


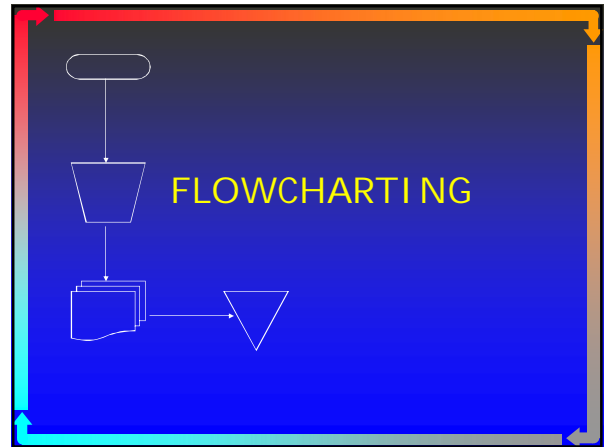



Systems Development and Documentation

Actg 474

- ## Documentation
- Narratives - Written description
 - Flowcharts
 - Diagrams
 - Tables
- Pictorial / Symbolic descriptions
- explains how the system works

- ## User Documentation
- Paper books - Written description
 - Help screens
 - Online assistance
- explains how to use the system*
- 
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- 



- ## Flowcharts
- ← Pictorial / Symbolic descriptions of transaction processing procedures and flows of data
 - ← Types:
 - ← System
 - ← Document
 - ← Internal control
 - ← Program
- 


- ## Flowcharts
- ← Symbols (Fig. 3-8 in text)
 - ← Input/Output
 - ← Processing
 - ← Storage
 - ← Flow and other
- 

FIGURE 3.8
Common flowcharting Symbols

Symbol	Name	Explanation
<i>Input/Output Symbols</i>		
	Document	A document or report; the document may be prepared by hand or printed by a computer
	Multiple copies of one document	Illustrated by overlapping the document symbol and printing the document number on the face of the document in the upper-right corner
	Input/output; journal/b ledger	Any function of input or output on a program flowchart. Represents accounting journals and ledgers on document flowchart
	Display	Information displayed by an on-line output device such as a CRT terminal or personal computer monitor
	On-line keying	Data entry by on-line devices such as a CRT terminal or personal computer
	CRT terminal, personal computer	The display and on-line keying symbols are used together to represent CRT terminals and personal computers
	Transmittal tape	Manually prepared control totals, used for control purposes to compare to computer-generated totals
<i>Processing Symbols</i>		
	Computer processing	A computer-performed processing function, usually results in a change in data or information
	Manual operation	A processing operation performed manually
	Auxiliary operation	A processing function done by a device that is not a computer
	Off-line keying operation	An operation utilizing an off-line keying device (e.g., key to disk, cash register)

FIGURE 3.8
Continued

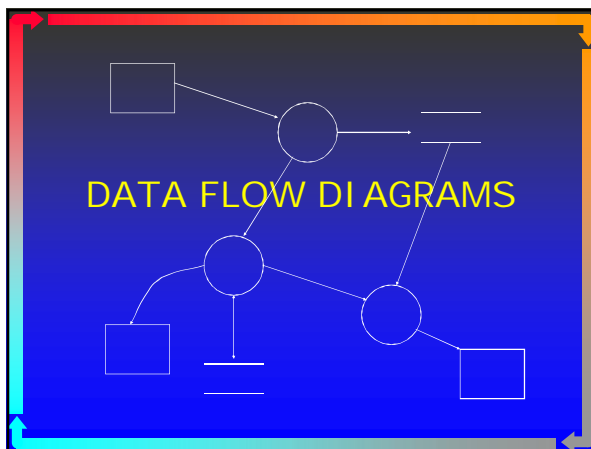
Symbol	Name	Explanation
<i>Storage Symbols</i>		
	Magnetic disk	Data stored permanently on a magnetic disk used for master files
	Magnetic tape	Data stored on a magnetic tape
	Magnetic diskette	Data stored on a diskette
	On-line storage	Data stored in a temporary on-line file in a direct-access medium such as a disk
	File	File of documents manually stored and retrieved; inscribed letter indicates file-ordering sequence: N = numerically, A = alphabetically, D = by date
<i>Flow and Miscellaneous Symbols</i>		
	Document or processing flow	Direction of processing or document flow; normal flow is down and to the right
	Data/information flow	Direction of data/information flow; often used to show data copied from one document to another
	Communications link	Transmission of data from one location to another via communication lines
	On-page connector	Connects the processing flow on the same page; its usage avoids connecting lines entering a page
	Off-page connector	An entry from, or an exit to, another page
	Flow of goods	Physical movement of goods; used primarily with document flowcharts

FIGURE 3.8
Continued

Symbol	Name	Explanation
<i>Flow and Miscellaneous Symbols (continued)</i>		
	Terminal	A beginning, end, or point of interruption in a process or program; also used to indicate an external party
	Decision	A decision making step; used in a computer program flowchart to show branching to alternative paths
	Association	Addition of descriptive comments or explanatory notes as clarification

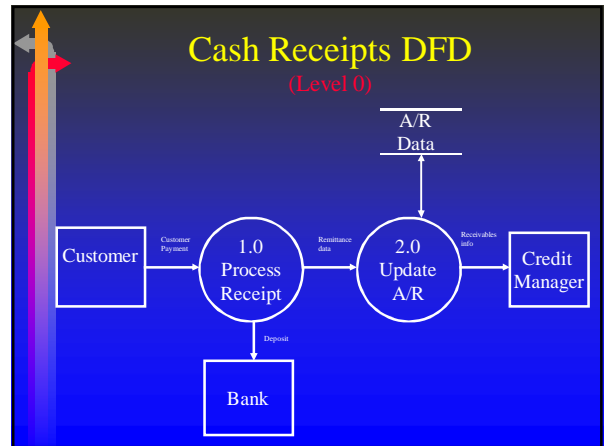
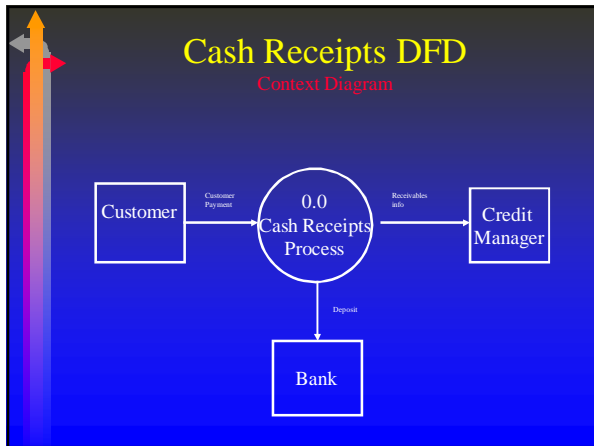
Flowcharts

- ← Guidelines (p. 71 in text)
- ← Upper left to lower right
- ← "Sandwich rule"



Data Flow Diagrams (DFDs)

- ← DFDs describe the movement of data through a process
- ← Can be decomposed to increasing levels of detail
- ← Uses 4 symbols for 4 elements

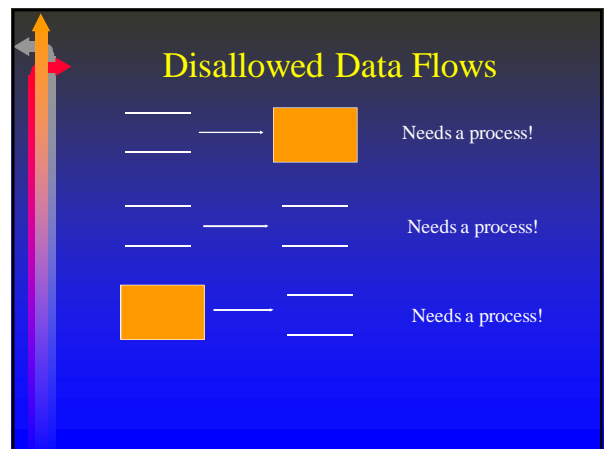
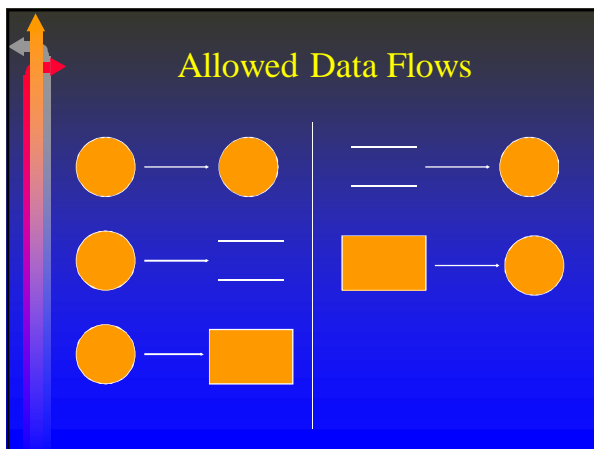


Problem 3.9

- o Ashton Fleming has worked furiously for the past month trying to completely document the major business information flows at S&S. Upon completing his personal interview with cash receipts clerks, Ashton asks you to develop a comprehensive DFD for the cash receipts system. Ashton's narrative of the system follows:
- o *Customer payments include cash received at the time of purchase as well as account payments received in the mail. At the end of the day, all checks are endorsed by the treasurer and a deposit slip is prepared for the checks and the cash. The checks, cash, and deposit slip are then deposited daily at the local bank by a clerk.*
- o *When checks are received as payment for accounts due, a remittance slip is included with the payment. The remittance slips are used to update the accounts receivable file at the end of the day. The remittance slips are stored in a file drawer by date.*
- o *Every week a cash receipts report and an aged trial balance are generated from the data in the accounts receivable ledger. The cash receipts report is sent to Scott and Susan. A copy of the aged trial balance by customer account is sent to the Credit and Collections department.*

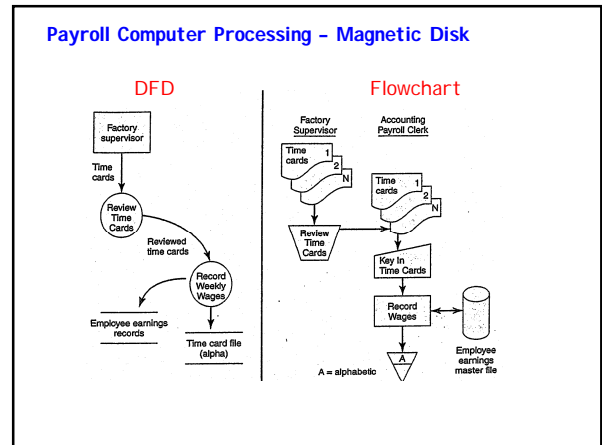
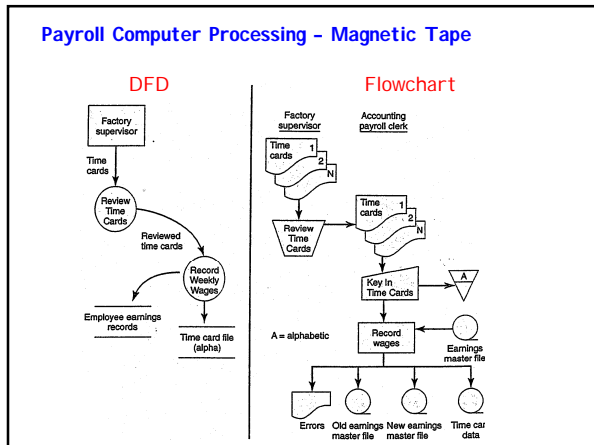
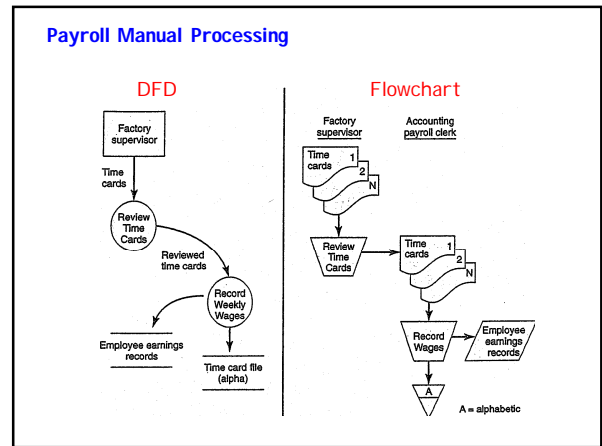
Some guidelines

- ← In Context Diagram:
 - ← No data stores
 - ← Only one process circle (0.0)
 - ← Define system boundary carefully
- ← In Level 0 Diagram:
 - ← First identify sub-processes (1.0, 2.0, etc.)
 - ← Use same sources and destinations from context diagram



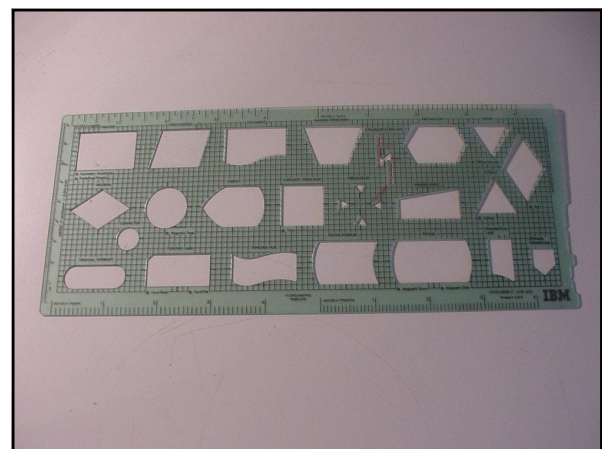
Flowchart-DFD Comparison

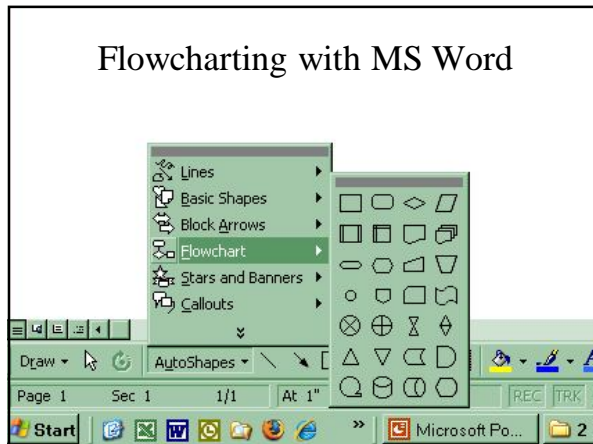
- ← DFD's and Flowcharts are different ways of describing a system
- ← Flowcharts are **procedural**
DFDs focus on **processes**
- ← Payroll Cycle example



Flowcharts and DFD's

How do you draw them?





Diagramming in MS Word

- ← Use the Drawing Toolbar to produce diagrams
- ← If you do not see the toolbar:
View / Toolbars / Drawing
- ← Use the AutoShapes, lines, arrows and textboxes to create diagrams

THE END

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