

# Flowchart and Decision Table

Week 2 Lecture 1

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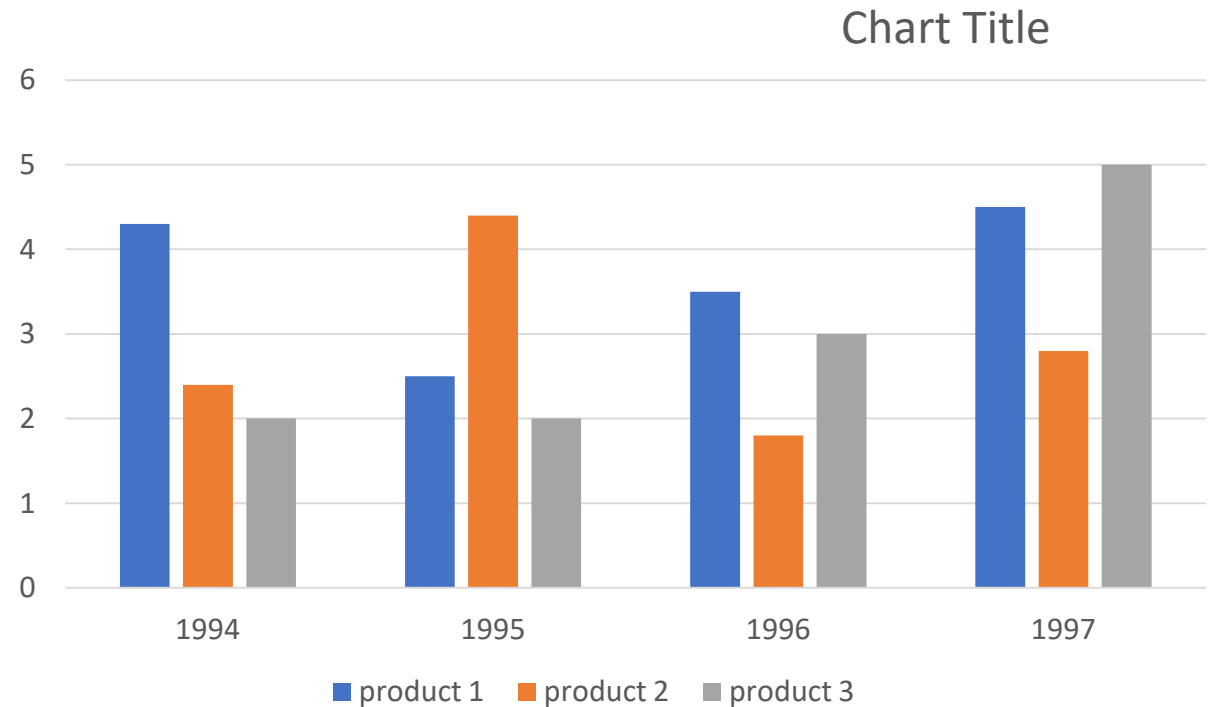
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# Diagrammatic representation of a process

- 1. Why diagrammatic representation?
  - Best way of information sharing
  - Problem solving
  - Clear communication
  - Easy to understand
  - Clear representation of complex processes

# Textual information vs Diagrammatic information

- The four years production of three different categories of product of a industry is as follows:
- In 1994, product 1 4.2,product 2 2.4,product 3 2,In 1995, product 1 2.5,product 2 4.5,product 3 2,In 1996, product 1 3.5,product 2 1.8,product 3 3,In 1997, product 1 4.5,product 2 2.8,product 3 5



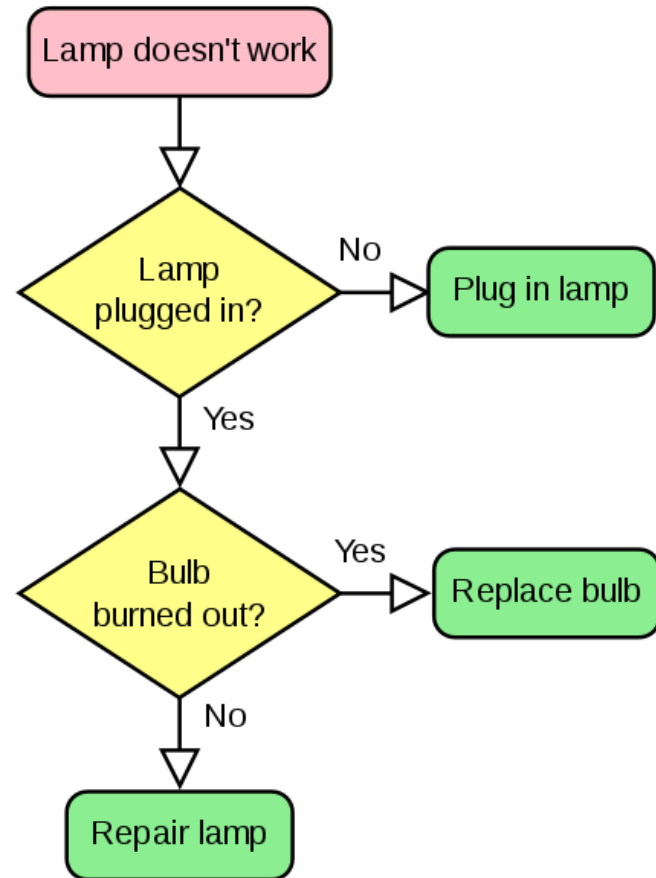
# What's an algorithm?

- A finite sequence of well defined instructions to solve a problem.

# What's a flowchart?

- A flowchart is a diagram that depicts a process, system or computer algorithm
- A flowchart is simply a graphical representation of steps. It shows steps in sequential order and is widely used in presenting the flow of algorithms


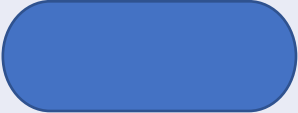


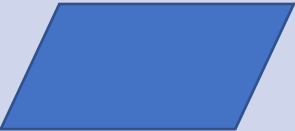
# Example of Flowchart



# What's a flowchart?

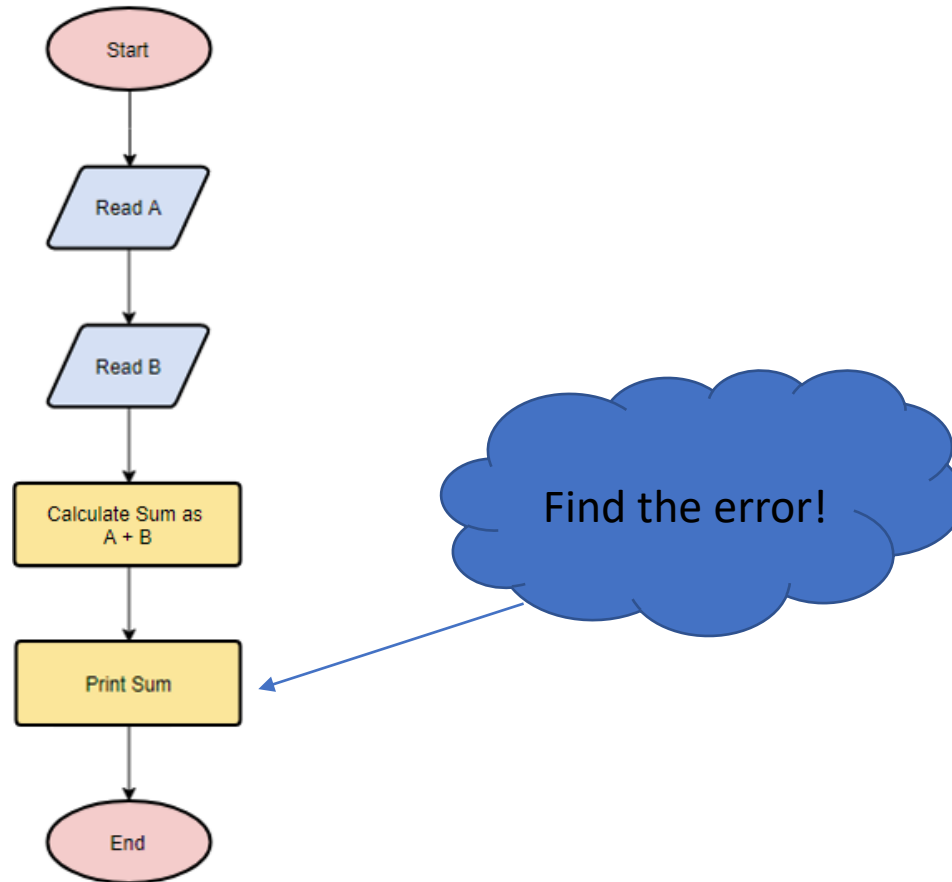
A flowchart can also be defined as a diagrammatic representation of an [algorithm](#), a step-by-step approach to solving a task

# Basic Flowchart Symbols

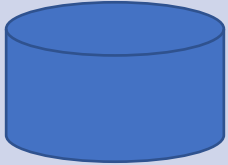

Shape	Name	Description
	Flow Arrow	Shows the process's order of operation
	Terminal	Indicates the beginning and ending of a program or sub-process
	Process	A box indicates some particular operation.
	Decision	A diamond represents a decision or branching point
	Input/Output	It represents information entering or leaving the system



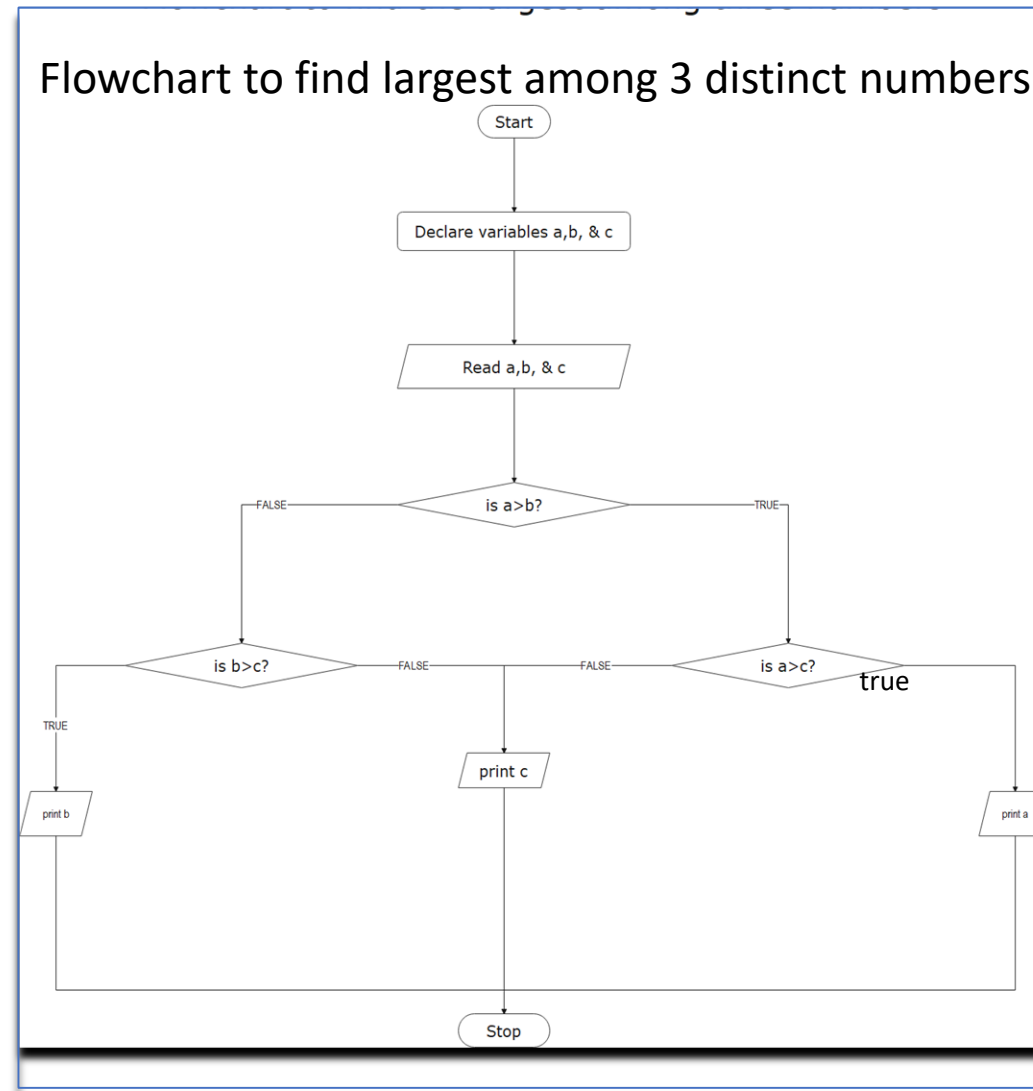
# Another Example of adding two numbers



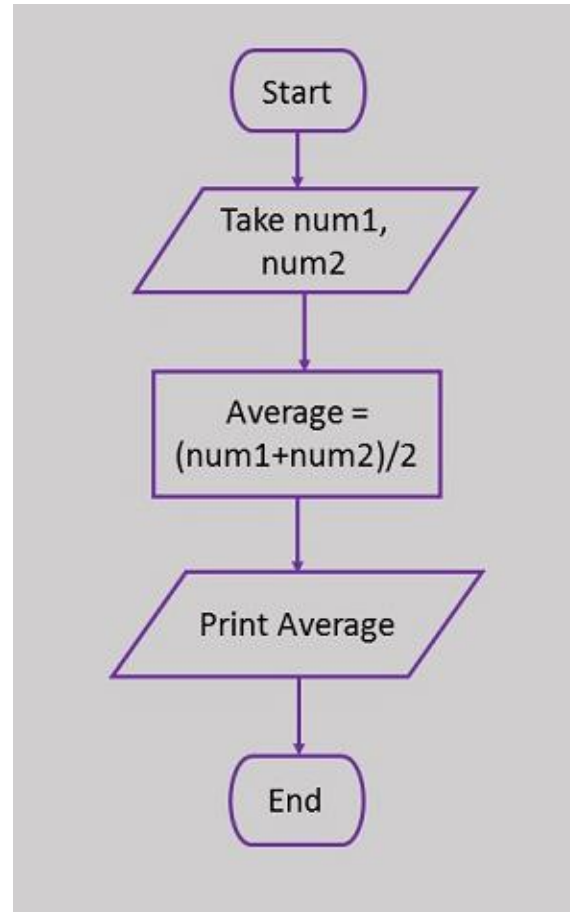
# Basic Flowchart Symbols

Shape	Name	Description
	Data File or Database	Data represented by a cylinder (disk drive).
	Predefined Process	Shows named process which is defined elsewhere

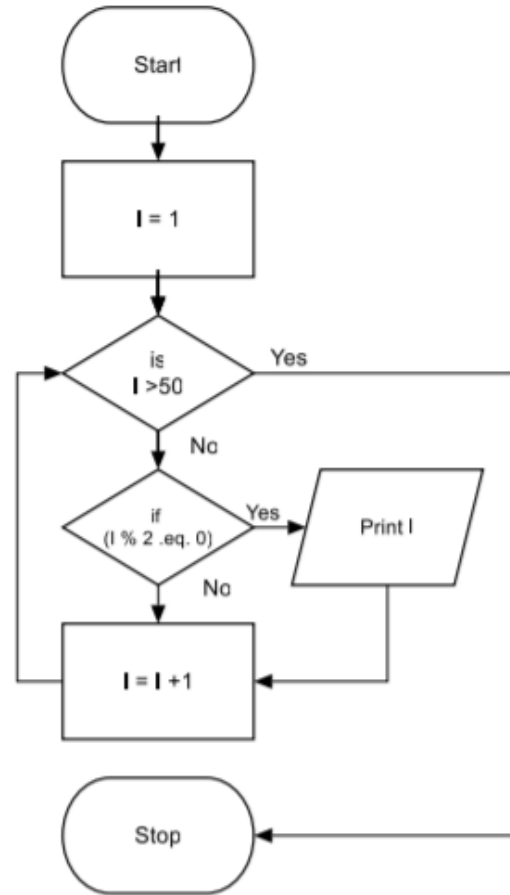
# Let's discuss some examples of flowchart



# Let's discuss some examples of flowchart



# Let's discuss some examples of flowchart



# Decision table

- **Decision tables** are a concise visual representation for specifying which actions to perform depending on given conditions. They are [algorithms](#) whose output is a set of actions.

# A simple example of decision table

Conditions	Rule 1	Rule 2	Rule 3	Rule 4
Username	F	T	F	T
Password	F	F	T	T
Output	E	E	E	NE

# Example of Decision Table

**Printer troubleshooter**

		Rules							
<b>Conditions</b>	Printer prints	No	No	No	No	Yes	Yes	Yes	Yes
	A red light is flashing	Yes	Yes	No	No	Yes	Yes	No	No
	Printer is recognized by computer	No	Yes	No	Yes	No	Yes	No	Yes
<b>Actions</b>	Check the power cable			✓					—
	Check the printer-computer cable	✓		✓					—
	Ensure printer software is installed	✓		✓		✓		✓	—
	Check/replace ink	✓	✓				✓		—
	Check for paper jam		✓		✓				—



# Why decision table?

- It is a very effective tool used for complex software testing.
- Decision table helps to check all possible combinations of conditions for testing and testers can also identify missed conditions easily.
- The representation is simple

Disadvantage: The main disadvantage is that when the number of input increases the table will become more complex.

# References

- <https://www.lucidchart.com/pages/what-is-a-flowchart-tutorial>
- <https://en.wikipedia.org/wiki/Flowchart>
- [https://en.wikipedia.org/wiki/Decision\\_table](https://en.wikipedia.org/wiki/Decision_table)