Real-world case where a software application required critical maintenance

Case: Aadhaar Authentication System Maintenance

Background:
Aadhaar is India's national biometric identification system used for verifying the identity of over a billion citizens. It is used by various government and private services for authentication, such as banking, subsidies, mobile connections, and more.

The Issue:
In 2018, the Aadhaar authentication system faced critical performance issues due to a sudden increase in the number of authentication requests. Many users reported delays and failures while trying to authenticate their identity. This affected services relying on Aadhaar for verification and caused major disruptions.

Why Maintenance Was Critical:

- The system handles millions of authentication requests daily, so any downtime or slow performance impacts essential services.
- Security concerns were high, as Aadhaar data is sensitive personal information.
- The system needed to handle peak loads efficiently, especially during subsidy disbursal or election times.

Maintenance Actions Taken:

- Immediate performance tuning was done to optimize database queries and server response times.
- Server infrastructure was scaled up to handle increased loads.
- Security patches were applied to fix vulnerabilities discovered during audits.
- Code was refactored in some modules to reduce latency and improve reliability.

Outcome:
The maintenance helped stabilize the system, improve response times, and restore user confidence. It ensured uninterrupted delivery of services relying on Aadhaar authentication.