Problem

As a Site Reliability Engineer (SRE), you are responsible for ensuring the reliability and availability of our systems. In this assignment, you will participate in an incident response simulation focused on a hypothetical scenario involving a service outage.

Incident Description 1 :

- **Service Affected**: Payment Gateway
- **Symptoms**:
  - Sudden spike in error rates exceeding the threshold.
  - Complete loss of connectivity to the payment gateway.
- **Impact**:
  - Inability to process customer transactions.
  - Revenue loss during peak hours.
- **Timeline**:
  - Incident Start Time: 14:30 UTC
  - Peak Error Rates Observed: 14:45 UTC
  - Service Outage Detected: 15:00 UTC

Environment Details:

- **System Architecture**:
  - Payment Gateway Service: Hosted on Kubernetes clusters
  - Backend Database: Amazon RDS (MySQL).
  - Frontend Application: Deployed on AWS amplify.
- **Monitoring Tools**:
  - New Relic for application performance monitoring.
  - CloudWatch for AWS resource monitoring.
  - Splunk for log analysis

Provide steps of response by detailing out the response plan, parameters to be observed, probable root causes and proposed solutions for the same.

Incident Description 2:

A user accidentally deletes a key file containing critical credentials stored on a server, there is an immediate need to recover the deleted file to prevent service disruption and potential security breaches.

Provide a robust recovery process to restore the deleted access key file promptly while minimizing the impact on system availability and security.

Also propose a plan to avoid such incidents in future.

Assignment Deliverables:

1. Scenario 1: Provide an incident response Plan for the first incident scenario detailing the incident response plan, parameters to be observed, probable root causes and proposed solutions for the same.
2. Scenario 2: Provide a robust recovery process to restore the deleted access key file promptly while minimizing the impact on system availability and security. Also propose a plan to avoid such incidents in future.
3. Create a github repo with all the code, documents, readme and other resources included in your submission and share the repo with `atulxalts` and `jaywardhan01`
4. Share a link to your github repo via email
    a. atul.mishra@xalts.io
    b. jaywardhan.sawale@xalts.io

Note:

1. Assignment has to be submitted by 48 hours