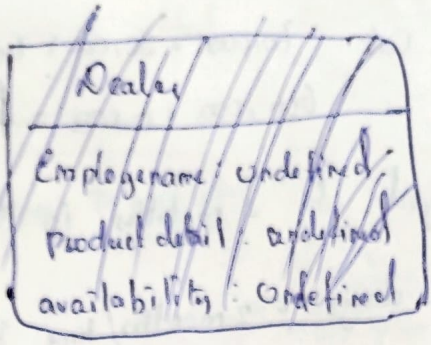
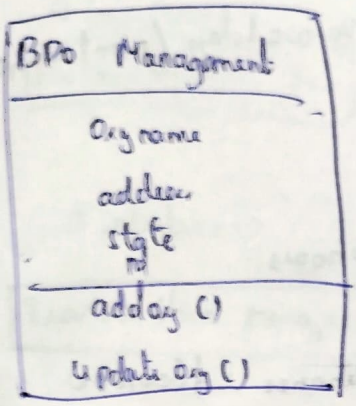
Class diagram

BPO Management





Analysis × Design phase ×

1. a)

Person-days : 30
Team member : 5
Hourly rate : $50.
Total hours : 30 × 8 = 240
Total cost : 60,000

Design phase.
person-days : 40
Team member : 5
Hourly rate : $50
Total hours = 40 × 8 = 320.
Total cost = $80,000

Implementation Phase:
Person-days : 70
Team members : 5
Hourly rate : $50.
Total = 70 × 8 = 560
Total cost : $140,000

Testing phase.
Person-days : 35
Team members : 5
Hourly rate : $70
Total hours = 35 × 8 = 280.
Total cost : $ 70 000

main tenance phase.
person-days per month : 25
team members : 5
Hourly rate : $50.
Duration 12 m.

Total hours per month : 25 × 8 × 5 = 200 h.

Total Cost for 12 m : 50,000 × 12 : $600,000

b) Overall project Cost

Total project Cost = 60,000 + 30,000 + 140,000 + 70,000 + 600,000 + 10,000 = $960,000

c) Project delayed by 2 months in the Implementation phase

Person - days : 2 months/time 20 working days / month = 40d

TM : 5

Hourly rate $30

Total additional hours : 40 × 8 = 320 hours

d) Cost Saving due to reduced maintenance : $600,000.

Reduced for 6 months : $600,000/2

= $300,000

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6. i) Calculate the Total no of Method.

no of classes : 5

Average no of method / class : 4.

Total no of methods = 5 × 4 = 20 methods.

ii) Calculate the Total lines of Code

Avg lines of code / method : 25

Total LOC = 20 × 25 / m = 500 LOC

iii) Estimate the development effort

Development effort = $\frac{500 LOC}{100}$ × 20 / 100 LOC = 5 × 20

= 100 person-hour.

iv) Calculate the Quality Assurance.

QA phase requires 20% of development effort

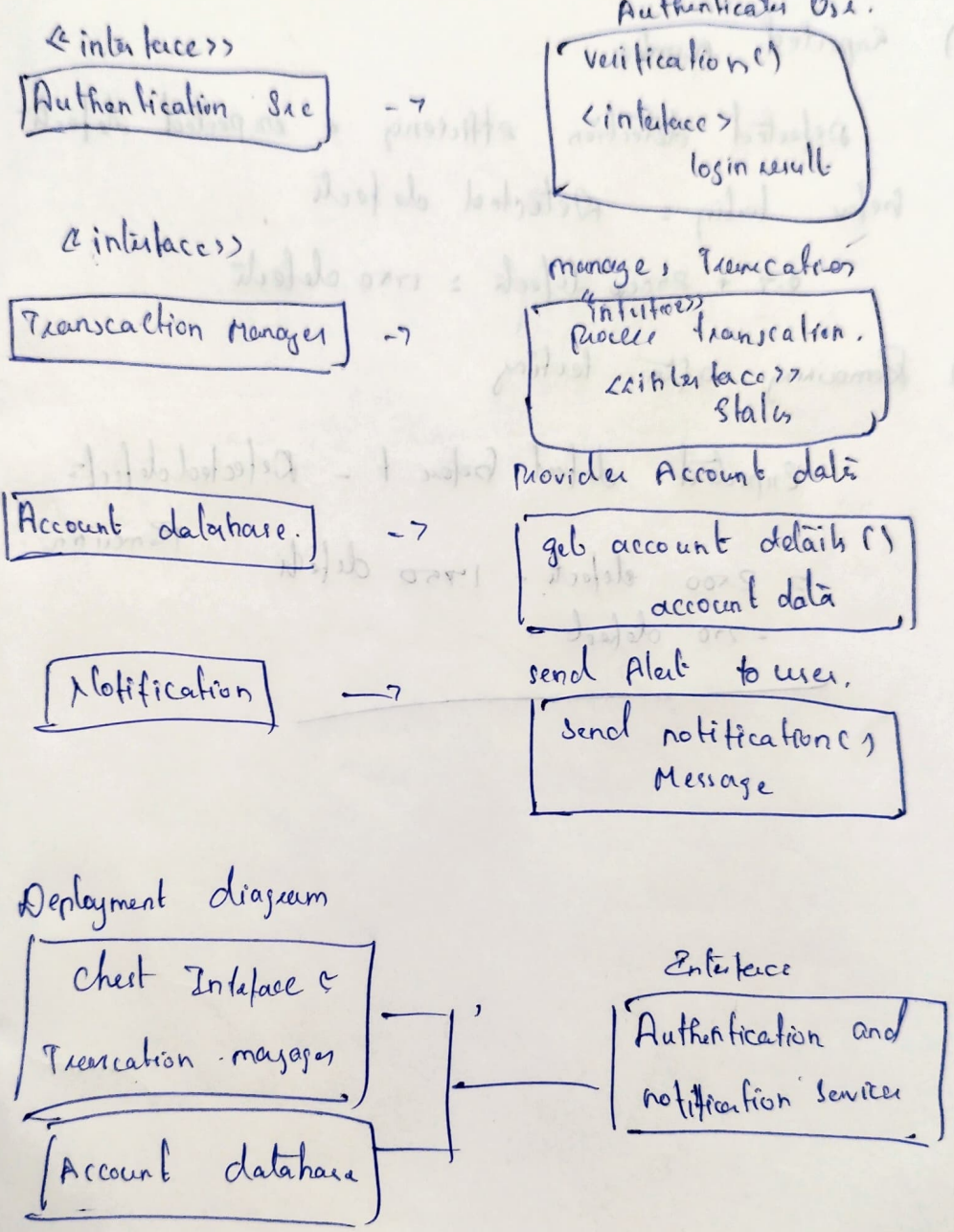
QA = 0.20 × 100 person-hour = 20 person.

Total estimated effort:

: Development effort + QA effort

: 100 person hour + 20 person-hour : 100 person hour ≈.

7. Component diagram to distributed banking system



Deployment diagram

10. a) Total. no of method in the Software System

no of class * method /class : Total method.

500 * 10 m/c = 5000 methods.

b) Total no of testcases required

3 t/c * 5000 m = 15000 test cases.

c) Expected number

Defect density * Total methods : Expected defects.

0.5 * 5000 = 2500 defects.

d) Expected number.

Defected detection efficiency * expected defects before testing : Detected defects

0.7 * 2500 defects = 1750 defects

e) Remaining after testing

Expected defect before t - Detected defect = Remaining

= 2500 defects - 1750 defects

= 750 defect