Official Task Assignment Document

Title:

Solution Proposal and Implementation for Checksum Calculation of AWS S3 Objects

Objective:

To design, propose, and implement a solution that calculates a checksum (MD5) for newly uploaded objects to an AWS S3 bucket, stores the checksum file with the same prefix but with an ".md5" extension, ensuring high availability and durability. The solution must be implemented using Infrastructure as Code (IaaC) with Terraform.

Key Deliverables:

- Solution Proposal Document:
    - Detailed architecture and design document.
    - List of AWS services utilized.
    - Workflow diagram of the checksum calculation and storage process.
    - Considerations for high availability and durability.
- Infrastructure as Code (IaaC) with Terraform:
    - Terraform scripts for deploying all required components.
    - Documentation and comments within the Terraform code.

Assessment Criteria:

- Solution Design:
    - Comprehensiveness of proposed solution
    - Clarity and accuracy of the architecture diagram
    - Detail and clarity of design documentation
- Implementation:
    - Accuracy and completeness of Terraform scripts
    - Correctness and efficiency of AWS services configuration
- Documentation:
    - Thoroughness of process documentation
    - Quality and usability of the deployment and management guide
- Testing:
    - Development of a comprehensive test plan and test cases
    - Successful validation of the solution in a test environment