

Time & Time Zones

Computing

The rules that prevent the entire category of date bugs.

Dates are the most consistently underestimated source of bugs in software.

Always

Store timestamps in UTC

Store the IANA zone name, not the offset

Use ISO 8601: 2026-09-05T14:30:00Z

Use the platform's date library

Never assume

A day is 24 hours — DST breaks it

Offsets are whole hours — some are :30 or :45

A zone's rules are fixed — they change by law

A year has 365 days, or a minute 60 seconds

Gotchas

2 a.m. can occur twice, or not at all

Sorting local times across zones is wrong

'Tomorrow' depends on the user's zone

Unix time ignores leap seconds

An offset like +01:00 is not a time zone. Europe/London is — because only the name knows when the rules change.