Course Name: Application Support Professional Training Program

Course Overview: Application Support role should cover technical skills, troubleshooting techniques, communication skills, and practical experience. The aim is to prepare learners for real-world challenges and responsibilities that an Application Support professional faces.

Course Duration:

12 weeks (3 months)

5-6 hours/week (Mix of theory, hands-on labs, and project work)

Syllabus

Module 1: Introduction to Application Support (Week 1)

1.1 Role of Application Support

  - Overview of Application Support.

  - Key responsibilities: Troubleshooting, incident management, monitoring.

  - Types of software and applications supported.

  - Common industries for Application Support roles.

1.2 Understanding the Application Lifecycle

  - Software development lifecycle (SDLC).

  - Role of support at various stages.

1.3 Introduction to ITIL Framework

  - ITIL Basics: Incident, Problem, Change Management.

  - Service request handling.

  - Understanding SLAs (Service Level Agreements) and KPIs.

Module 2: Operating Systems and Server Basics (Week 2-3)

2.1 Operating Systems Overview

  - Basics of Windows and Linux OS.

  - Working with the command line (Linux/Unix).

  - File system management, permissions, and processes.

2.2 Server Infrastructure Basics

  - Introduction to servers and virtual machines.

  - Server roles (Web, Database, File Servers).

  - Basic server troubleshooting techniques.

2.3 Monitoring and Logging

  - Tools for system monitoring (Nagios, Zabbix, SolarWinds).

- Understanding logs (Windows Event Viewer, Linux Syslog).

- How to troubleshoot using logs.

Module 3: Networking and Databases (Week 4-5)

3.1 Networking Basics for Application Support

  - TCP/IP model, OSI layers.

  - IP addressing, subnetting, DNS, DHCP, and firewalls.

  - Troubleshooting common network issues (ping, tracert, netstat).

3.2 Database Fundamentals

  - Understanding SQL and NoSQL databases.

  - Basic database queries (SELECT, INSERT, UPDATE, DELETE).

  - Database troubleshooting (timeouts, performance issues).

  - Working with database logs.

Module 4: Application Monitoring and Diagnostics (Week 6-7)

4.1 Application Monitoring Tools

  - Introduction to monitoring tools (Splunk, Dynatrace, New Relic).

  - Performance monitoring: CPU, memory, disk usage.

  - Application-specific metrics and logs.

4.2 Debugging and Troubleshooting Techniques

  - Basic debugging techniques for web and desktop applications.

  - Common errors (500 errors, database connection issues, etc.).

  - Memory leak detection, load balancing, and high availability.

Module 5: Incident, Problem, and Change Management (Week 8)

5.1 Incident Management Best Practices

  - Difference between incidents and problems.

  - How to handle high-priority incidents.

- Communication during incidents (creating clear incident reports).

5.2 Root Cause Analysis (RCA)

  - Steps for conducting RCA.

  - Documenting lessons learned.

5.3 Change Management

  - Understanding Change Requests (CR).

  - Evaluating the impact of changes.

  - Rollback plans and risk mitigation.

Module 6: Scripting and Automation (Week 9-10)

6.1 Introduction to Scripting Languages

  - Shell scripting basics (bash scripting for Linux).

  - PowerShell for Windows.

  - Automating repetitive tasks (log monitoring, backup processes).

6.2 Automation Tools

  - Introduction to Ansible, Jenkins.

  - Writing simple playbooks to automate basic tasks.

6.3 Continuous Monitoring

  - Automated alerts and notifications (setting thresholds).

  - Integrating monitoring tools with incident management systems.

Module 7: Customer Service and Communication Skills (Week 11)

7.1 Effective Communication with Stakeholders

  - How to communicate technical issues to non-technical teams.

  - Writing effective incident reports.

  - Handling escalations and customer feedback.

7.2 Collaboration Tools

- Working with tools like Jira, Confluence, Slack, and ServiceNow.

- Ticketing systems overview.

Module 8: Capstone Project (Week 12)

8.1 Real-World Project

  - Students will work on real-world application support cases.

  - Simulate incidents, document troubleshooting, and implement fixes.

  - Presenting findings and lessons learned.

8.2 Job-Readiness Preparation

  - Resume writing and interview tips.

  - Mock interviews based on real-world support scenarios.

  - Preparing for technical tests and assessments.

Tools & Platforms Covered:

  - Operating Systems: Windows, Linux/Unix.

  - Databases: MySQL, PostgreSQL, MongoDB.

  - Monitoring: Nagios, Splunk, Dynatrace, SolarWinds.

  - Ticketing Systems: ServiceNow, Jira, Zendesk.

  - Automation & Scripting: Bash, PowerShell, Ansible, Jenkins.

Assessment & Certification:

  - Weekly quizzes and assignments.

  - Final project evaluation.

  - Certificate of completion upon passing all modules.

Outcome:

After completing this course, participants will have the skills necessary to:

- Provide first and second-level support for applications.

- Perform incident management, troubleshooting, and root cause analysis.

- Use monitoring tools and automation for efficient support.

- Collaborate effectively with cross-functional teams and communicate technical issues.

This syllabus covers technical and soft skills essential for an Application Support role and prepares learners for job interviews and on-the-job tasks.