PYTHON PROJECT

**Clock Angle Problem**

Under the guidance of my favorite teacher

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**Technology Used**

**Python-** Python is a high-level, general-purpose programming language. Its design philosophy emphasizes code readability with the use of significant indentation.

Python was conceived in the late 1980s by Guido van Rossum at Centrum Wiskunde and Informatica in the Netherlands as a successor to the ABC programming language which was inspired by SETL, capable of exception handling and interfacing with the Amoeba operating system. Its implementation began in December 1989.

Python is dynamically-typed and garbage- collected. It supports multiple programming paradigms, including structured (particularly procedural), object-oriented and functional programming. It is often described as a “batteries included” language due to its comprehensive standard library.

# ABOUT PROJECT

**Clock Angle Measurement** **–** The clock angle measurements, in this project if the user gives input in terms of hour : minutes format, then the code will give output as the angle between the hour and the minute hand.

## CODE OF THE PROJECT-

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 = 0.5\*(hour\*60+minutes)

        minutes=6\*minutes

        hour = hour + minutes / 60

        angle=abs(hour - minutes)

        angle=min(360-angle, angle)

        return angle

    else:

        print("Enter a correct time.")

        exit()

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n")

print("Give a time in hh:mm format in 24 hour notation")

print("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n")

angle=clockangle(int(input("Hour: ")), int(input("Minutes: ")))

postangle=format (angle, ".2f")

print("\nThe difference between the hour and the minute hand is", postangle + "\*")

## INPUT AND OUTPUT-

## Text Description automatically generated