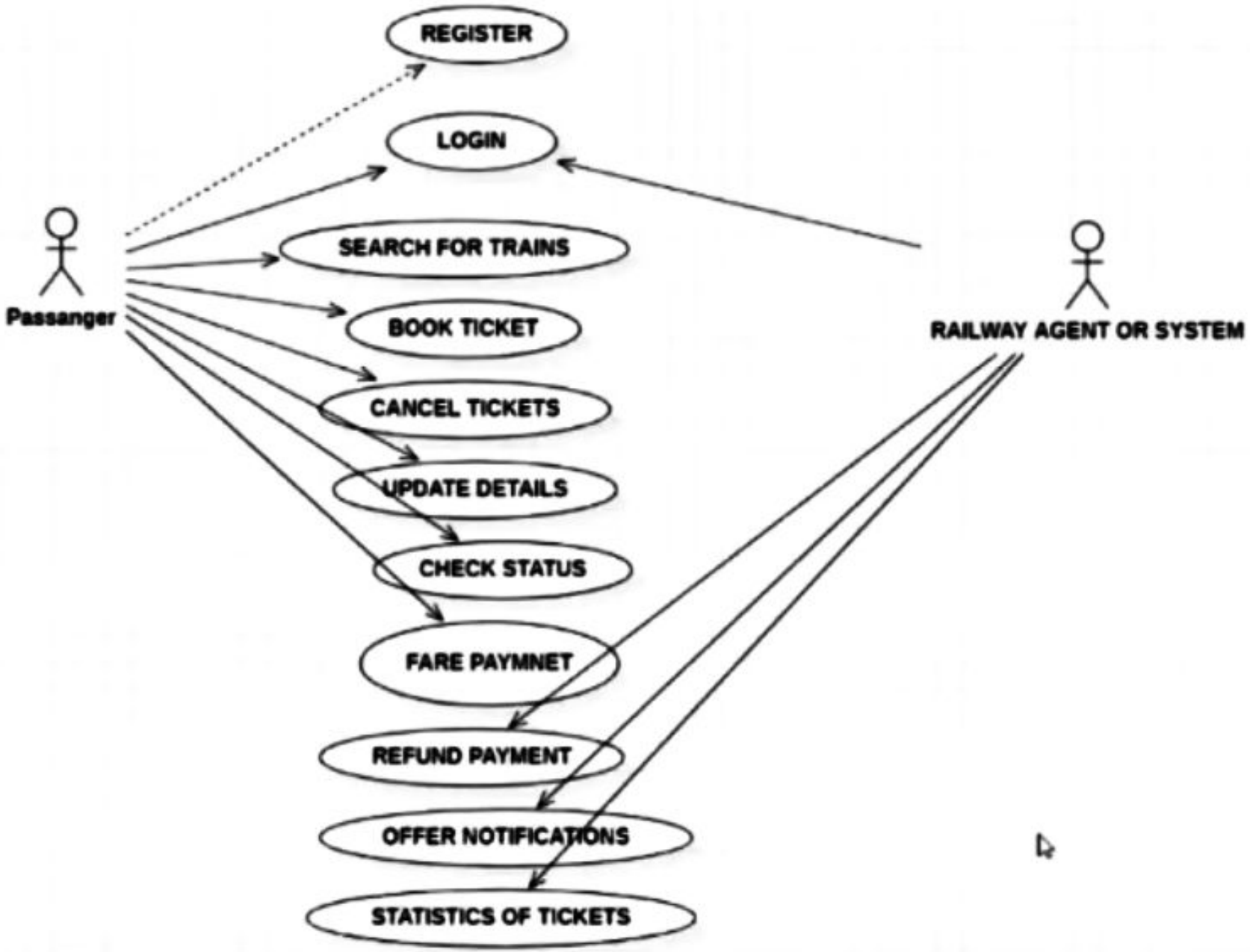
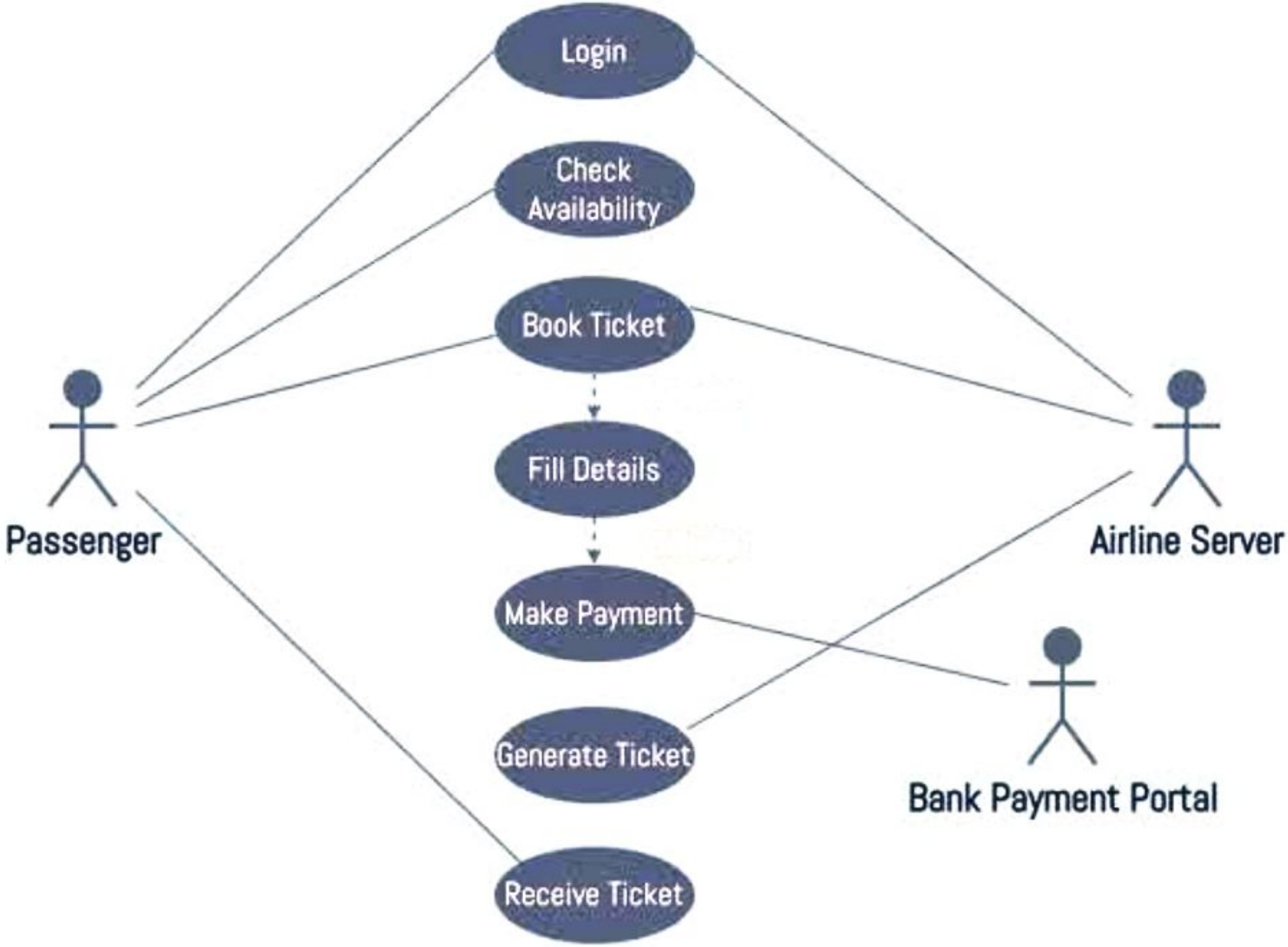
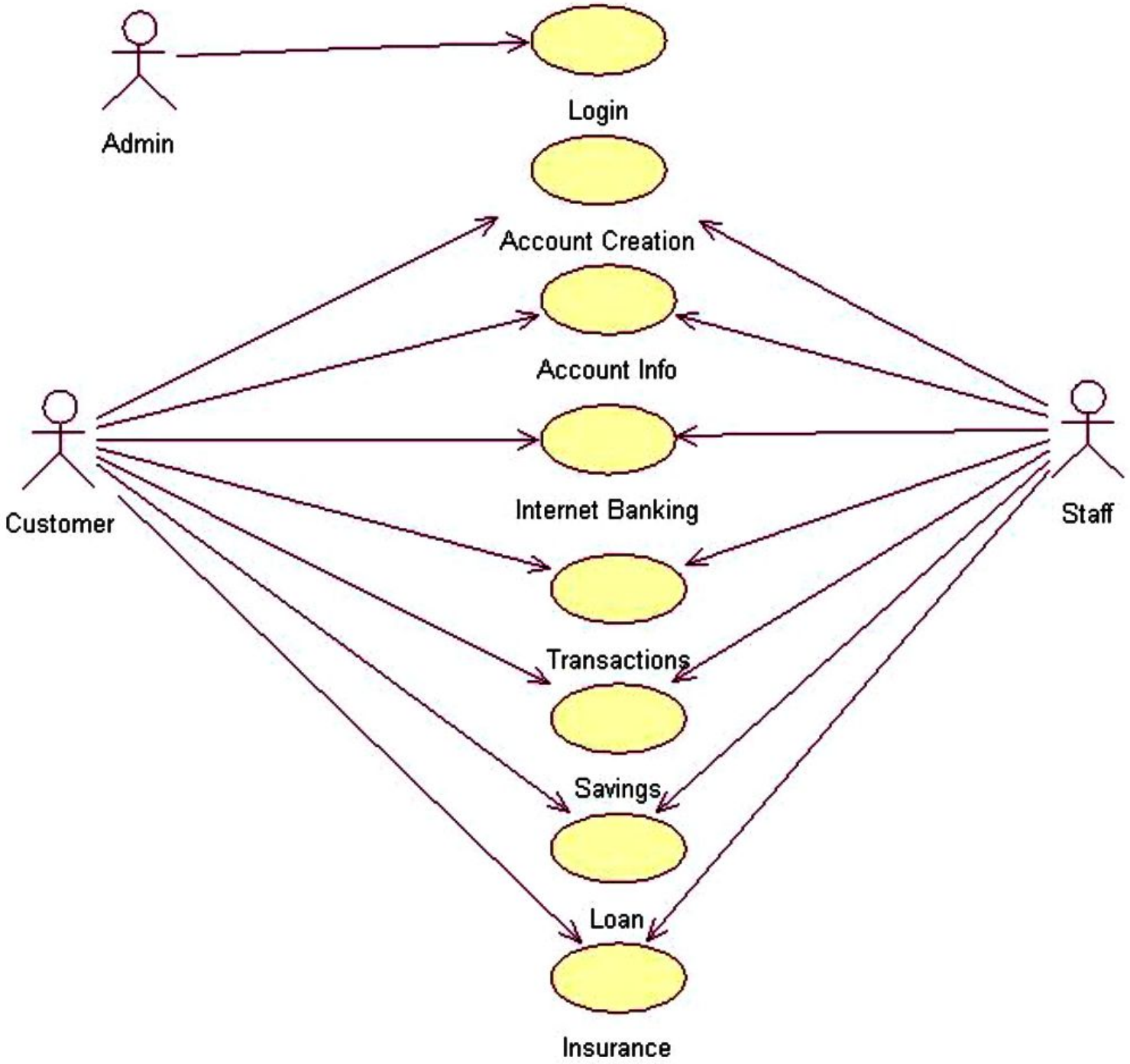
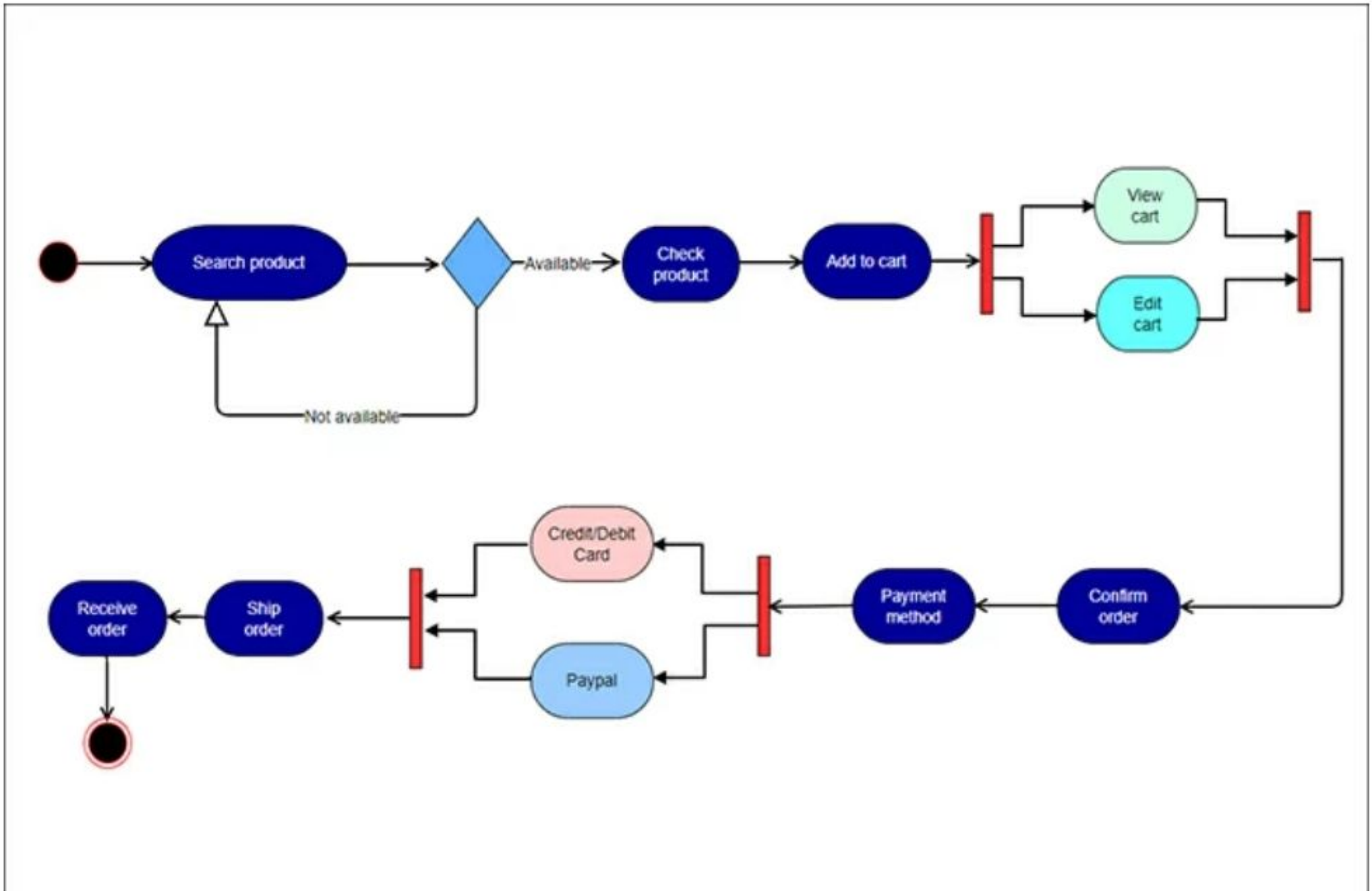

REGISTER
LOGIN
SEARCH FOR TRAINS
BOOK TICKET
CANCEL TICKETS
UPDATE DETAILS
CHECK STATUS
FARE PAYMNET
REFUND PAYMENT
OFFER NOTIFICATIONS
STATISTICS OF TICKETS
Passanger
RAILWAY AGENT OR SYSTEM

Online Airline Reservation System

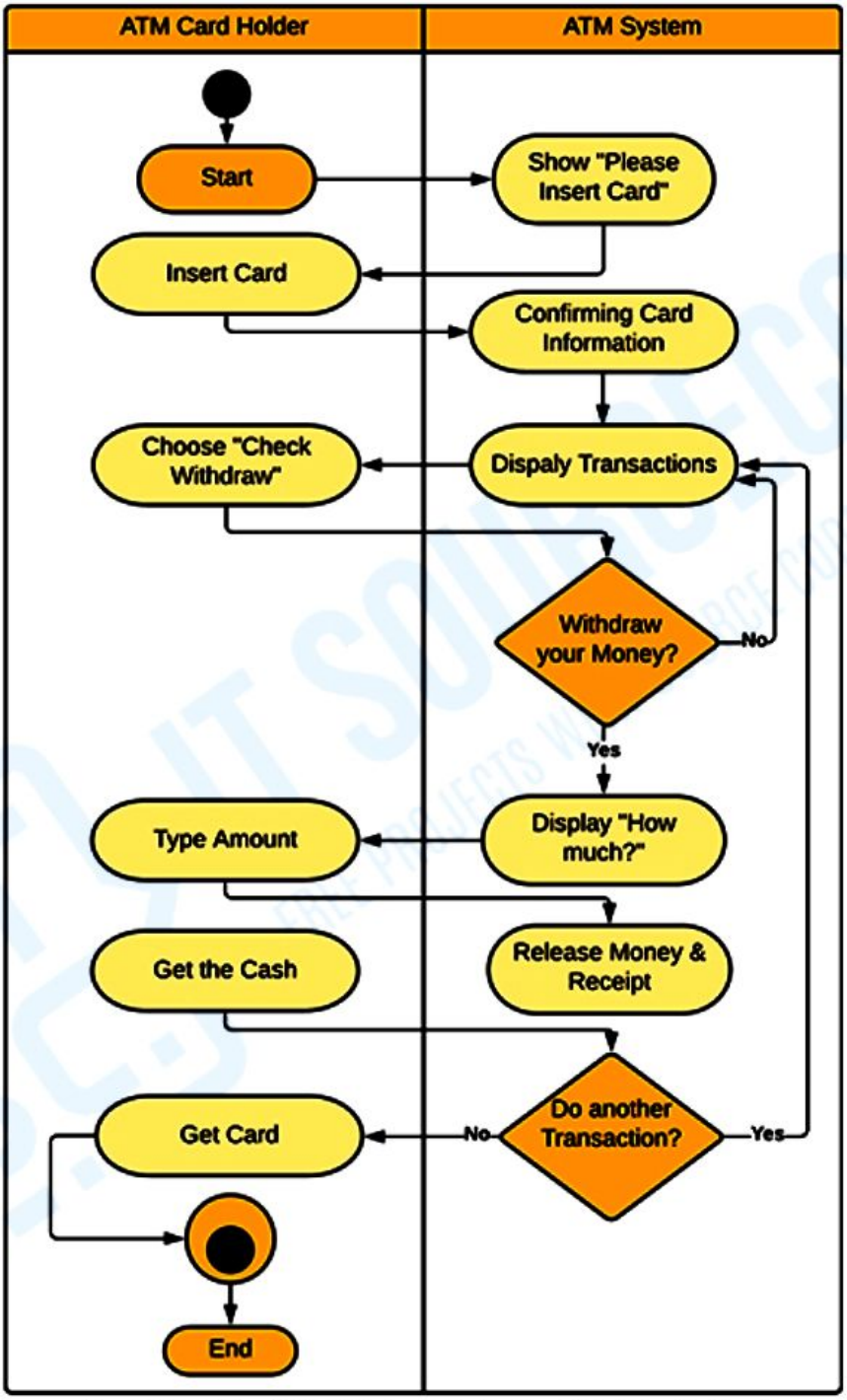


BANKING MANAGEMENT SYSTEM




Search product
Available
Check product
Add to cart
View cart
Edit cart
Not available
Credit/Debit Card
Paypal
Payment method
Confirm order
Ship order
Receive order

ATM MANAGEMENT SYSTEM



ACTIVITY DIAGRAM

in similar environment is low.

Calculate the object point count, New object point and effort to develop such project.

Step-1:

Number of screens = 4

Number of records = 2

Step-2:

For screens,

Number of views = 4

Number of data tables = 7

Number of servers = 3

Number of clients = 4

by using above given information and table (For Screens),

Complexity level for each screen = medium

For reports,

Number of sections = 6

Number of data tables = 7

Number of servers = 2

medium

For reports,

Number of sections = 6

Number of data tables = 7

Number of servers = 2

Number of clients = 3

by using above given information and table (For Reports),

Complexity level for each report = difficult

Step-3:

By using complexity weight table we can assign complexity weight to each object instance depending upon their complexity level.

Complexity weight for each screen = 2

Complexity weight for each report = 8

Step-4:

Step-4:

```
Object point count
= sigma (Number of object instanc
= 4 * 2 + 2 * 8 = 24
```

Step-5:

```
%reuse of object points = 10% (gi
NOP = [object points * (100 - %re
= [24 * (100 -10)]/100 = 21.6
```

Step-6:

Developer's experience and capability is low (given)

Using information given about developer and productivity rate table Productivity rate (PROD) of given project = 7

Step-7:

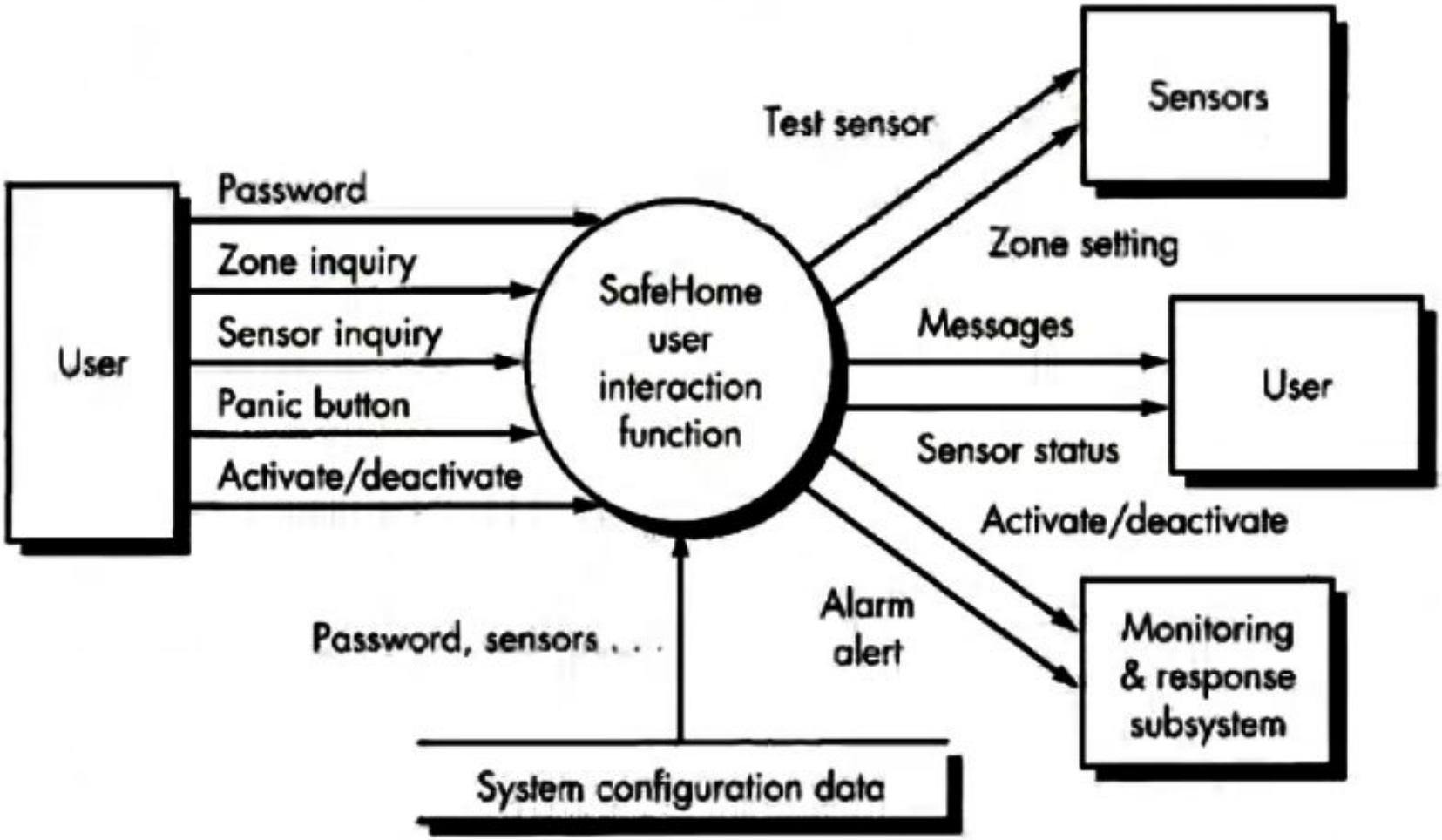
Productivity rate (PROD) of given project = 7

Step-7:

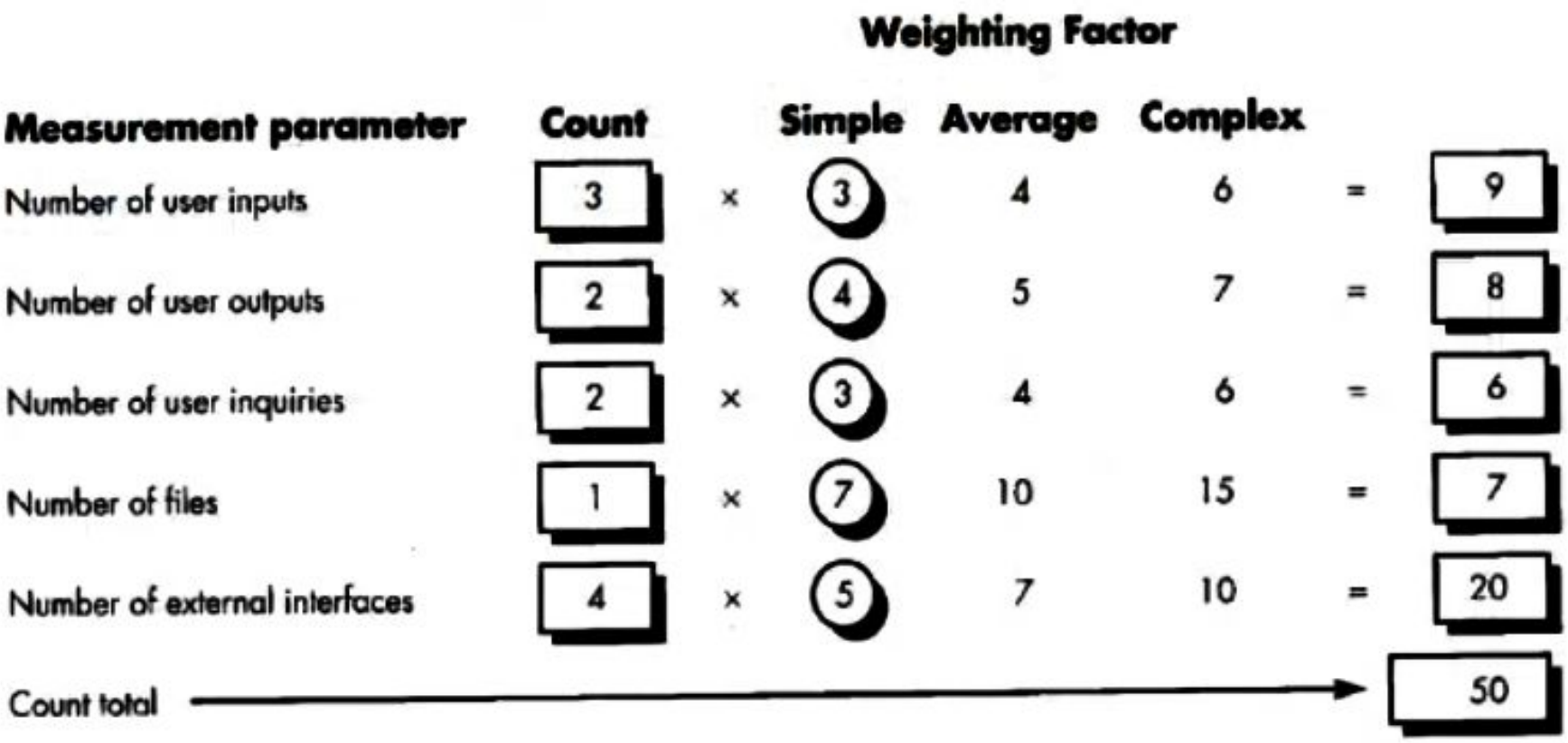
```
Effort
= NOP/PROD
= 21.6/7
= 3.086 person-month
```

Therefore, effort to develop the given project = 3.086 person-month.

Example2: Part of analysis model for SafeHome software



- Number of **user inputs** = 3 (password, panic button, and activate/deactivate)
- Number of **user outputs** = 2 (massages and sensor status)
- Number of **user inquiries** = 2 (zone inquiry and sensor inquiry)
- Number of **file** = 1 (system configuration file)
- Number of **external interfaces** = 4 (test sensor, zone setting, activate/deactivate, and alarm alert)



+Assume Weighting Factor is simple:

➔ CT = (3*3)+(2*4)+(2*3)+(1*7)+(4*5)= **50**

+And assume $\sum Fi = 46$

➔ FP = 50 x [0.65 + (0.01 x 46)] = **55.50 ≈ 56FP**

Computing FPs

Measurement Parameter	Count		Weighing factor		
			Simple	Average	Complex
1. Number of external inputs (EI)	32	•	3	4	6 = 128
2. Number of external Output (EO)	60	•	4	5	7 = 300
3. Number of external Inquiries (EQ)	24	•	3	4	6 = 96
4. Number of internal Files (ILF)	8	•	7	10	15 = 80
5. Number of external interfaces(EIF)	2	•	5	7	10 = 14
Count-total →					618

Now f_i for average case = 3. So sum of all f_i ($i \leftarrow 1$ to 14) = 14 * 3 = 42

$$FP = \text{Count-total} * [0.65 + 0.01 * \sum(f_i)]$$

$$= 618 * [0.65 + 0.01 * 42]$$

$$= 618 * [0.65 + 0.42]$$

$$= 618 * 1.07 = 661.26$$

and feature point = (32 *4 + 60 * 5 + 24 * 4 + 80 +14) * 1.07 + {12 * 15 *1.07}

= 853.86

COCOMO – II EXAMPLE

- Use COCOMO-II model to estimate the effort required to build software for a simple ATM that produces 12 screen, 10 reports, and will require approximately 80% as new software components. Assume average complexity and average developer/environment maturity. Use the application composition model with object point

- **Given**

Object	Count	Complexity	Weight Factor	Total Objects
Screen	12	Simple	1	12
Report	10	Simple	2	20
3GL Components	0	N/A	N/A	0
			Total Objects Points:	**32**

COCOMO – II EXAMPLE

- It is given that 80% of components have to be newly developed. So remaining 20% can be reused.
- Now compute new object points as
  - $NOP = (object\ points) * [(100 - \%reuse)/100]$
  - $NOP = 32 * [(100 - 20)/100]$
  - $NOP = 25.6\ object\ points$
- Since productivity is average, we can assume PROD = 13
- Hence,
  - **effort = NOP/PROD = 25.6 / 13 = 1.96 person-months**

Example: We have determined our project fits the characteristics of **Semi-Detached** mode & We estimate our project will have **32,000** Delivered Source Instructions.

Using the formulas, we can estimate:

- **Effort** = $3.0*(32)^{1.12}$ = 146 man-months
- **Duration** = $2.5*(146)^{0.35}$ = 14 months
- **Productivity** = 32,000 DSI / 146 MM
  = 219 DSI/MM
- **Person estimation** = 146 MM /14 months
  = 10 FSP