February.2018 - March.2018

REBOOT!

...TO SDE-1...

Do & Learn:

Solve a Problem! ***Less Gyan, More Action!***

Collaborate:

Work as a Team!

Be Guided:

Walk with a Mentor!

- 3/4/5 Member Teams
- Members from assorted backgrounds & technologies
- Learn Together! Share & Receive knowledge

YOU ARE GROUP-ED!!

CUSTOMER ACCOUNT MANAGEMENT

```
Build a Customer Account Management UI
So the Customers can view and manage their Profiles
Securely, supported by Registration & Login
```

```
Given the SLAs:

- ~1 Million Customers & Growing
- ~100,000 page-views per day (80:20 – reads:writes)
- < 2 sec. page load times
- ~1000 Concurrent Users
```

UI

```
- Remember My Login
- Disconnected (Offline) mode
- Auto-populate address using GPS
- Secure and quick access using a 4-digit pin
- Certificate Pinning
- Integrate google analytics to
   report on the logging behaviour,
   registration drop-offs etc.,
   google analytics to report on load times,
- Capture favorite store information
   and push offers when they are in the vicinity.
- A secure wallet for storing offers
   and should take care of expiry (7 days expiry)
```

ADDITIONAL MOBILE REQUIREMENTS

```
Build the underlying service(s) to support account management
```

```
- Create / Modify Customer Account Data, with PII Data
- Accessible to both internal apps & external Tesco consumers
- Secure Access
- Response Times < 200 ms per call
- Throughput > ~2000 TPS
```

SERVICE

Build an integration layer where profile data from multiple channels
(both online & offline – ex: CSD Tills, Support Centres) are recd.,
in daily batches having the last 90-day spend.

Identify segments that will divide customers
into three equal groups based on the 90-day spend data

- ~100,000 profile changes from across ~3500 stores
  (Including updates, activations & de-activations)
- Profile changes recd. as files in CSV format, via FTP/SFTP
- All Stores transmit the files almost at the same time
- ~3500 files to be processed, every day

INTEGRATION

System and component design

- Document high level designs with design decisions
- Logical and physical views

Document low level designs

- Class diagrams
- Sequence diagrams

Document data models & API contracts

Apply best-practices, CI-CD & design principles

Consider & apply key NFRs in the design

- Performance
- Scalability
- High Availability
- Security

Awareness about trade-offs

EVALUATION EXPECTATIONS

EXPLORE!

HAVE FUN!!!