**Task:** Disk I/O Latency & Fault   
**Description:** Simulate slow disk I/O performance for the database.  
**Type:** IOChaos (latency & Fault)  
Simulating slow disk I/O performance for the database using IOChaos (latency) involves injecting delays in the disk input/output operations. This simulation helps in testing how the database and the application behave under performance degradation scenarios.  
  
**cd /root/kalyani/disk**

**./script.sh**

**Fault:** Based on the error codes we will get error message like   
  
 ERRNO 2: No such file or directory  
 ERRNO 5: I/O Error  
 ERRNO 28: No space on device

ERRNO 13: Permission Denied  
  
**Latency:** Using latency yaml. It will impact on UI. While performing deposit or send payment.  
  
**Recommendations to overcome these issues.**  
**Optimizing Disk Performance**  
 Implement disk striping (RAID) to improve read/write speeds.  
 Implement caching mechanisms to reduce disk read/write frequency.  
  
**Database Optimization**  
Use indexing and query optimization to minimize disk access.  
Implement read replicas to distribute the load.  
  
**Horizontal Scaling**  
Scale out the database by adding more instances to handle read/write operations more efficiently.  
Use sharding to split large databases into smaller, more manageable parts.  
  
**Asynchronous I/O**  
Implement asynchronous disk I/O operations to avoid blocking application threads while waiting for disk access.  
  
**Backup and Failover Strategies**  
Set up automated backups and failover mechanisms to ensure data integrity and availability in case of disk-related issues.  
  
**Retry Logic and Timeout Handling**  
Implement robust retry logic and timeout handling to ensure the application continues functioning even under degraded disk I/O performance.