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|  | SHRI SANT GAJANAN MAHARAJ COLLEGE OF ENGG. | | LABORATORY MANUAL | |
| | PRACTICAL EXPERIMENT INSTRUCTION SHEET | | | |
| | EXPERIMENT TITLE : Write a python script to print the current date in the following format "Sun May 29 02:26:23 IST 2017" | | | |
| EXPERIMENT NO. : SSGMCE/WI/IT/01/3IT09/01 | | | ISSUE NO. : 00 | ISSUE DATE : 30.07.2023 |
| REV. DATE : | | REV. NO. : | DEPTT. : INFORMATION TECHNOLOGY | |
| LABORATORY : 3IT09 COMPUTER SKILL LAB – I | | | SEMESTER : III | PAGE: 1 OF 2 |

1.0) AIM: Write a python script to print the current date in the following format "Sun May 29 02:26:23 IST 2017"

2.0) SCOPE: This Python script is designed to provide students with practical exposure to working with dates and times using the datetime module. The script's primary objective is to print the current date in a specific format, fostering an understanding of datetime manipulation and formatting.

3.0) FACILITIES/ APPARATUS:

1. Python development environment (e.g., IDLE)
2. Input mechanism (keyboard)

4.0) THEORY:

The Python script exemplifies the utilization of the datetime module to retrieve the current date and time and format it as per the specified format. The following steps elucidate the script's execution:

4.1) Using the datetime Library in Python with strftime() for Different Formats:


The datetime library in Python allows you to work with date and time objects effectively. The strftime() method (string format time) is used to format date and time objects as strings in various formats.

Example:

```
from datetime import datetime

# Current date and time
current_time = datetime.now()

# Formatting in different formats
print("Default Format:", current_time.strftime('%Y-%m-%d %H:%M:%S'))
print("Date:", current_time.strftime('%d/%m/%Y'))
print("Time:", current_time.strftime('%I:%M %p'))
```

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| LABORATORY : 3IT09 COMPUTER SKILL LAB – I | | | SEMESTER : III | PAGE: 2 OF 2 |

Output:


```
Default Format: 2023-08-16 11:15:30
Date: 16/08/2023
Time: 11:15 AM
```

Explanation:

1. We import the datetime class from the datetime module.
2. Using datetime.now(), we get the current date and time.
3. We use the strftime() method to format the date and time in different ways:
 - %Y: Year with century as a decimal number.
 - %m: Month as a zero-padded decimal number.
 - %d: Day of the month as a zero-padded decimal number.
 - %H: Hour (24-hour clock) as a zero-padded decimal number.
 - %M: Minute as a zero-padded decimal number.
 - %S: Second as a zero-padded decimal number.
 - %I: Hour (12-hour clock) as a zero-padded decimal number.
 - %p: AM or PM.

The **datetime** library in Python provides powerful tools for handling date and time. The **strftime()** method allows you to format date and time objects according to various patterns. By customizing the format strings, you can represent dates and times in different ways for diverse applications.

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4.2) Program Explanation:


1. Module Import: Begin by importing the datetime module using the import statement. This module provides classes for working with dates and times.
2. Current Date Retrieval: Employ the datetime.datetime.now() function to obtain the current date and time.
3. Date Formatting: Use the strftime() method to format the current date according to the desired format. The format string %a %b %d %H:%M:%S IST %Y specifies the layout of the formatted date.
4. Print Formatted Date: Display the formatted date using the print() function.

Functions/Data Types Used - Explanation with Example:

1. import Statement: This statement allows access to external modules in Python. Example: import datetime.
2. datetime Module: This module provides classes for manipulating dates and times. In the script, the datetime.datetime class is utilized.
3. datetime.datetime.now() Function: This function retrieves the current date and time. Example: current_datetime = datetime.datetime.now().
4. strftime() Method: This method is used to format a datetime object as a string based on the provided format string. Example: formatted_date = current_datetime.strftime("%a %b %d %H:%M:%S IST %Y").

Example Syntax and Description:

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| LABORATORY : 3IT09 COMPUTER SKILL LAB – I | | | SEMESTER : III | PAGE: 4 OF 2 |

```
import datetime

current_datetime = datetime.datetime.now()
formatted_date = current_datetime.strftime("%a %b %d %H:%M:%S IST %Y")
print(formatted_date)
```

Program

```
import datetime

# Get the current date and time
current_datetime = datetime.datetime.now()

# Format the date in the desired format
formatted_date = current_datetime.strftime("%a %b %d %H:%M:%S IST %Y")

# Print the formatted date
print(formatted_date)
```


4.3) Explanation of Execution:

1. The **datetime** module is imported.
2. The current date and time are retrieved using **datetime.datetime.now()**.
3. The **strftime()** method is used to format the date into the specified format.
4. The formatted date is printed using the **print()** function.

5.0) Conclusion:

This Python script cultivates students' understanding of the **datetime** module, datetime manipulation, and formatting. By obtaining the current date and time and converting it into a desired

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format, students gain practical insight into working with time-related data. This experiment encourages comprehension of module usage, function calls, and formatting techniques, reinforcing students' foundational programming skills in date and time operations.

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