LOVELY PROFESSIONAL UNIVERSITY

Transforming Education Transforming India

REPORT FOR

As a project work for the course

PYTHON PROGRAMMING(INT 108)

section – koc05

Name – **Sonal kumar singh**
Registration No. **12216843**
Roll No. **63**
Semester – **1st semester**
submitted to – **Mrs. Manbir kaur**

Date of submission – **30/12/2022**

SCHOOL OF COMPUTER SCIENCE AND ENGINEERING

LOVELY PROFESSIONAL UNIVERSITY,JALANDHAR,PUNJAB

INDIA

Student declaration

This is to declare that this project has been prepared by us. No part of the project is copied from other sources . All information included from other source have been acknowledged .we are that if any part of the project is found to be copied. We are shall take full.

- Sonal kumar singh(12216843)

  Roll No. 63
- Ganesh pardhiv Duvvuri(12221315)

  Roll No. 22

INDEX

PYTHON - INTRODUCTION	
PROJECT & CODE	
RESULTS	

PYTHON

- **INTRODUCTION -** Python is a dynamically-typed garbage-collected programming language developed by Guido van Rossum in the late 80s to replace ABC. Much like the programming language Ruby, Python was designed to be easily read by programmers. Because of its large following and many libraries, Python can be implemented and used to do anything from webpages to scientific research.

PROJECT 18:-

clock angle problem: Given time in hh: mm format in 24-hour Notation, calculate the shorter angle between the hour and minute hand in an Analog clock.
Input: 5:30
Output: 15 degree
Input: 21:00
Output: 90 degree
Input: 12:00
Output: 0 degree

- CODE:

```
def  clockangle(hour , minutes):
    if 00 <= hour <= 24 and 00 <= minutes <= 60:
        #converting the  24hr format to 12 to make calculation easier
        if hour > 12:
         hour = hour – 12
        #if  user  inputs  3 : 60 the program will assume the time as 4: 00
        if minutes == 60:
          hour = hour + 1
          minutes = 00
        #calculating the angle
        hour = hour + minutes / 60
        handiff = abs(hour – minutes / 5)
        preangle = handoff * 30
        postangle = min(preangle, 360 – preangle)
        return postangle
    else:
      print("Enter a correct  time.")
      exit()


Print("_____
_____\n")
Print("Give a time in hh : mm format in 24 hour notation")
Print("_____
_____\n")
Postangle=clockangle(int(input("Hour: ")), int(input("Minutes: ")))
angle=format(postangle, "2f.")
Print("\nThe difference between the hour and the minute hand  is" , angle + "0"
```

RESULTS

If we take:-

- Input = 5:30

Then, the difference between the hour and the minute hand is 15.00 degree.

- Input = 21:00

- Then, the difference between the hour and the minute hand is 90.00 degree.

- Input = 12:00

- Then, the difference between the hour and the minute hand is 0 degree.

BONAFIDE CERTIFICATE

Certified that this project on " clock angle problem" of INT108 is the bonafide work of "SONAL KUMAR SINGH" and "GANESH PARDHIV DUVVURI"who carried the project work under my supervision.

MANBIR KAUR

INT108