

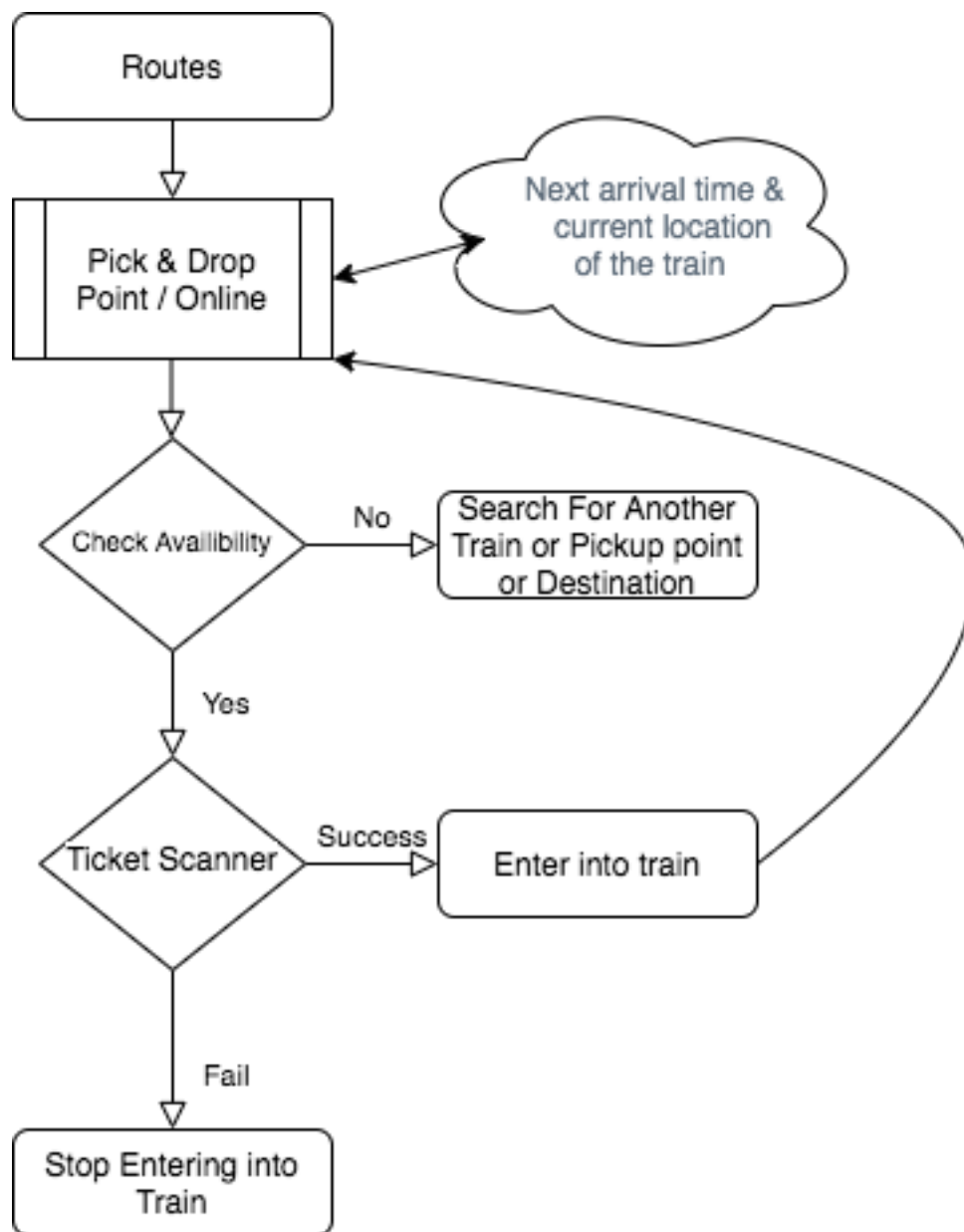
**Grameenphone hackathon**  
**Part-2**  
**(Category: “Business Analyst”)**

**Name:** Md. Tarek Hasan

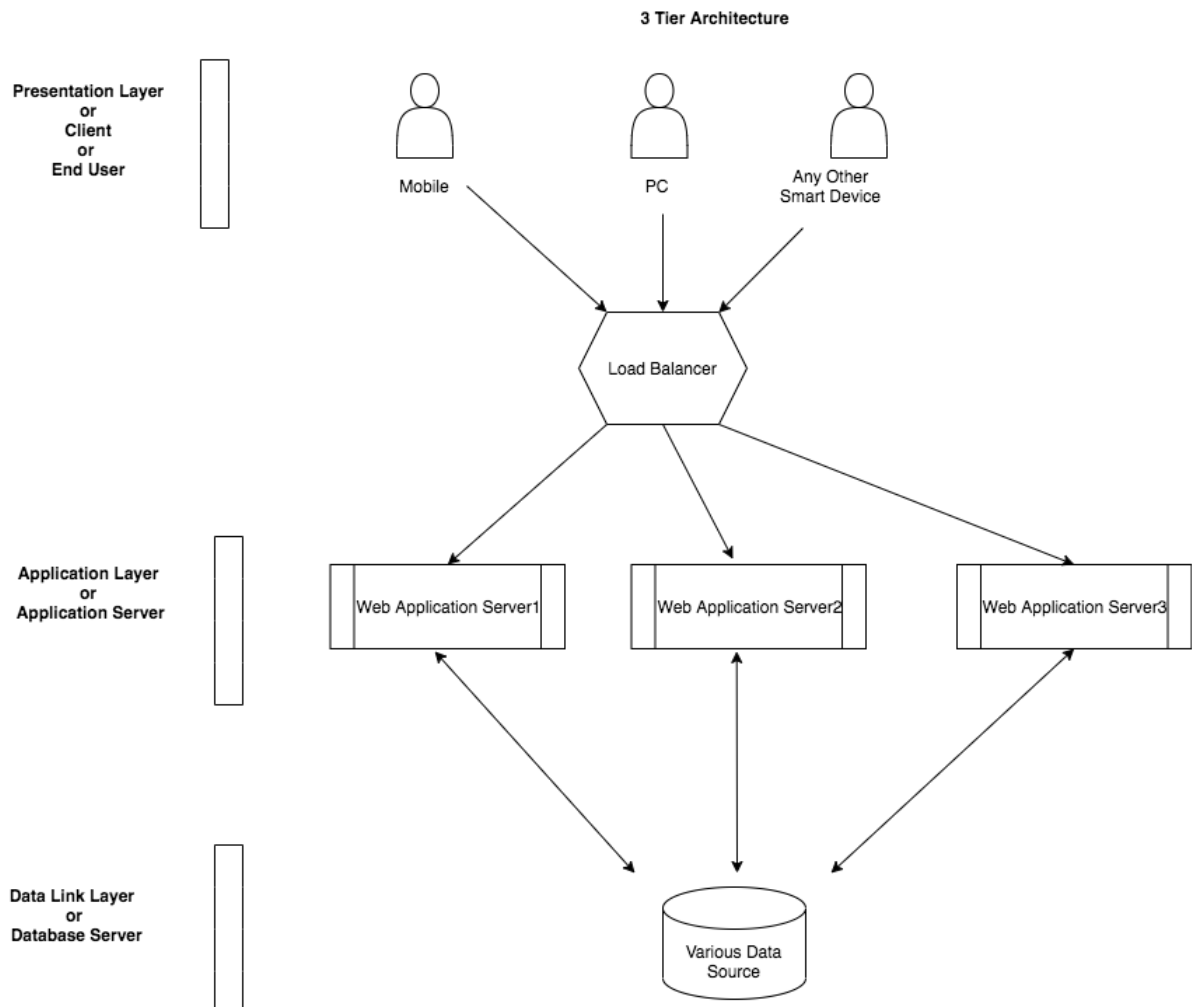
**Mobile:** 01670974776

**Email:** [tarek.inspire@gmail.com](mailto:tarek.inspire@gmail.com)

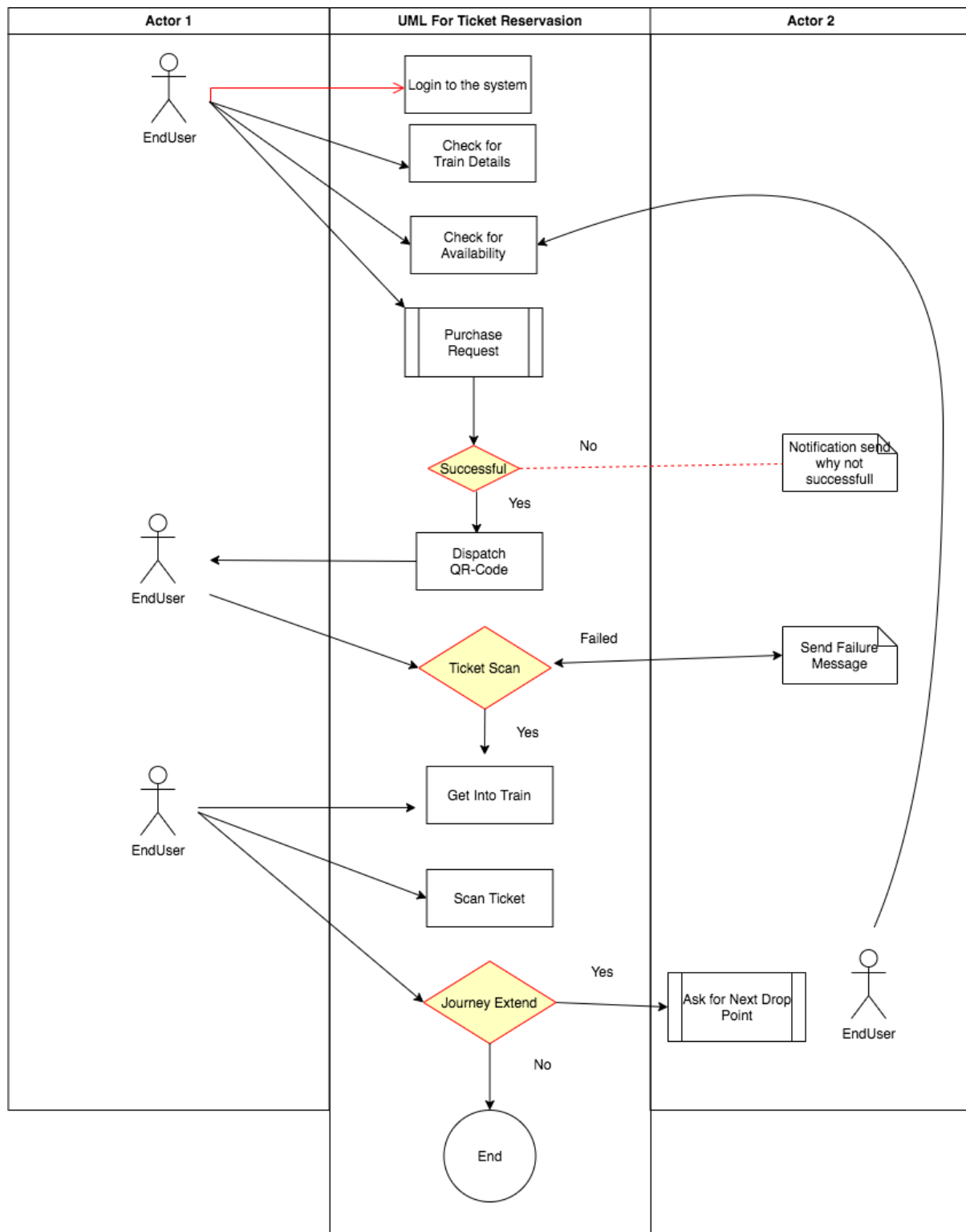
**1. High level design of the service flow**



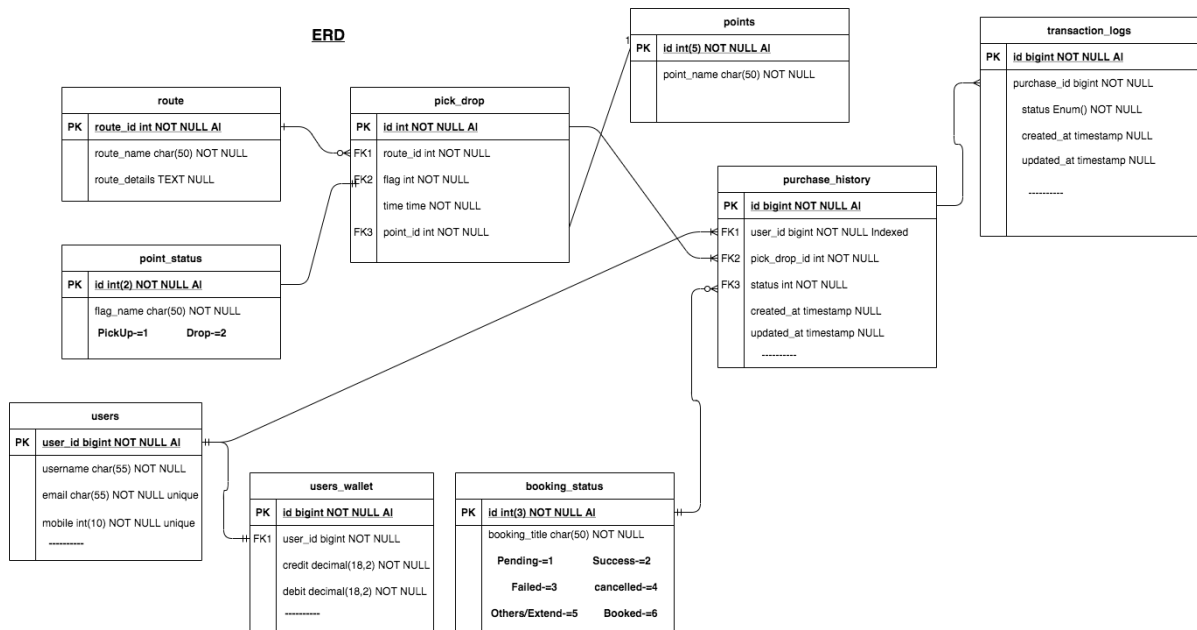
## 2. High level architecture of this system



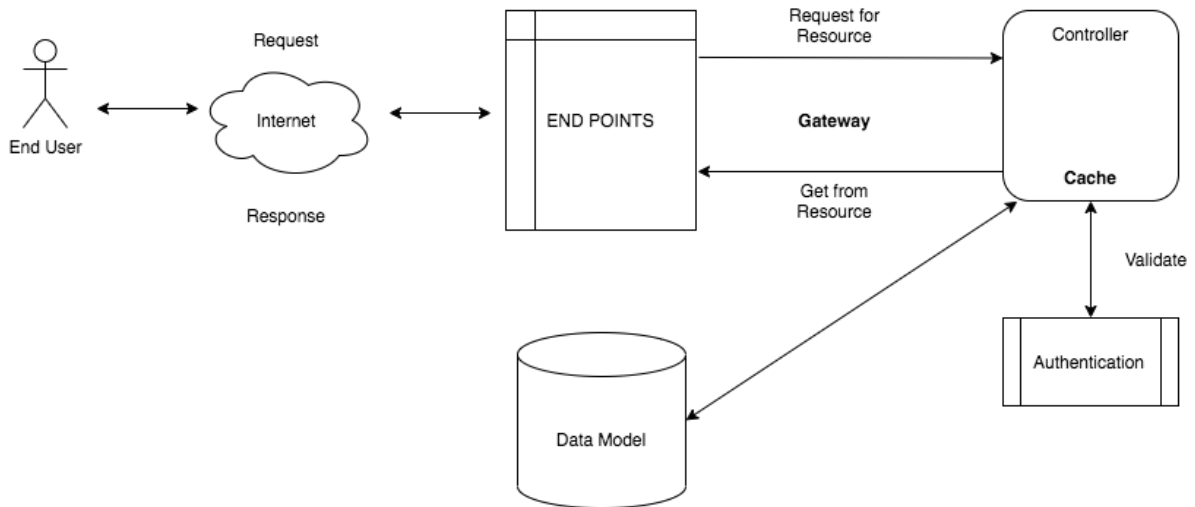
### 3. UML diagram



## 4. ERD



## 5. High Level API Designs



6. **TPS (transaction per second):**

**Calculation** = user forecast / time range;

App Login = 100k per day      86400 seconds in a day

1.16 transactions per second

Booking = 80k per day

0.93 transactions per second

Purchase = 50k per day

0.58 transactions per second

Complete Journey = 25k per day

0.3 transactions per second

### **Infrastructure:**

Get transaction per second by approx. user request in a given range (Above Example)

Get TMM Count

TPS (of full server system) = (TMM \* TPS)

0 ----- 5 ----- 10ms

if transaction come in between after 5 and failed then we will take a log & regenerate the transaction (while limit exceed of TPS)

Need to Calculate Bandwidth

Estimate Peak Load

Using JMeter we can in in detail

Scale Database, use sharding technology & use License product to enhance TPS.

Highly Parallel Loosely Coupled

Ensure that multiple processing complexes remained synchronized in real-time.