**INTERNSHIP: STUDENT DAILY REPORT**

**Name of the Student:** Harshita Prakash

**Internship Project Topic:** Secured Docker Based Lab: Enforcing end-to-end security

**Name of the Organisation:** TCS ion

**Name of the Industry Mentor:** Debashis Roy

**Name of the Institution:** Amity University

**Day 1**

* **Date:** 26-02-2025
* **Day #:** 1
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Met with my mentor, to discuss the internship project goals and expectations. Received an overview of the company's cloud infrastructure on AWS."
  + **Task 2:** "Completed AWS foundational training modules, focusing on EC2, VPC, and IAM. Learned about key concepts like instance types, security groups, and key pairs."
  + **Task 3:** "Set up my AWS account and configured the AWS CLI on my workstation."

**Day 2**

* **Date:** 27-02-2025
* **Day #:** 2
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Created my first EC2 instance using the AWS Management Console. Launched an Ubuntu instance and connected to it via SSH."
  + **Task 2:** "Explored different EC2 instance types (t3.micro, t3.medium) and their use cases. Documented the cost differences and performance characteristics."
  + **Task 3:** "Configured security groups for the EC2 instance, allowing SSH access from my IP address and HTTP access from anywhere."

**Day 3**

* **Date:** 28-02-2025
* **Day #:** 3
* **Hours Spent:** 4
* **Activities done during the day:**
  + **Task 1:** "Installed and configured Apache web server on the EC2 instance. Deployed a simple HTML website to test the server."
  + **Task 2:** "Created an Elastic IP address and associated it with the EC2 instance to ensure a static public IP."
  + **Task 3:** "Learned about EBS volumes and added an additional volume to the EC2 instance for data storage. Formatted and mounted the volume."

**Day 4**

* **Date:** 01-03-2025
* **Day #:** 4
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Worked on automating EC2 instance creation using AWS CloudFormation. Started writing a CloudFormation template to launch an instance with a pre-configured web server."
  + **Task 2:** "Investigated the use of EC2 Instance Metadata and User Data. Practiced retrieving instance ID and other metadata from within the instance."
  + **Task 3:** "Troubleshooted an issue with the CloudFormation template related to security group rules. Debugged the template and resolved the error."

**Day 5**

* **Date:** 02-03-2025
* **Day #:** 5
* **Hours Spent:** 3
* **Activities done during the day:**
  + **Task 1:** "Completed the CloudFormation template for launching an EC2 instance with a web server. Successfully deployed the stack and verified the instance was running."
  + **Task 2:** "Implemented a basic monitoring solution for the EC2 instance using Amazon CloudWatch. Set up CloudWatch alarms to monitor CPU utilization."
  + **Task 3:** "Learned about different storage options for EC2, including EBS, Instance Store, and EFS. Compared their performance and cost."

**Day 6**

* **Date:** 03-03-2025
* **Day #:** 6
* **Hours Spent:** 3
* **Activities done during the day:**
  + **Task 1:** "Created an EC2 snapshot of the EBS volume."
  + **Task 2:** "Restored the EBS volume from the snapshot."
  + **Task 3:** "Created a new EC2 instance from the restored EBS volume."

**Day 7**

* **Date:** 04-03-2025
* **Day #:** 7
* **Hours Spent:** 1
* **Activities done during the day:**
  + **Task 1:** "Worked on optimizing the performance of the EC2 instance by choosing the right instance size."
  + **Task 2:** "Conducted load testing on the EC2 instance."
  + **Task 3:** "Analysed the results and suggested changes."

**Day 8**

* **Date:** 05-03-2025
* **Day #:** 8
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Learned about AWS Auto Scaling."
  + **Task 2:** "Configured an Auto Scaling group for the EC2 instance."
  + **Task 3:** "Tested the scaling policies."

**Day 9**

* **Date:** 06-03-2025
* **Day #:** 9
* **Hours Spent:** 4
* **Activities done during the day:**
  + **Task 1:** "Learned about Elastic Load Balancing."
  + **Task 2:** "Configured a Load Balancer to distribute traffic to the EC2 instance."
  + **Task 3:** "Tested the Load Balancer."

**Day 10**

* **Date:** 07-03-2025
* **Day #:** 10
* **Hours Spent:** 3
* **Activities done during the day:**
  + **Task 1:** "Secured the EC2 instance using IAM roles."
  + **Task 2:** "Updated security group rules."
  + **Task 3:** "Implemented security best practices."

**Day 11**

* **Date:** 08-03-2025
* **Day #:** 11
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Created a backup strategy for the EC2 instance."
  + **Task 2:** "Implemented the backup using AWS Backup."
  + **Task 3:** "Tested the backup and restore process."

**Day 12**

* **Date:** 09-03-2025
* **Day #:** 12
* **Hours Spent:** 2
* **Activities done during the day:**
  + **Task 1:** "Monitored the EC2 instance using CloudWatch."
  + **Task 2:** "Created CloudWatch dashboards."
  + **Task 3:** "Set up alerts for critical metrics."

**Day 13**

* **Date:** 10-03-2025
* **Day #:** 13
* **Hours Spent:** 4
  + **Task 1:** "Learned about disaster recovery."
  + **Task 2:** "Created a disaster recovery plan for the EC2 instance."
  + **Task 3:** "Tested the disaster recovery plan."

**Day 14**

* **Date:** 11-03-2025
* **Day #:** 14
* **Hours Spent:** 1
  + **Task 1:** "Documented the EC2 instance setup."
  + **Task 2:** "Created diagrams of the architecture."
  + **Task 3:** "Prepared a presentation."

**Day 15**

* **Date:** 12-03-2025
* **Day #:** 15
* **Hours Spent:** 3
* **Activities done during the day:**
  + **Task 1:** "Attended a meeting about a new project."
  + **Task 2:** "Discussed how EC2 instances would be used."
  + **Task 3:** "Started planning the infrastructure."

**Day 16**

* **Date:** 13-03-2025
* **Day #:** 16
* **Hours Spent:** 2
  + **Task 1:** "Worked on a proof of concept for a new application."
  + **Task 2:** "Deployed a test application on an EC2 instance."
  + **Task 3:** "Conducted initial testing."

**Day 17**

* **Date:** 14-03-2025
* **Day #:** 17
* **Hours Spent:** 4
  + **Task 1:** "Optimized the EC2 instance configuration for the application."
  + **Task 2:** "Improved performance."
  + **Task 3:** "Ensured security."

**Day 18**

* **Date:** 15-03-2025
* **Day #:** 18
* **Hours Spent:** 2
  + **Task 1:** "Integrated the EC2 instance with other AWS services."
  + **Task 2:** "Used S3 for storage."
  + **Task 3:** "Connected to a database."

**Day 19**

* **Date:** 16-03-2025
* **Day #:** 19
* **Hours Spent:** 2
  + **Task 1:** "Troubleshooted an issue with the application deployment."
  + **Task 2:** "Debugged the application."
  + **Task 3:** "Resolved the problem."

**Day 20**

* **Date:** 17-03-2025
* **Day #:** 20
* **Hours Spent:** 2
  + **Task 1:** "Documented the deployment process."
  + **Task 2:** "Created a knowledge base article."
  + **Task 3:** "Shared with the team."

**Day 21**

* **Date:** 18-03-2025
* **Day #:** 21
* **Hours Spent:** 2
  + **Task 1:** "Participated in a team meeting."
  + **Task 2:** "Discussed best practices for EC2 management."
  + **Task 3:** "Shared my learnings."

**Day 22**

* **Date:** 20-03-2025
* **Day #:** 22
* **Hours Spent:** 5
  + **Task 1:** "Assisted other team members with their EC2 issues."
  + **Task 2:** "Provided support."
  + **Task 3:** "Helped them troubleshoot."

**Day 23**

* **Date:** 22-03-2025
* **Day #:** 23
* **Hours Spent:** 1
  + **Task 1:** "Researched new EC2 features."
  + **Task 2:** "Looked into Graviton processors."
  + **Task 3:** "Evaluated their potential."

**Day 24**

* **Date:** 24-03-2025
* **Day #:** 24
* **Hours Spent:** 4
  + **Task 1:** "Worked on a cost optimization strategy."
  + **Task 2:** "Identified areas to reduce EC2 costs."
  + **Task 3:** "Suggested solutions."

**Day 25**

* **Date:** 26-03-2025
* **Day #:** 25
* **Hours Spent:** 3
  + **Task 1:** "Automated EC2 tasks with AWS Systems Manager."
  + **Task 2:** "Used automation."
  + **Task 3:** "Reduced manual work."

**Day 26**

* **Date:** 28-03-2025
* **Day #:** 26
* **Hours Spent:** 2
  + **Task 1:** "Improved the security of EC2 instances."
  + **Task 2:** "Implemented best practices."
  + **Task 3:** "Audited existing configurations."

**Day 27**

* **Date:** 31-03-2025
* **Day #:** 27
* **Hours Spent:** 4
  + **Task 1:** "Learned about containerization with Docker and ECS."
  + **Task 2:** "Explored running containers on EC2."
  + **Task 3:** "Understood the benefits."

**Day 28**

* **Date:** 03-04-2025
* **Day #:** 28
* **Hours Spent:** 4
  + **Task 1:** "Prepared a final presentation."
  + **Task 2:** "Summarized my internship experience."
  + **Task 3:** "Highlighted key achievements."

**Day 29**

* **Date:** 10-04-2025
* **Day #:** 29
* **Hours Spent:** 3
  + **Task 1:** "Presented my internship project."
  + **Task 2:** "Demonstrated the work I did with EC2."
  + **Task 3:** "Answered questions."

**Day 30**

* **Date:** 17-04-2025
* **Day #:** 30
* **Hours Spent:** 4
  + **Task 1:** "Completed my final report."
  + **Task 2:** "Submitted all required documents."
  + **Task 3:** "Received feedback from my mentor."