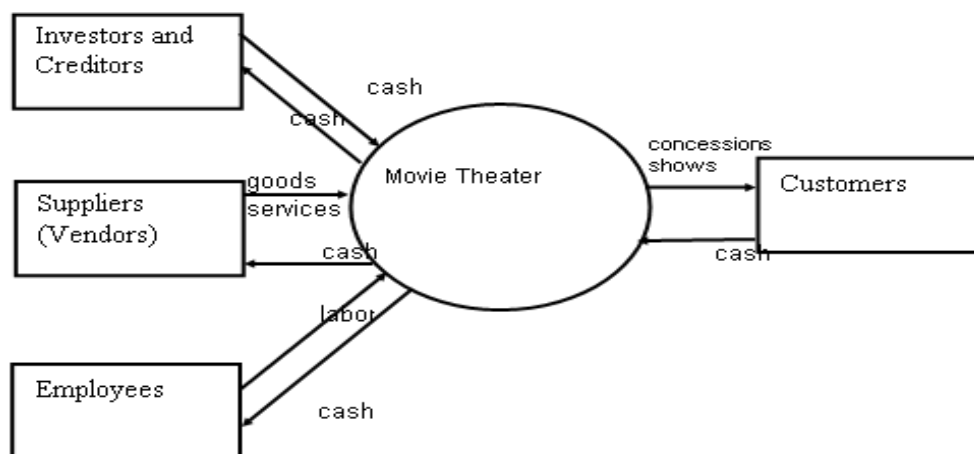## CHAPTER 2:

1) Differentiate between Value System Level and Chain Value Chain Level ?

- **Value System Level (object-based pattern)**
  – Examines enterprise in context of its external business partners
  – The combination of value systems of business partners forms a supply chain
- **Value Chain Level (script-based pattern)**
  – Connects business processes of an enterprise via the resource flows between the processes

Remarks : Study cases – just understand the concept from other material ☺

CHAPTER 3 :

2) Create a value system level model for the movie theater (understand).

Investors and Creditors — cash — cash

Suppliers (Vendors) — goods services — cash

Movie Theater

Employees — labor — cash

concessions shows — cash → Customers

CHAPTER 4 :

3) Describe the steps in REA business process level modeling (understand only)?

Step 1: Identify Economic Exchange Events
Examine value chain to identify the core of the business process – the causally related economic increment and decrement events
Step 2: Attach Resources to Economic Events
Examine value chain to identify the resource flows involved in the economic increment and decrement events that were identified in step
create stockflow relationships to connect the resources to the events
Step 3: Attach External Agents to Economic Events
Determine the external business partners involved in the economic increment and decrement events; create participation relationships to connect the external agents to the events
Step 4: Attach Internal Agents to Economic Events
Determine which enterprise employee categories are involved in the economic increment and decrement events; create participation relationships to connect the internal agents to the events
Step 5: Attribute Assignment
Determine the characteristics an enterprise needs to track for each entity and relationship in the model; connect each attribute to the appropriate entity or relationship
Step 6: Participation Cardinality Assignment
For each relationship, ask the four questions about the minimum and maximum number of times each entity participates in the relationship;
indicate the answers to the questions using the appropriate notation
Step 7: Validate Model
Discuss the model with a knowledgeable enterprise representative; review

CHAPTER 5 :

4) what are the meaning of the individual diagram symbols?
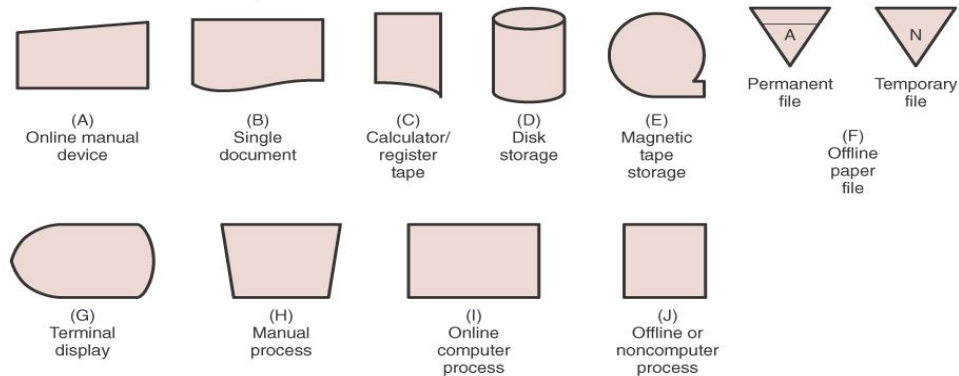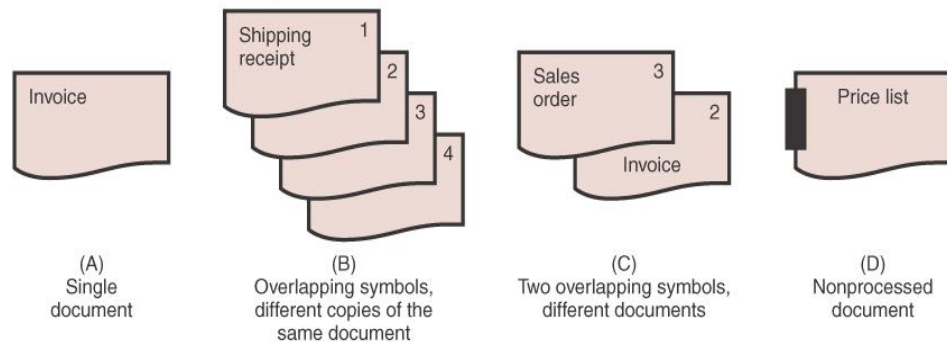
EXHIBIT 5–2   Flowchart Symbols

(A) Online manual device
(B) Single document
(C) Calculator/ register tape
(D) Disk storage
(E) Magnetic tape storage
Permanent file
Temporary file
(F) Offline paper file

(G) Terminal display
(H) Manual process
(I) Online computer process
(J) Offline or noncomputer process

EXHIBIT 5–3   Flowchart Symbols: Documents

Invoice

Shipping receipt 1
2
3
4

Sales order 3
2
Invoice

Price list

(A) Single document
(B) Overlapping symbols, different copies of the same document
(C) Two overlapping symbols, different documents
(D) Nonprocessed document

CHAPTER 6 :

5) What are the differences between conceptual, logical, and physical database models?

A conceptual model attempts to represent reality as faithfully as possible and is independent of any particular type of database model, software or hardware. A logical model represents reality in a format compatible with a specific type of database, such as relational or object-oriented. A physical database model represents the actual implementation of the logical model in conformance with a specific software package's requirements.

CHAPTER 7 :

6) What is Querying?
It is asking questions about the data in the database and manipulating or combining the data in different ways.

7)Which of the relational algebra operators is needed to retrieve a vertical subset (i.e., a subset of columns) from a relational database table?

PROJECT

8) Which of the relational algebra operators is needed to retrieve a horizontal subset (i.e., a subset of rows) from a relational database table?
SELECT

9) Which of the relational algebra operators is needed to combine two tables together in a query?
JOIN

10) Which component of a SQL statement accomplishes a relational algebra SELECT operation?

The "Where" clause.

11)Which component of a SQL statement accomplishes a relational algebra PROJECT operation?

The "Select" clause.

CHAPTER 8 :

12) what are the Type of events in business process ?

1) Instigation Events in the Revenue Cycle :
a) May be internally instigated (marketing events such as sales calls, advertising campaigns, or promotions)
b)External agents involved in revenue cycle instigation events usually are customers .

2) Mutual Commitment Events in the Revenue Cycle involves

Involve the enterprise and an external business partner agreeing to exchange resources at a defined future time

Type of Mutual Commitment :

Sale Order Event : The enterprise agrees to deliver goods to a customer and that customer agrees to pay price for those goods .

Rental Contract Event :
The enterprise agrees to transfer a product to a customer for a defined time period.

Service Contract Event : the enterprise agrees to perform one or more services for a customer during a defined time period.

3) Economic Decrement Events in the Revenue Cycle :

Represent the revenue generating activities; the giving up of one or more resources in order to get some other resource

Type of Economic Decrement:

Sale Event : Events in which title (ownership) of one or more products is transferred from the enterprise to a customer e.g. a sale of a t-shirt at a campus bookstore .

Rental Event: Events in which possession of one or more products is transferred from an enterprise to a customer for an agreed upon length of time.

Service Engagement Event: Events in which one or more agents of the enterprise provide one or more types of service to a customer.

4) Economic Increment Events in the Revenue Cycle :

Events in which an external agent transfers ownership of cash (or a cash equivalent) to the enterprise .

5) Economic Decrement Reversal Events :

Events in which previous economic decrement events are reversed or negated.

Type of Economic Decrement:

Sale Return Event : Events in which title (ownership) for products that were previously transferred from seller to buyer is transferred back from buyer to seller.

13) Define the Sales/Collection Process Relationships ?

Fulfillment relationships

Between Marketing, Sales Call, or Customer Inquiry and Sale Order events

Between Sale Order and Sale events

Duality relationships

Between Sale and Cash Receipt (or Receipt of Bartered Goods/Services) events

Reversal relationships

Between Sale and Sale Return events

Participation relationships

Between each event and each internal and external agent

Proposition relationships

Between Marketing, Sales Call, or Customer Inquiry event and Inventory

Reservation relationships

Between Sale Order, Rental Contract, or Service Contract and Inventory, Sale Order, Rental Contract, or Service Contract and Cash

Stock flow relationships

Between Sale and Inventory, Sale Return and Inventory, Cash and Cash Receipt

14) what are the Revenue Cycle Resource Queries ?

A list of each inventory item or item type offered for sale by an enterprise

15) List Resource Query ?

- Detailed status information at one or more points in time for each resource instance
- Detailed status information at one or more points in time for only those resource instances meeting specified criteria
- Summarized status information at one or more points in time for all resource instances

- Summarized status information at one or more points in time for only those resource instances meeting specified criteria

16) List Agent Query Types ?

- Detailed status information at one or more points in time for each agent instance
- Detailed status information at one or more points in time for only those agent instances meeting specified criteria
- Summarized status information at one or more points in time for all agent instances

- Summarized status information at one or more points in time for only those <u>agent</u> instances meeting specified criteria

17) List Event Query Types ?

- Detailed information about each event instance
- Detailed information about each event instance that meets specified criteria
- Summarized information for all instances of an event type for a specified time period
- Summarized information for only those instances of an event type for a specified time period that meet specified criteria

18) List Duality Relationship Query Types?

- Identification a specified exchange is completed
- Identification of completed exchanges for a specified time period
- Identification of incomplete exchanges for a specified time period
- Calculation of the amount of claims, Calculation of the total or average

19) List Revenue Cycle Duality Queries ?

- Calculation of the outstanding receivable balance for a sale invoice
- Calculation of total accounts receivable at a point in time
- Calculation of prepaid revenue at a point in time
- Aging of accounts receivable
- Calculation of the average number of days it takes to collect receivables

CHAPTER 9 :

12) what are Type of events in acquisition payment process ?
1) Instigation Events in the Expenditures
– Are usually internally instigated; triggered by an identified need
– External instigation is possible, e.g. need may be identified as result of supplier visit

Type of Mutual Commitment
Purchase Requisition Event: event that is entirely internal; typically involves a department supervisor identifying a need for a type of good or service and communicating that need to the purchasing department.

2) Mutual Commitment Events in the Acquisition/ Payment Process

– Involve the enterprise and an external business partner agreeing to exchange resources at a defined future time

Type of Mutual Commitment :
Purchase Order Event , Rental Order Event , Service Order Event

3) Economic Increment Events in the Acquisition Cycle :
Represent the receipt of goods or services for which the enterprise will give up some other resource (usually cash)

Type of Economic Decrement:
Purchase (aka Acquisition) Event: in which title (ownership) of one or more products is transferred from a supplier to the enterprise. The transfer may take place in person
Rental Acquisition Event: Economic increment event in which possession of goods is transferred to the enterprise by a supplier for an agreed upon length of time for an agreed upon purpose and price
Service Acquisition Event: Economic increment event in which a supplier performs one or more types of service for the enterprise

4) Economic Decrement Events in the Acquisition Cycle:
event whereby the enterprise
transfers ownership of cash (or equivalent) to a supplier
5) Economic Increment Reversal Events
Events in which previous economic increment events are reversed or negated

Type of Economic Decrement:
Purchase Return Event: in which title (ownership) for goods previously transferred from a supplier to the enterprise are transferred back from the enterprise to the supplier

13) What does a participation relationship between a purchase requisition and a vendor usually represent?
participation relationship between purchase requisition and vendor in its database in order to track supplier recommendations that are made as part of the requisitions.

14) What is the difference between a purchase requisition and a purchase order?

A purchase requisition is an internal document sent from a department, function, or individual to an organization's purchasing agent(s). A purchase order is the document sent by the purchasing agent to the vendor.

CHAPTER 10 :

15) What three basic steps are involved in view integration?
- Identify the common entities in two views.
- Merge the common entities, resolving any entity conflicts and performing a set   union of their attributes.
- Examine each relationship and resolve any relationship conflicts.

16) What are two types of entity name conflicts that must be resolved when identifying common entities in multiple business process conceptual models?

17) List the three Implementation Compromises level and differentiate them?
Conceptual Level Compromises :
a)Exclusion of an entity because of inadequate measurement tools
b)Exclusion of a relationship because of inadequate traceability or because no decision information is needed.
c) Consolidate conceptually congruent entities
d) Materialization of tasks as entities
Logical Level Compromises :
a) A "pure" relational database should never include a null value
b) Posting keys of similar entities in combination to avoid null values OR Combination of similar entities without a generalization relationship.
Physical Level Compromises :
a) Storage of derivable attributes
b) Event History Roll-up

CHAPTER 11:

18) List the Conversion Cycle Events?
1) Economic Increment Event :
— Production Run; Represents a batch or job in a job-order-costing environment and Represents a machine run in a process-costing environment.
2) Economic Decrement Event :
— Labor Operation: Represents the performance of a particular activity in the conversion process by a production employee, thereby using up that person's labor
— Machine Operation: Represents the performance of a particular activity in the conversion process by a machine, thereby consuming part of the machine's useful life
3) Increment Commitment Event:
— Production (Job) Order: A commitment event that schedules a work-in-process job, committing to a future increase in finished products
4)Decrement Commitment Event:
— Raw Materials (or Labor or Machine) Requisition: Is a Commitment event whereby the production commits to transfer materials from the materials warehouse to the production floor, thus it commits to a future decrease in materials (or labor or machinery).

19) What is the primary objective of the conversion process?

The primary objective of the conversion process is to convert (transform) raw inputs such as raw materials and labor into marketable finished products

20) Discuses the Conversion Cycle Relationships ?
Duality Relationships:
a)Transformations are more complex than transfers found in other processes
b)Involve materials use, labor use, and equipment consumption
Stock-flow Relationships:
a)Materials and labor are typically used up completely in the material issuances and labor operations; such stock flows are called Use
b)Machines are typically only partially used up in machine operations, such a stock flow is called Consume
c)Finished goods are produced by the production run
Fulfillment Relationships:
a)Material issuances fulfill raw material requisitions
b)Production runs fulfill production orders

Reservations Relationships:
a)Raw materials are reserved for use via the requisition event
b)Finished Goods are reserved for availability
via the production order

Participation relationships :
a)Typically all agents in the conversion cycle are internal agents
b)Usually includes a direct association relationship (responsibility)
between production supervisors and employees

Linkages relationships :
a)**Between Materials and Finished Goods:**
Contains information needed for Bill of Materials, I.e., a finished good is
composed of what raw material items (in what quantities)
b)**Between Labor (type) and Finished Goods:**
Contains information needed for Operations List, I.e., a what labor
operations are needed to produce a finished good

Reciprocal relationships :
Production orders trigger the requisitioning of materials; this reciprocal
relationship represents a schedule of what is to be produced and what
will need to be used and consumed to accomplish the production

Custody relationships :
Companies often give custody of materials (and possibly finished goods)
to a set of inventory clerks to protect the goods from theft or other
misappropriation

21)What is the difference between a materials requisition and a purchase requisition?
A material requisition is a commitment event that the inventory clerk or
warehouse supervisor commits to the production supervisor to transfer
materials from the materials warehouse to the production floor. A
materials requisition assumes the raw materials are available within the
enterprise, and is reserving them for use . In contrast, warehouse
personnel initiate purchase requisitions to indicate the need to acquire
the items from an external source the raw material requisition event
occurs within the conversion cycle and the purchase requisition event
occurs within the acquisition/payment cycle.

CHAPTER 12:

22) What is the primary objective of the human resource process?

The primary objective is to provide and pay for the human labor and expertise that an organization needs to function efficiently and effectively.

23) List the Payroll Cycle Resources ?
Labor : Labor type usually substitutes for actual labor due to the intangible nature of labor

Cash : Cash for the payroll cycle is usually stored in either a regular checking account or in an imp rest checking account

Labor Requisition: An instigation event that identifies the need for and requests the acquisition of employee labor, skills, and knowledge

24) List the Payroll Cycle Events ?

Employee Schedule: A commitment event that specifies the agreement between the enterprise and an employee for the exchange of labor for cash

Labor Acquisition: An economic increment event that identifies the provision of labor by an employee to the enterprise

Cash Disbursement: An economic decrement event that represents the distribution of cash to the employee from whom labor was acquired
25) what do the followings mean ?

Recruiting :A "general" instigation event Initiates labor acquisition in a general sense; specifics are not yet determined
Hiring :A "general" commitment event Commits enterprise to labor acquisition and payment in a general sense; specifics are often not yet determined
Training An economic increment event in which the human capital resource is increased

26) How is the human resource process related to the conversion process, the sales/collection process, the acquisition/payment process, and the financing process?

The human resource process makes labor available to all of those other processes.

27) What is the difference between a timecard and a job time ticket?

A timecard is used to indicate total hours worked by an employee during a specified time period , A job time ticket is used to indicate time worked on a specific job or production run by an employee in a conversion process .
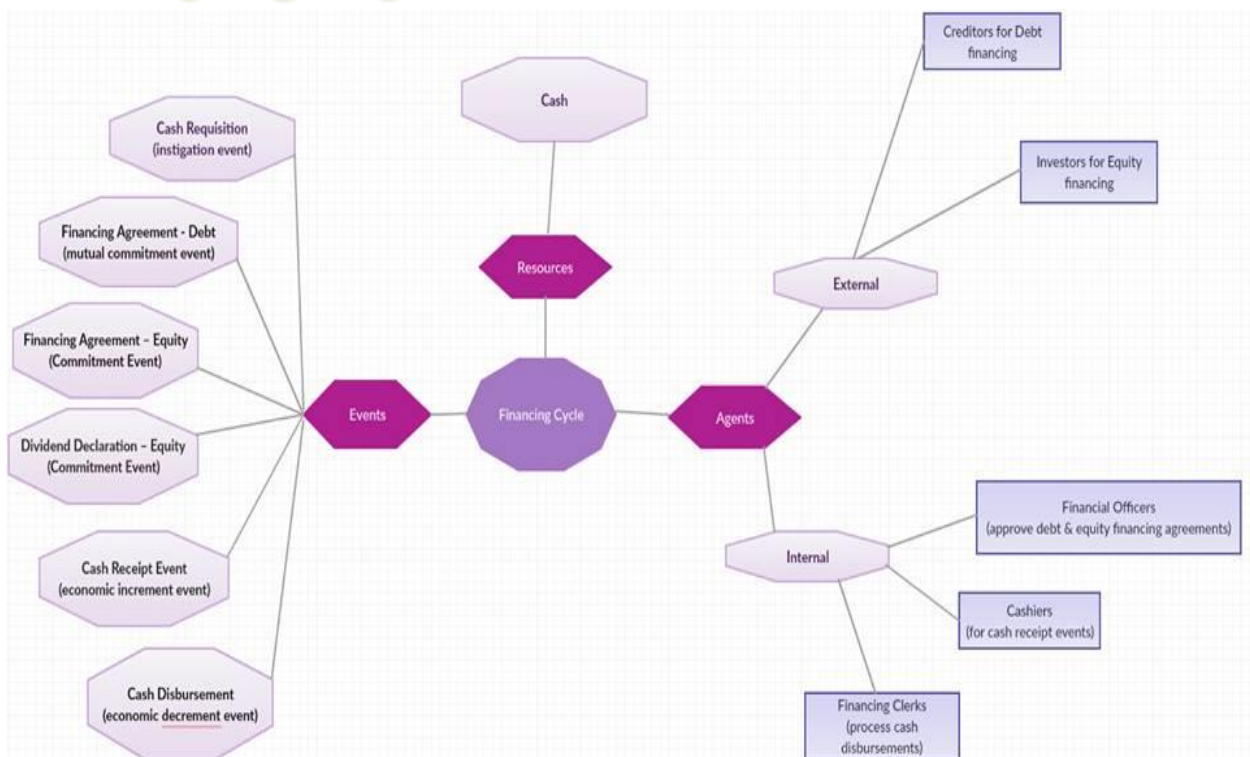
CHAPTER 13:

28) What is the primary objective of the financing business process?

The objective of the financing business process is to have the liquid funds needed to run the business without allowing cash to sit idle

29) What is the difference between a bond certificate and a stock certificate?

A bond certificate is a document that represents a debt financing agreement. A stock certificate is a document that represents an equity financing agreement.

Mind Map designed by Wareef Seu for CH 13

IT342 Enterprise Systems Chapter 13 ----- mind map
(The Financing Business Process)

CHAPTER 14:

30) What is Committee of Sponsoring Organizations of the Tread way Commission (COSO)?

A committee of the Tread way Commission that issues reports with guidance/requirements as to components of internal control systems and methods of evaluating internal controls.

31) What are the COSO's internal control model has five components?

Control environment
Risk assessment
Control Activities
Information and communication
Monitoring

32) List the Control Activities and its focus ?

Objectives - Prevent, Detect, and Correct

— Preventive controls focus on preventing an error or irregularity.
— Detective controls focus on identifying when an error or irregularity has occurred.
— Corrective controls focus on recovering from, repairing the damage from, or minimizing the cost of an error or irregularity.

33) The purpose of Monitoring ?

Monitoring is the process of assessing the quality of internal control performance over time

34) What is a system of internal controls?

Internal controls are a set of rules, policies, and procedures an organization implements to provide reasonable assurance that (1) its financial reports are reliable, (2) its operations are effective and efficient, and (3) its activities comply with applicable laws and regulations.

35) List and describe the five interrelated components of an internal control system?

1) Control Environment. Control environment sets the tone of the organization, which influences the control consciousness of its people

2) Risk Assessment. Risk assessment identifies and analyzes the relevant risks associated with the organization achieving its objectives.

3) Control Activities. Control activities are the policies and procedures the organization uses to ensure that necessary actions are taken to minimize risks associated with achieving its objectives.

4) Information system. The information system consists of the methods and records used to record, maintain, and report the events of an entity, as well as to maintain accountability for the related assets, liabilities, and equity

5) Monitoring. Monitoring is the process of assessing the quality of internal control performance over time.

CHAPTER 15:

36) What's the difference between back-office applications and bolt-on applications?

Back-office applications are activities or systems that are only seen and used by people within enterprises; external partners, such as vendors and customers, do not usually see back-office activities or systems. Bolt-on applications are software programs that can be added to existing ERP software applications.

37) Name a characteristic of a semantic orientation of a system.

Objects in the system's conceptual model correspond as closely as possible to objects in the underlying reality.

38) What are following stand for ? note (from Ch 5 and Ch15)

ERP : Enterprise Resource Planning

EDI : Electronic Data Interchange

Bolt-on applications : are software programs that can be added to existing ERP applications ,

Front-office systems : are seen and interacted with by external partners such as customers and suppliers

Batch: accumulates transaction data for a period of time. Then all of the transactions in the transaction file are posted to the master file in one processing run

so that master files are updated as transaction data are entered

Report-time: the data used to generate the requested report is processed as the report is created
Master files: Contain the balance or status of entities E.g. vendors
Transaction files: Contain activity data E.g. orders
History or archive files : Contain inactive past or historical data
Suspense files: Contain items awaiting action, errors, missing information

تمنياتي للجميع بالتوفيق والسداد