PERTEMUAN VI



Network Modeling

Suatu teknik diagram yang digunakan untuk mendokumen tasikan arus sistem informasi pada suatu lokasi bisnis

1. Business Geography
2. Miscellaneous Constructs
3. Synchronizing of System Models

Hubungan Data dengan Proses

Entity . Attribute	Process Customer Application	Process Customer Credit Application	Process Customer Change of Address	Process Internal Customer Credit Change	Process New Customer Order	Process Customer Order Cancellation	Process Customer Change to Outstanding Order	Process Internal Change to Customer Order	Process New Product Addition	Process Product Withdrawl from Market	Process Product Price Change	Process Change to Product Specification	Process Product Inventroy Adjustment
Customer	C	C			R	R	R	R					
.Customer Number	C	C			R	R	R	R					
.Customer Name	C	C	U		R		R	R					
.Customer Address	C	C	U		RU		RU	RU					
.Customer Credit Rating		C		U	R		R	R					
.Customer Balance Due					RU	U	R	R					
Order					C	D	RU	RU					
.Order Number					C		R	R					
.Order Date					C		U	U					
.Order Amount					C		U	U					
Ordered Product					C	D	CRUD	CRUD		RU			
.Quantity Ordered					C		CRUD	CRUD					
.Ordered Item Unit Price					C		CRUD	CRUD					
Product					R	R	R	R	C	D	RU	RU	RU
.Product Number					R	R	R	R	C			R	
.Product Name					R		R	R	C			RU	
.Product Description					R		R	R	C			RU	
.Product Unit of Measure					R		R	R	C		RU	RU	
.Product Current Unit Price					R		R	R			U		
.Product Quantity on Hand					RU	U	RU	RU					RU

Hubungan Data dengan Lokasi

Entity . Attribute	Customers	Kansas City	. Marketing	. Advertsing	. Warehouse	. Sales	. Accounts Receivable	Boston	. Sales	. Warehouse	San Francisco	. Sales	San Diego	. Warehose
Customer	**INDV**					**ALL**	**ALL**		**SS**	**SS**		**SS**		**SS**
.Customer Number	R				R	CRUD	R		CRUD	R		CRUD		R
.Customer Name	RU				R	CRUD	R		CRUD	R		CRUD		R
.Customer Address	RU				R	CRUD	R		CRUD	R		CRUD		R
.Customer Credit Rating	X					R	RU		R			R		
.Customer Balance Due	R					R	RU		R			R		
Order	**INDV**		**ALL**		**SS**	**ALL**			**SS**	**SS**		**SS**		**SS**
.Order Number	SRD		R	CRUD	R	CRUD	R		CRUD	R		CRUD		R
.Order Date	SRD		R	CRUD	R	CRUD	R		CRUD	R		CRUD		R
.Order Amount	SRD		R	CRUD		CRUD	R		CRUD	R		CRUD		R
Ordered Product	**INDV**		**ALL**		**SS**	**ALL**			**SS**	**SS**		**SS**		**SS**
.Quantity Ordered	SUD		R	CRUD	R	CRUD	R		CRUD			CRUD		
.Ordered Item Unit Price	SUD		R	CRUD		CRUD	R		CRUD			CRUD		
Product	**ALL**		**ALL**	**ALL**	**ALL**	**ALL**			**ALL**	**ALL**		**ALL**		**ALL**
.Product Number	R		CRUD	R	R	R			R	R		R		R
.Product Name	R		CRUD	R	R	R			R	R		R		R
.Product Description	R		CRUD	RU	R	R			R	R		R		R
.Product Unit of Measure	R		CRUD	R	R	R			R	R		R		R
.Product Current Unit Price	R		CRUD	R		R			R	R		R		R
.Product Quantity on Hand	X				RU	R			R	RU		R		RU

INDV = individual **ALL** = ALL **SS** = subset **X** = no access

S = submit C = create R = read U = update D = delete

Hubungan Proses dengan Lokasi

Process	Customers	Kansas City	. Marketing	. Advertsing	. Warehouse	. Sales	. Accounts Receivable	Boston	. Sales	. Warehouse	San Francisco	. Sales	San Diego	. Warehose
Process Customer Application	X					X			X			X		
Process Customer Credit Application	X						X							
Process Customer Change of Address	X					X			X			X		
Process Internal Customer Credit Chnage							X							
Process New Customer Order	X					X			X			X		
Process Customer Order Cancellation	X					X			X			X		
Process Customer Change to Outstanding Order	X					X			X			X		
Process Internal Change to Customer Order						X			X			X		
Process New Product Addition			X											
Process Product Withdrawal from Market			X											
Process Product Price Chnage			X											
Process Product Chnage to Product Specification			X	X										
Process Product Inventory Adjustment					X					X				X

Proses Logika Network Modeling

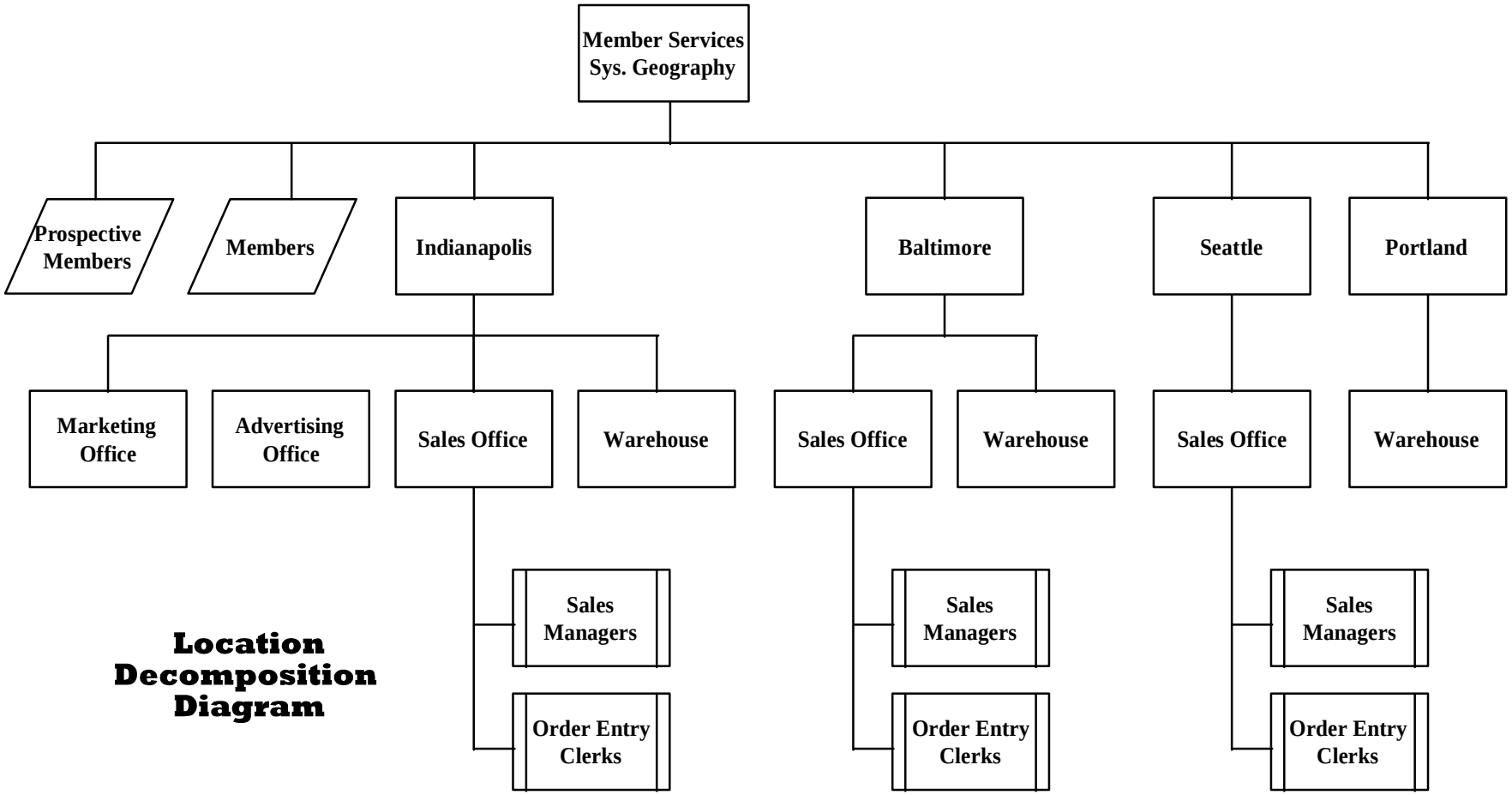
1. Stratejik Network Modeling
2. Network Modeling Selama Analisis Sistem
3. Menentukan Perancangan Sistem untuk Network Modeling
4. Mendapatkan Data/Informasi Untuk Network Modeling
5. Computer-Aided Systems Engineering (Case) untuk Network Modeling

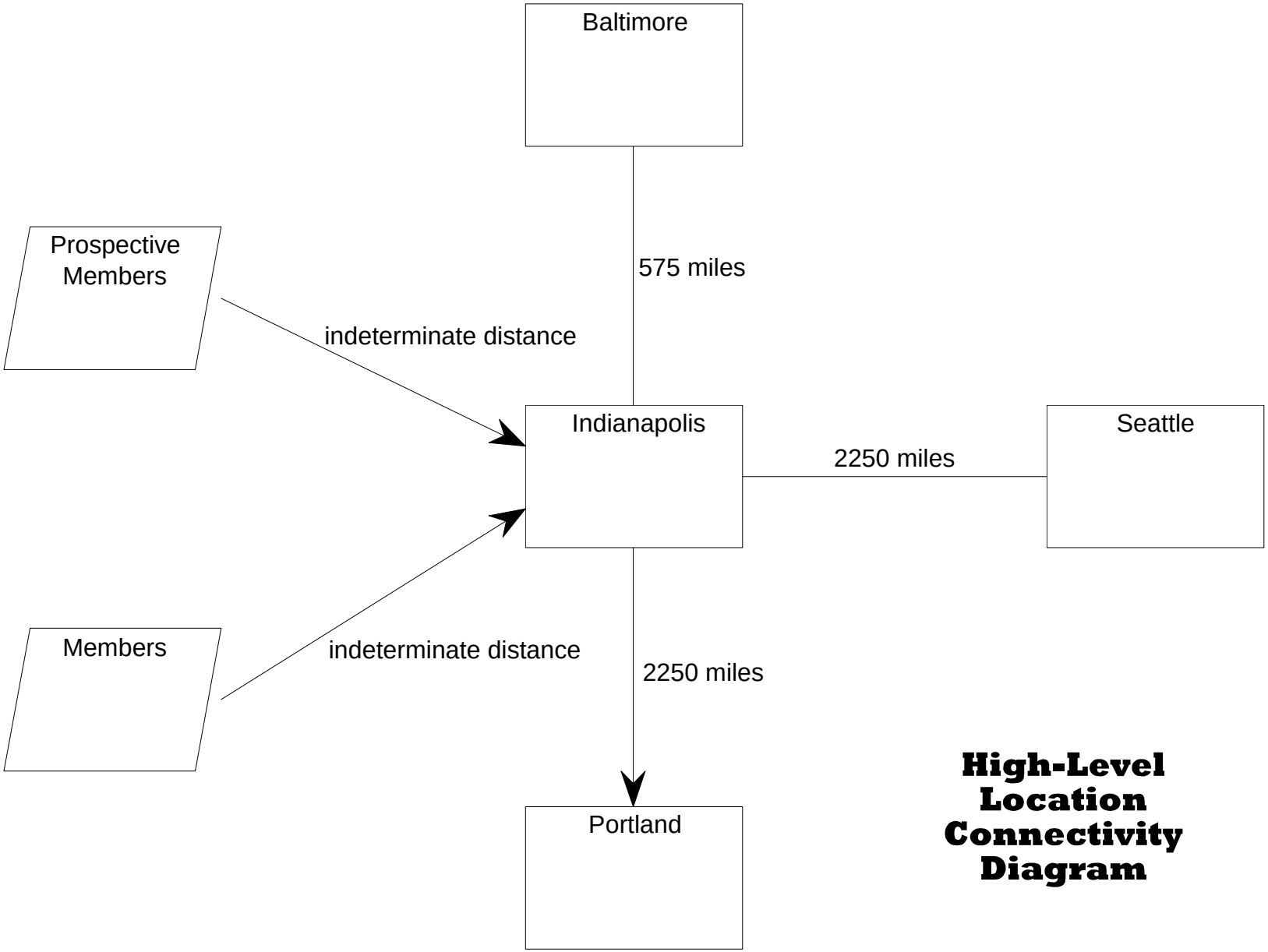
Membangun Model Network



Membuat Diagram Pembagian Lokasi

Membuat Diagram Hubungan Lokasi


Member Services Sys. Geography
Prospective Members
Members
Indianapolis
Baltimore
Seattle
Portland
Marketing Office
Advertising Office
Sales Office
Warehouse
Sales Office
Warehouse
Sales Office
Warehouse
Sales Managers
Order Entry Clerks
Sales Managers
Order Entry Clerks
Sales Managers
Order Entry Clerks
Location Decomposition Diagram



High-Level Location Connectivity Diagram

Detailed Location Connectivity Diagram

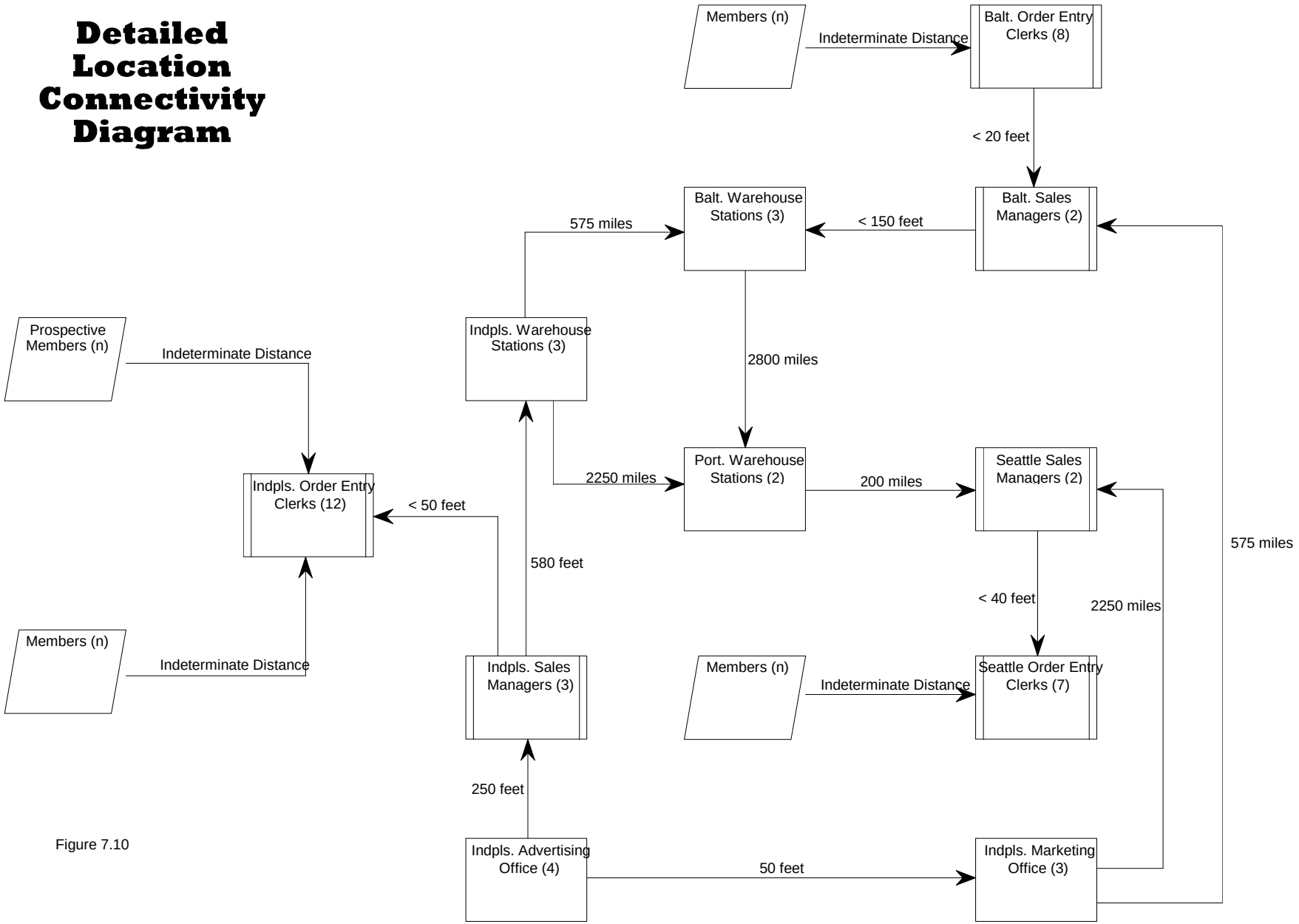


Figure 7.10

Object Modeling

Suatu teknik untuk mengidentifikasi objek dari lingkungan Sistem dan hubungan antara objek yang ada.

1. Objects, Attributes, Methods, and Encapsulation
2. Classes, Generalization, and Specialization
3. Object/Class Relationships
4. Messages & Messages Sending
5. Polymorphism

Proses Objek Modeling

Menentukan dan Mengidentifikasikan Objek Bisnis

- Mengidentifikasi Pelaku dan Kasus Yang dipakai
- Membuat Model Kasus Yang Digunakan
- Mengidentifikasi Ketergantungan Kasus yang Dipakai
- Mendokumentasikan Kejadian Sistem Yang Dipakai
- Menentukan Objek yang Potensial
- Menganalisis Objek Yang Potensial

Member Services Context Model



Club Member

Club Promtion

Promotion Order

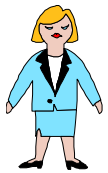
Regular Order

Subscription Offer

New Subscription



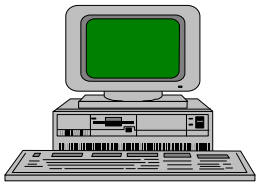
Potential Member



Past Member

Subscrition Renewal Offer

Subscrition Renewal

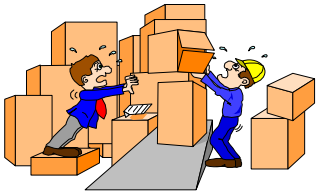


Member Services System

Member Credit Status



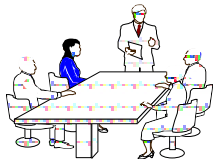
Accounts Receivable Data Base



Warehouse

Order To Be Filled

Membership Reports



Member Services Department

New Membership Plan & Subscrition Offer

Sales & Promotion Reports

New Monthly or Seasonal Promotion



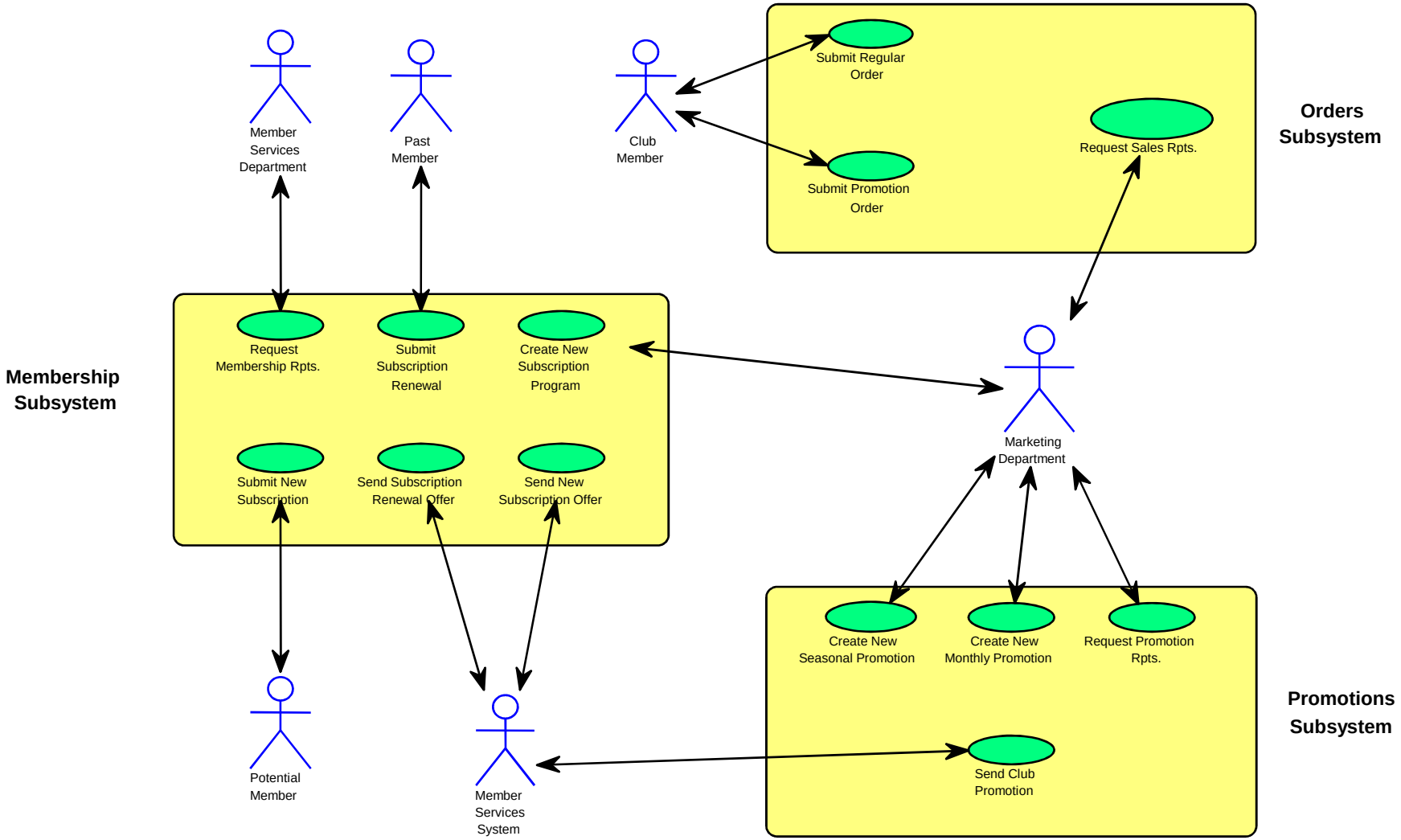
Marketing Department

Context Model Diagram

ACTOR		USE CASE
Club Member	***initiates***	**Submit Promotion Order** **Submit Regular Order**
Potential Member	***initiates***	**Submit New Subscription**
Past Member	***initiates***	**Submit Subscription Renewal**
Member Services Department	***initiates***	**Request Membership Rpts.**
Marketing Department	***initiates***	**Create New Monthly Promotion** **Create New Seasonal Promotion** **Create New Subscription Program** **Request Promotion Rpts.** **Request Sales Rpts.**
Member Services System	***initiates***	**Send New Subscription Offer** **Send Club Promotion** **Send Subscription Renewal Offer**

Daftar Pelaku dan Kasus yang Dipakai

Member Services System
Use Case Model



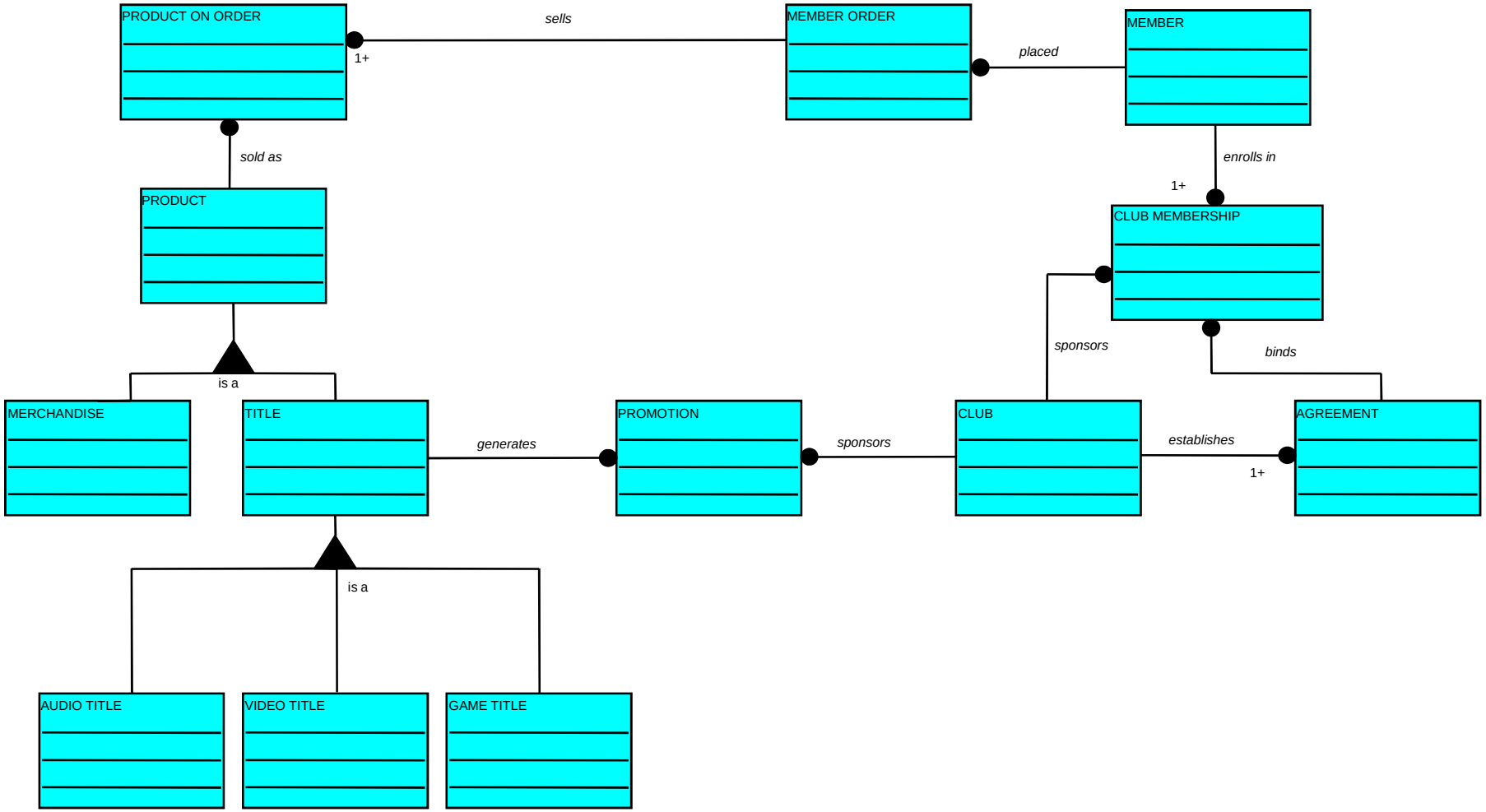
Menentukan & Menganalisis Objek Yang Potensial

POTENTIAL OBJECT LIST		REASON
Club Member	✓	Type of "MEMBER"
Potential Member	✓	Type of "MEMBER"
Past Member	✓	Type of "MEMBER"
Member Services Department	⌛	Not relevant for current project
Marketing Department	⌛	Not relevant for current project
Member Services System	⌛	Not relevant for current project
Member Address	⌛	Attribute of "MEMBER"
Promotion order	✓	Result of an event named "PROMOTION"
	✓	Type of "MEMBER ORDER"
Product	✓	"PRODUCT"
Product Inventory	⌛	Attribute of "PRODUCT"
Order Quantity	⌛	Attribute of "MEMBER ORDER"
Ordered Product	✓	"PRODUCT ON ORDER"
Credit Status	⌛	Attribute of "MEMBER"
Payment	⌛	Out of Scope
Ordered Product Status	⌛	Attribute of "PRODUCT ON ORDER"
Picking Ticket	⌛	Potential interface item
Warehouse	⌛	Not relevant for current project
Member Telephone Number	⌛	Attribute of "MEMBER"
Selection Of Month	✓	Type of "TITLE"
Transaction	⌛	Not relevant for current project
Accounts Receivable	⌛	Not relevant for current project
Promotion Order Status	⌛	Attribute of "MEMBER ORDER"
Order Error Report	⌛	Potential interface item
Member Services Clerk	⌛	Not relevant for current project

Proses Objek Modeling

Mengorganisasikan Objek dan Mengidentifikasikan Hubungannya

- Mengidentifikasikan Hubungan-hubungan yang ada
- Mengidentifikasi Hubungan secara Umum/Khusus
- Menyiapkan Model Hubungan



Mengorganisasikan Objek dan Menidentifikasi Hubungan