**Deployment Phase for Cafe Management System (CMS)**

**The Deployment Phase focuses on moving the CMS from development to a live, production environment, ensuring it runs smoothly and securely.**

**1. Server Setup**

* **Configure Tomcat Server:**
  + **Install Apache Tomcat on the production server.**
  + **Deploy the CMS WAR (Web Application Archive) file to the webapps directory.**
  + **Configure server settings (memory allocation, port settings, security configurations).**
* **Security Hardening:**
  + **Enable HTTPS with SSL certificates.**
  + **Set up firewall rules to restrict unauthorized access.**
  + **Implement secure user authentication protocols.**

**2. Database Configuration**

* **Set Up MySQL Database:**
  + **Install MySQL on the production server.**
  + **Create databases and tables as per the schema (Users, Orders, Inventory, etc.).**
  + **Apply initial data (sample menu items, admin user credentials, etc.).**
* **Database Security:**
  + **Use strong passwords and limit database access to the CMS server only.**
  + **Regular backups and replication for data redundancy.**
  + **Implement proper indexing for performance optimization.**

**3. User Training**

* **Documentation Preparation:**
  + **User Manuals: Step-by-step guides for staff (ordering process, inventory management).**
  + **Admin Guides: System configurations, user management, and advanced features.**
* **Training Sessions:**
  + **Hands-on workshops for staff to familiarize them with the CMS.**
  + **Q&A sessions to address any uncertainties.**
* **Support System:**
  + **Establish a helpdesk or support channel for post-deployment issues.**

**4. Deployment Strategy**

* **Phased Rollout:**
  + **Deploy the system in stages to minimize risks (e.g., start with a single outlet).**
* **Backup Plan:**
  + **Full backup of the current system before deployment.**
  + **Rollback procedures in case of critical issues.**
* **Monitoring:**
  + **Real-time system monitoring for performance, uptime, and errors.**
  + **Logging mechanisms to track user activities and system health.**