**DABBAWALA – OBJECT MODEL – V1 – 09-Aug-2020**

**Lender**

* Lender ID
* Static Data
  + Name
  + Address
  + Bank details
* Risk Appetite – Lender can set the level (say : Low [X% interest], Medium [Y%], High [Z%])
* Pending Amount – monies waiting to be invested
* Active Trades (see definition of a **TRADE** further below) – list of loans given in market
* Completed Trade – list of loans that were paid back
* Partially complete trades – loans not paid even after expiry date
  + Partially paid amount
  + Defaulted amount

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**Borrower**

* Borrower ID
* Static Data
  + Name
  + Address
  + Bank details
* Credit rating – gets recalculated after each new loan and repayment (see algo section below)
* Active Trades – list of loans given in market
* Completed Trade – list of loans that were paid back
* Partially complete trades – loans not paid even after expiry date
  + Partially paid amount
  + Defaulted amount

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**Agent –** Person who managers a bunch of dabbawallas

* Agent ID
* Static Data
  + Name
  + Address
  + Bank details
* List of Borrower IDs managed by this agent
* Commission Rate
* Commission earned so far
* Trust Rating – (similar to credit rating, but for agents)

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**Trade (Each atomic piece of loan agreement)**

* Trade ID
* Borrower ID
* Lender ID
* Loan Amount
* Interest Rate – based on risk appetite of lender – Low, Medium, High
* Expiry Date
* Final Amount to pay = FunctionOf(Loan Amount, interest rate, expiry date, commission etc)

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**ALGORITHMS TO BUILD:**

* Credit Rating calculation of Borrower, based on:
  + Previous Trades – amount, completed, defaulted
  + Any collateral held
  + Trust Rating of his Agent
* Trust Rating of Agent
  + Credit rating of the borrowers he manages
  + Any collateral held
* Trade matching Engine. Every time a borrower applies. match lender based on:
  + Filter by lender risk appetite level – based on borrower credit rating
  + lenders queue i.e. first come-first-serve