

# **TIME CONVERSION**

The **time\_conversion** function converts a time string in "hh:mm:ss AM/PM" format to military time.

The **timeit** module is used to calculate the time it takes to execute the **time\_conversion** function.

## **EXPLANATION:**

### **1. Time Conversion:**

- The **time\_conversion** function accepts an argument of a time string in "hh:mm:ss AM/PM" format and returns the time in military time format.
- Using the **split** method, the function first splits the time string into hours, minutes, seconds, and AM/PM parts.
- The **map** function converts the hours, minutes, and seconds to integers.
- If the time is in the PM and the hours are not equal to 12, the function adds 12 to the hours.
- Finally, the function utilises string formatting to return the time in military time format.

### **2. Timeit:**

- The **timeit** module is used to calculate the time it takes to execute the **time\_conversion** function.
- The **timeit** module's **default\_timer** method is used to obtain the current time before and after the function call.
- The function's execution time is the difference between the two times.
- Along with the converted time, the execution time is printed.

## **POSSIBLE BUGS:**

- If the input time string is not in the "hh:mm:ss AM/PM" format, the method will return an error.
- If the input time string includes inaccurate values for hours, minutes, or seconds, the function may fail to output the correct military time.

## **POSSIBLE IMPROVEMENT:**

- Input validation should be implemented to ensure that the input time string is in the correct format.
- Error handling should be comprised to handle invalid input values for hours, minutes, or seconds.

