

Assignment #13

part-2

1. What is the difference between `math.floor()` and `math.ceil()`?

`math.floor()` returns the largest integer less than or equal to a number, while `math.ceil()` returns the smallest integer greater than or equal to it. For example, `floor(4.7) → 4`, `ceil(4.7) → 5`.

2. How is `datetime.timedelta()` useful in real-time applications?

`datetime.timedelta()` represents a duration or time difference, and it's useful for calculating future/past dates, setting countdowns, deadlines, or reminders in real-time systems.

3. Explain how `calendar.weekday()` works

`calendar.weekday(year, month, day)` returns the day of the week as an integer (0 = Monday, 6 = Sunday) for the given date. It helps determine which day a particular date falls on.

4. Why is the `math` module needed when Python has `**` for power?

The `**` operator works for basic exponentiation, but `math` provides more precise, optimized, and advanced functions like `math.pow()`, `sqrt()`, and trigonometric operations.

5. How do you format dates for display or reports?

You can use `strftime()` to format dates into readable strings, e.g., `datetime.now().strftime("%d-%m-%Y %H:%M:%S")` for "17-07-2025 23:59:59".