**Data Model Definition**

**Trade Details**

|  |  |  |
| --- | --- | --- |
| **Property Name** | **Type** | **PK** |
| shareName | String |  |
| shareQuantity | Integer |  |
| sharePrice | Double |  |
| traderId | String | FK |
| buyOrSell | String |  |
| tradeId | String | PK |

**Non-Functional Requirements**

**High availability and Resiliency: -** To achieve high availability and resiliency we can implement various strategies like load balancing, failover mechanism, monitoring and alerting and COB plan for disaster recovery.

**Volume of trade requests such as 100K in an hour: -** We can implement CDQR design pattern and also create indexing and caching mechanism.

**Deployment strategy**: - Rolling Deployment to minimize down time.

**Database and why?: -**  MongoDB. As we are dealing with large volume of data, mongodb is highly scalable and highly performing when it come to large data. It also supports high availability with horizontal scaling.

**Monitoring system: -** App Dynamics, ITRS

**System Design: -**

