

TIME DIFFERENCE

AIM :

Design a Python Script to determine the time difference between two given times in HH:MM:SS format.

ALGORITHM :

STEP 1 : Start the process

STEP 2 : Get the input from the user in the format HH:MM:SS

STEP 3 : The given time will be converted into seconds.

STEP 4 : Find the difference from seconds.

STEP 5: Then difference is again converted into HH:MM:SS.

STEP 6 : Print the result.

STEP 7 : Stop the process.

CODING :

```
def getTimeInSeconds(str):
```

```
    curr_time = str.split(':')
    t = (int(curr_time[0]) * 60 * 60
        + int(curr_time[1]) * 60
        + int(curr_time[2]))
    return t
```

```
def convertSecToTime(t):
```

```
    hours = t // 3600
    if hours < 10:
        hh = "0" + str(hours)
    else:
        hh = str(hours)
    min = (t % 3600) // 60
    if min < 10:
        mm = "0" + str(min)
    else:
```

```

        mm = str(min)
    sec = ((t % 3600) % 60)
    if sec < 10:
        ss = "0" + str(sec)
    else:
        ss = str(sec)
    ans = hh + ":" + mm + ":" + ss
    return ans

```

```

def timeGap(st, et):
    t1 = getTimeInSeconds(st)
    t2 = getTimeInSeconds(et)
    if (t1 - t2 < 0):
        time_diff = t2 - t1
    else:
        time_diff = t1 - t2
    return convertSecToTime(time_diff)

```

```

print("Enter the date format HH:MM:SS ")
st = input("Enter the first time : ")
et = input("Enter the Second time : ")
print("Time difference : ",timeGap(st, et))

```

OUTPUT:

```

Enter the date format HH:MM:SS
Enter the first time : 05:20:12
Enter the Second time : 12:04:50
Time difference : 06:44:38

```

RESULT :

Thus, the python programme for calculating the Time difference between two given Times has been executed and verified successfully.