Recap Exercise

- Develop a pseudo code for a program to calculate employee income tax based on the following formula:

```
Tax = 0.25 * (monthly income * 11 – number of
  kids * 450)
```

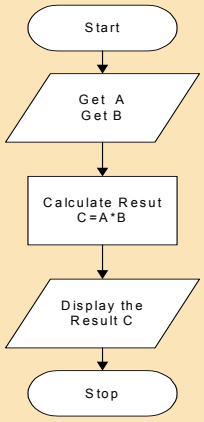
Your program will display the name of the employee and amount of tax on the screen.

Flowchart

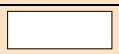
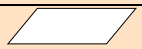
- Flowchart – a graph of geometrical shapes that are connected by lines.
- 2 important element in flow chart:

1. geometrical shapes – represent type of statements in the algorithm
2. Flow line – show the order in which the statements of an algorithm are executed.

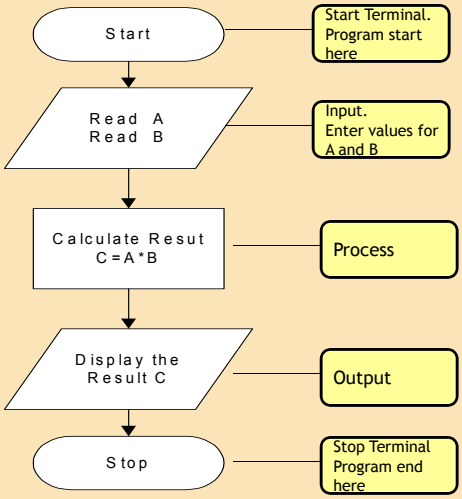
- Flowchart - Represents an algorithm in graphical symbols
- Example: Algorithm for multiplying two numbers



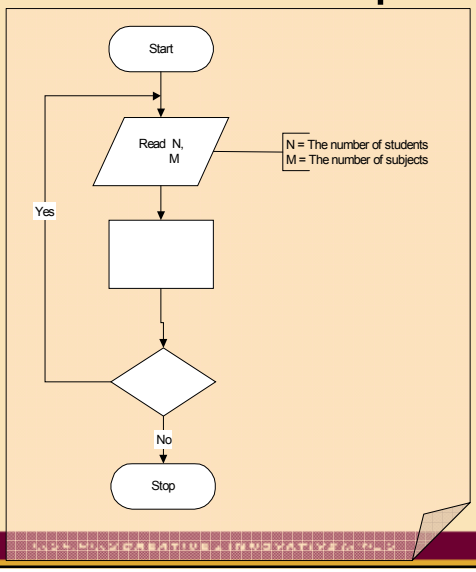
Flowchart Symbols

	**Terminal:** Used to indicates the start and end of a flowchart. Single flowline. Only one "Start" and "Stop" terminal for each program. The end terminal for function/subroutine must use "Return" instead of "Stop".
	**Process:** Used whenever data is being manipulated. One flowline enters and one flowline exits.
	**Input/Output:** Used whenever data is entered (input) or displayed (output). One flowline enters and one flowline exits.
	**Decision:** Used to represent operations in which there are two possible selections. One flowline enters and two flowlines (labelled as "Yes" and "No") exit.
	**Function / Subroutine:** Used to identify an operation in a separate flowchart segment (module). One flowline enters and one flowline exits.
	**On-page Connector:** Used to connect remote flowchart portion on the same page. One flowline enters and one flowline exits.
	**Off-page Connector:** Used to connect remote flowchart portion on different pages. One flowline enters and one flowline exits.
	**Comment:** Used to add descriptions or clarification.
	Flowline: Used to indicate the direction of flow of control.

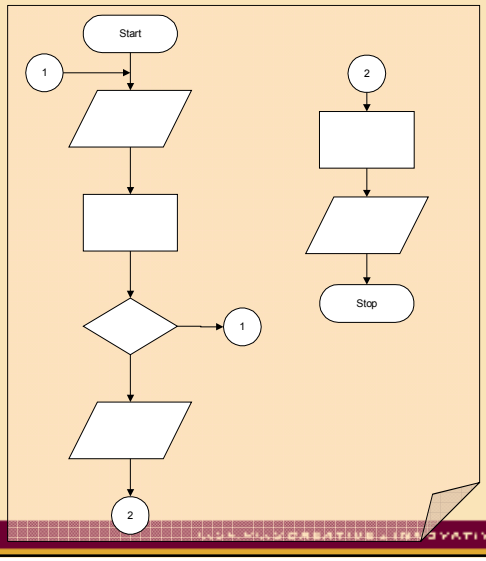
Flowchart Explanation



Example: Use of comments/description



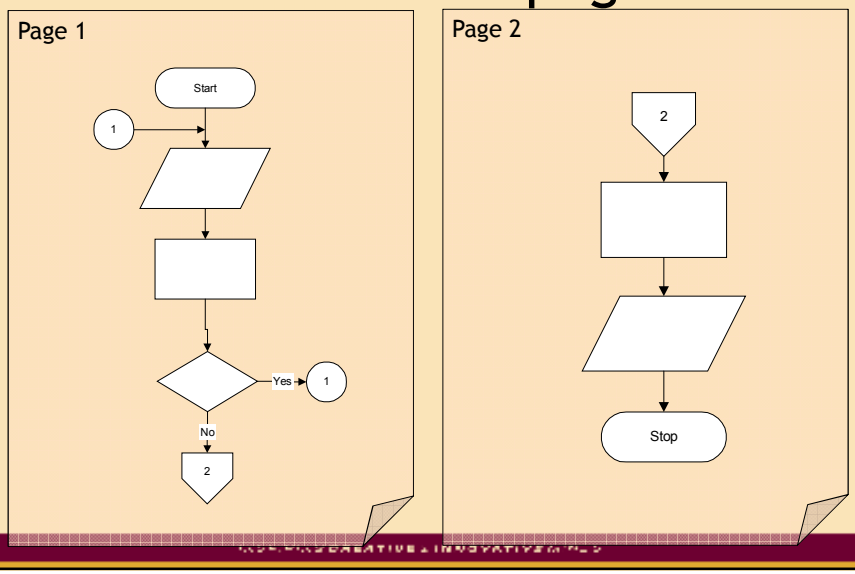
Example: Use of connectors on the same page.



1- connection on the same flowchart portion

2- connection on the different flowchart portion

Example: Use of connectors on the different page.



In-Class Exercise

- Refer to your solution for :
  - Lab 2, Exercise 3, No. 1, pg. 27
  - Lab 2, Exercise 3, No. 2, pg. 27
- Complete the exercise

In-Class Exercise

- Draw a flow chart for the following.
  - A program that calculates a customer's available credit should ask the user for the following:
    - The customer's maximum amount of credit
    - The amount of credit used by the customer

    Once these items have been entered, the program should calculate and display the customer's available credit. You can calculate available credit by subtracting the amount of credit used from the maximum amount of credit.