

## Topic 7: Dates in Python

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### ◆ Definition

Python uses the **datetime module** to work with dates and times.

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### ◆ Terminologies

- **datetime:** Combination of date and time.
  - **date:** Year, month, day.
  - **time:** Hours, minutes, seconds, microseconds.
  - **timedelta:** Difference between two dates or times.
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### ◆ Example + Output

```
from datetime import datetime, date
```

```
today = date.today()
```

```
print("Today's date:", today)
```

```
now = datetime.now()
```

```
print("Current date and time:", now)
```

#### **Output:**

Today's date: 2025-11-10

Current date and time: 2025-11-10 08:30:15.123456

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### ◆ Challenges

**Solved Challenge 1:** Print current year, month, day

```
from datetime import date
```

```
today = date.today()
print(today.year, today.month, today.day)
```

**Solved Challenge 2:** Add 5 days to current date

```
from datetime import date, timedelta
today = date.today()
future = today + timedelta(days=5)
print(future)
```

**Your 18 Challenges:**

1. Print current time (hours, minutes, seconds).
2. Calculate difference between two dates.
3. Print day of the week for today.
4. Format date as "DD/MM/YYYY".
5. Format date as "Month Day, Year".
6. Get current month name.
7. Add 10 hours to current datetime.
8. Subtract 7 days from today.
9. Create a date object for your birthday.
10. Compare two dates.
11. Get weekday number of a date.
12. Print ISO format of current date.
13. Check if a year is leap year.
14. Create datetime object with hour, minute, second.
15. Extract year from datetime.
16. Extract time only from datetime.
17. Print tomorrow's date.
18. Calculate number of days until New Year.

