using date functions in Python, including date creation, formatting, and arithmetic.

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1. Importing Date Module

from datetime import date, timedelta

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2. Get Today's Date

from datetime import date

today = date.today()
print("Today's date:", today)

Output:

Today's date: 2025-06-05

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3. Create a Specific Date

from datetime import date

my_birthday = date(2000, 12, 15)
print("My birthday is:", my_birthday)

Output:

My birthday is: 2000-12-15

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4. Access Date Components

```
today = date.today()
print("Year:", today.year)
print("Month:", today.month)
print("Day:", today.day)
```

Output:

```
Year: 2025
Month: 6
Day: 5
```

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5. Format Date with strftime()

```
today = date.today()
formatted_date = today.strftime("%A, %d %B %Y")
print("Formatted date:", formatted_date)
```

Output:

```
Formatted date: Thursday, 05 June 2025
```

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6. Date Arithmetic with timedelta

Add Days:

```
today = date.today()
future_date = today + timedelta(days=10)
```

```python
print("10 days from today:", future_date)
```

Subtract Days:

```python
past_date = today - timedelta(days=7)
print("7 days ago was:", past_date)
```

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7. Difference Between Two Dates

```python
date1 = date(2025, 6, 5)
date2 = date(2025, 6, 20)
diff = date2 - date1
print("Difference in days:", diff.days)
```

Output:

Difference in days: 15

Detailed explanation with examples of using datetime functions in Python for date and time.

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1. Importing datetime Module

```python
from datetime import datetime, timedelta
```

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2. Get Current Date and Time

```python
from datetime import datetime

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

Output example:

Current date and time: 2025-06-05 16:30:45.123456

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3. Create a Specific Date and Time

```python
from datetime import datetime

dt = datetime(2025, 6, 5, 14, 30, 0)  # Year, Month, Day, Hour,
Minute, Second
print("Specific datetime:", dt)
```

Output:

Specific datetime: 2025-06-05 14:30:00

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4. Access Date and Time Components

```python
now = datetime.now()
print("Year:", now.year)
print("Month:", now.month)
print("Day:", now.day)
print("Hour:", now.hour)
print("Minute:", now.minute)
print("Second:", now.second)
```

Output:

Year: 2025
Month: 6
Day: 5
Hour: 16
Minute: 30
Second: 45

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5. Format Date and Time with strftime()

```
now = datetime.now()
formatted = now.strftime("%d-%m-%Y %H:%M:%S")
print("Formatted datetime:", formatted)
```

Output:

Formatted datetime: 05-06-2025 16:30:45

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6. Date and Time Arithmetic with timedelta

Add 2 hours and 30 minutes:

```
from datetime import timedelta

now = datetime.now()
future_time = now + timedelta(hours=2, minutes=30)
print("Future time:", future_time)
```

Subtract 15 minutes:

```
past_time = now - timedelta(minutes=15)
print("Past time:", past_time)
```

7. Difference Between Two datetime Objects

```
dt1 = datetime(2025, 6, 5, 14, 0, 0)
dt2 = datetime(2025, 6, 5, 16, 30, 0)
diff = dt2 - dt1
print("Difference:", diff)
print("Difference in seconds:", diff.total_seconds())
```

Output:

```
Difference: 2:30:00
Difference in seconds: 9000.0
```