm clock functions and how we will design this alarm clock in such a way that it is effective, portable and user-friendly, using simple tools and hardware. The strategies for management of this project are also included in this proposal.

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INTRODUCTION OF THE PROJECT

The objective of our project is to implement an alarm clock using Python. Python consists of some very innovative libraries such as datetime and tkinter which help us to build the project using the current date and time as well as to provide a user interface to set the alarm according to the requirement in 24-hour format.

In this Python project, we will consider using some Python libraries, namely, **Tkinter** and **datetime**. We will be using the current date and time in this project along with a feature of setting the alarm as per the current date and time found.

PROBLEM STATEMENT

It is common for students especially those who sleep alone to use alarm clocks to wake them up in the morning. Most university students nowadays have a difficulty waking up to attend classes. The existing alarm clock is ineffective to most students as it fail to wake them up.

The commercial alarm clock that is being use today can only make loud, noisy sound. The students are now accustomed to putting their alarm clock on snooze just to be able to sleep again. This result in them missing their classes. In a random survey, 5 out of 10 UTP students are late to their classes because they overslept.Therefore, to overcome this problem we plan to invent a smart alarm clock that could switch off the fan and switch on the light simultaneously when the alarm clock ring. This way the students are force to wake up and hence prevent them from oversleeping.Our alarm clock uses the latest technology to connect with the fan and the lamp by a wireless system. Therefore, the alarm clock is portable and user friendly as it is not wired to the normal household electrical current.

REQUIREMENTS OF THE PROJECT

We will need the **Tkinter** library along with the **datetime**, **time** and **winsound** modules.

1. **Tkinter library:** This library will allow us to create a window for the user in order to use the application.

2. **Datetime and time modules:** These modules will allow us to handle dates and times and help us manipulate them whenever required.

3. **winsound module:** This module will allow us to generate sounds for the alarm clock.

CODE

```python
#Importing all the necessary libraries to form the alarm clock:
from tkinter import *
import datetime
import time
import winsound



def alarm(set_alarm_timer):
    while True:
        time.sleep(1)
        current_time = datetime.datetime.now()
        now = current_time.strftime("%H:%M:%S")
        date = current_time.strftime("%d/%m/%Y")
        print("The Set Date is:",date)
        print(now)
        if now == set_alarm_timer:
            print("Time to Wake up")
            winsound.PlaySound("sound.wav",winsound.SND_ASYNC)
            break

def actual_time():
    set_alarm_timer = f"{hour.get()}:{min.get()}:{sec.get()}"
    alarm(set_alarm_timer)

clock = Tk()
clock.title("DataFlair Alarm Clock")
clock.iconbitmap(r"dataflair-logo.ico")
clock.geometry("400x200")
time_format=Label(clock, text= "Enter time in 24 hour format!",
fg="red",bg="black",font="Arial").place(x=60,y=120)
addTime = Label(clock,text = "Hour  Min   Sec",font=60).place(x = 110)
setYourAlarm = Label(clock,text = "When to wake you up",fg="blue",relief =
"solid",font=("Helevetica",7,"bold")).place(x=0, y=29)

# The Variables we require to set the alarm(initialization):
```

```python
hour = StringVar()
min = StringVar()
sec = StringVar()

#Time required to set the alarm clock:
hourTime= Entry(clock,textvariable = hour,bg = "pink",width =
15).place(x=110,y=30)
minTime= Entry(clock,textvariable = min,bg = "pink",width =
15).place(x=150,y=30)
secTime = Entry(clock,textvariable = sec,bg = "pink",width =
15).place(x=200,y=30)

#To take the time input by user:
submit = Button(clock,text = "Set Alarm",fg="red",width = 10,command =
actual_time).place(x =110,y=70)

clock.mainloop()
#Execution of the window.
```

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