

Computer
Programming

Flowchart

Objectives

-  **Flowchart**
-  **Calculations**
-  **Decision Making (Selection)**
-  **Iteration (Repetition)**

Flowchart

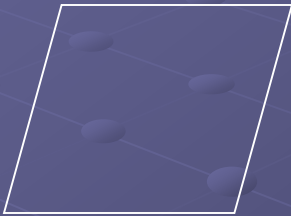
Flowchart خريطة سير العمليات

- **Graphical representation of an algorithm**
- **Components:**
 - **Arrows/lines:** Flow of control
 - **Parallelogram:** Indicates input and output operations
 - **Rectangle symbol (action symbol):** Indicates any type of action/computational step
 - **Oval symbol:** Indicates the start or the end of a program or a section of code
 - **Diamond:** Decision.

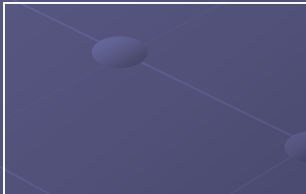
Flowchart Notations



Arrows



Parallelogram



Rectangle

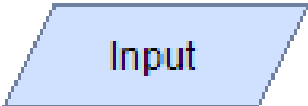
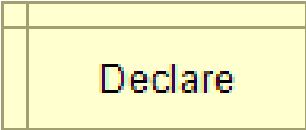
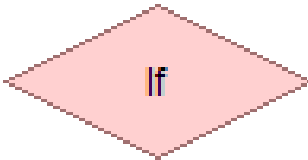
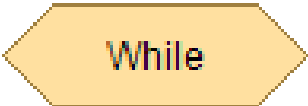
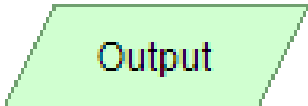
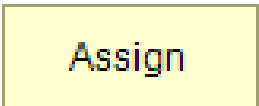
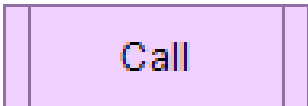
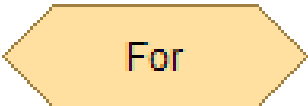
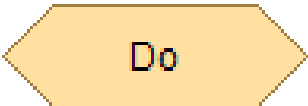


Diamond



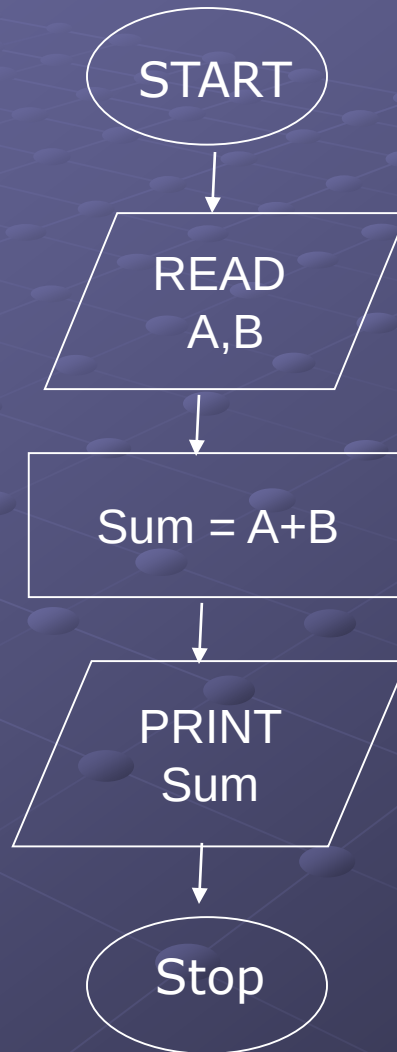
Oval

Flowchart Notations

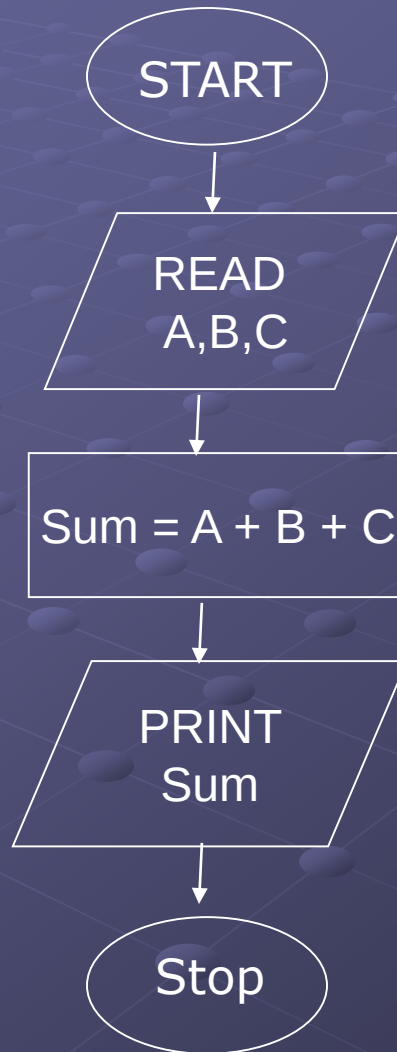
Statement			
Input / Output	Variables	Control	Looping
			
			
			

Calculations

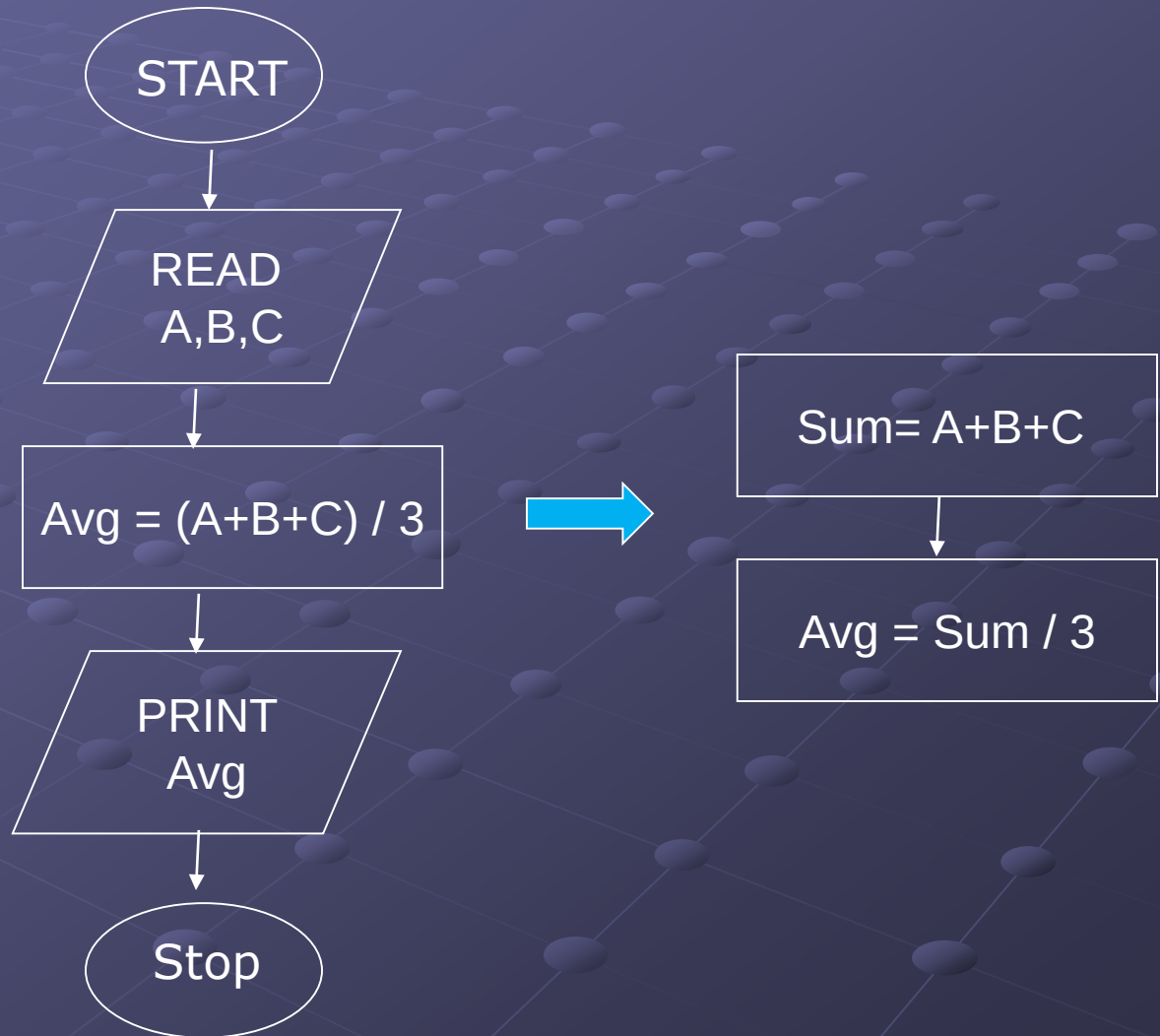
Example: Add Two Numbers



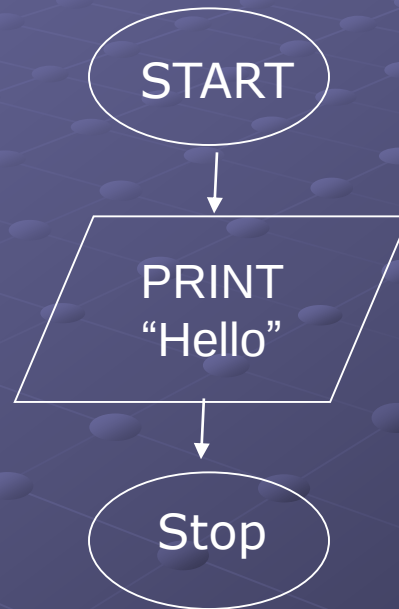
Example: Add Three Numbers



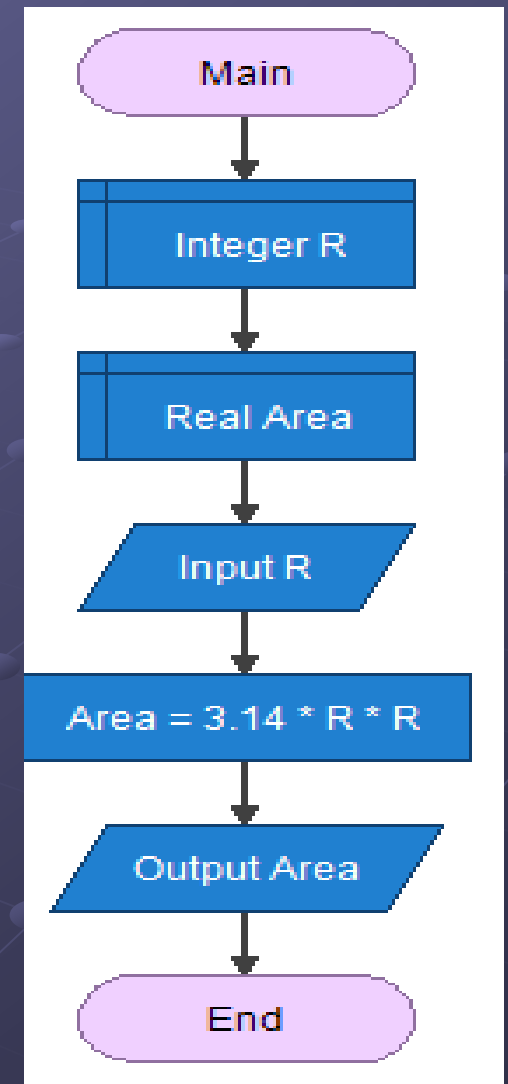
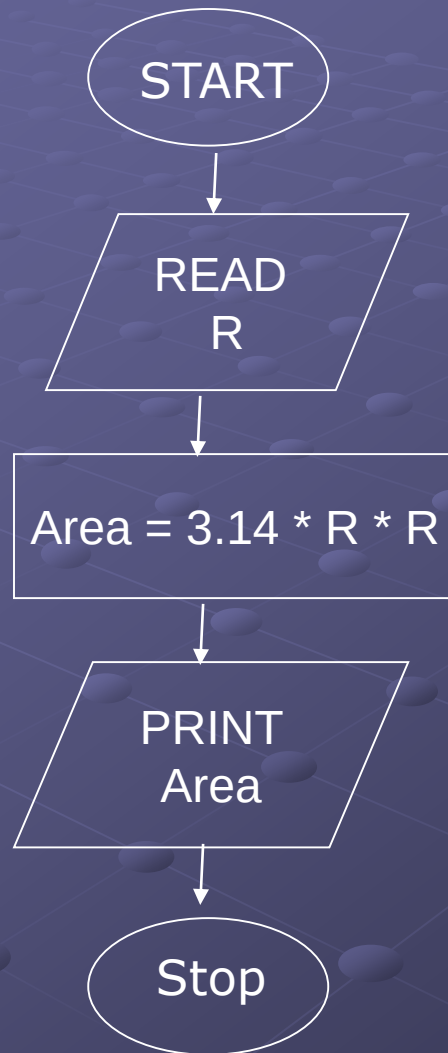
Example: Average of Three Numbers



Example: Print “Hello”

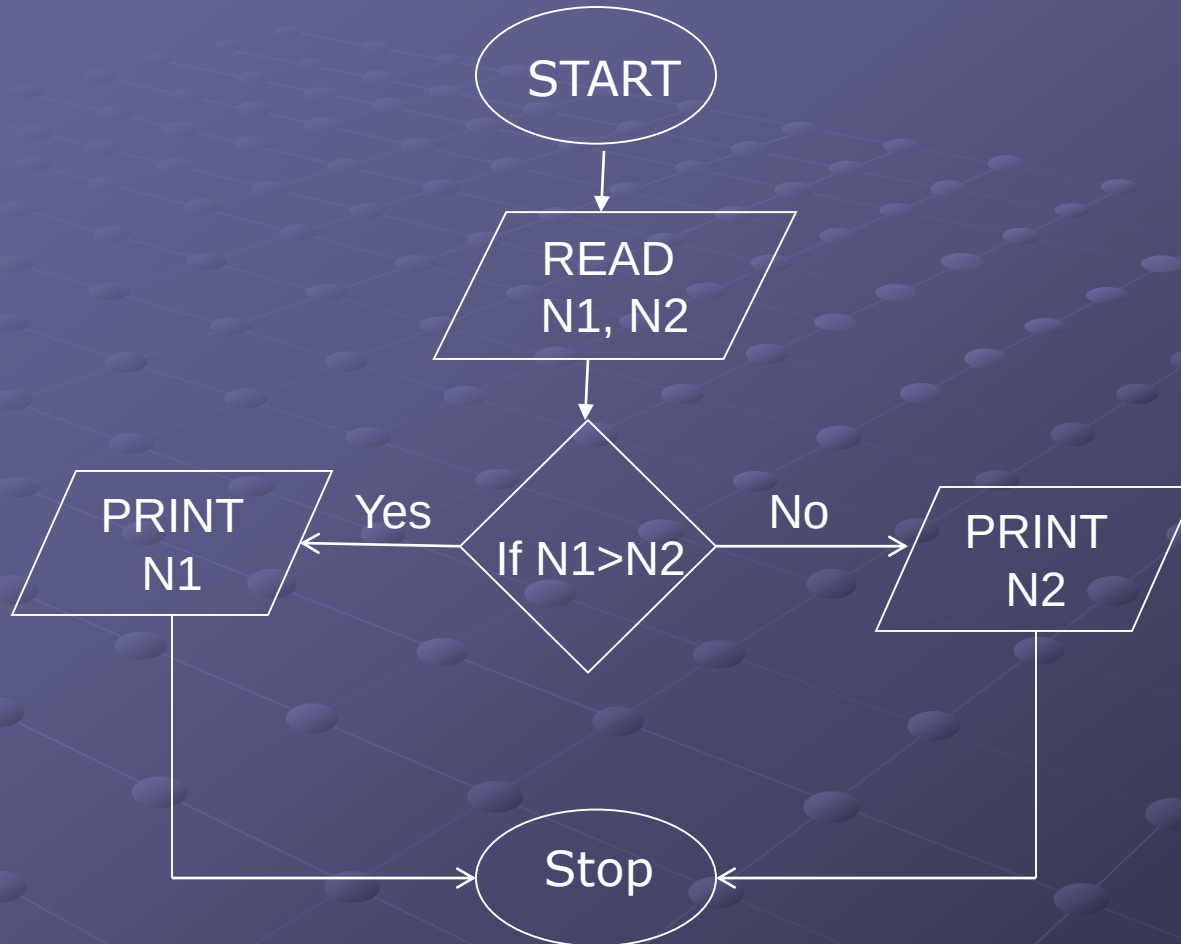


Example: Area of a Circle

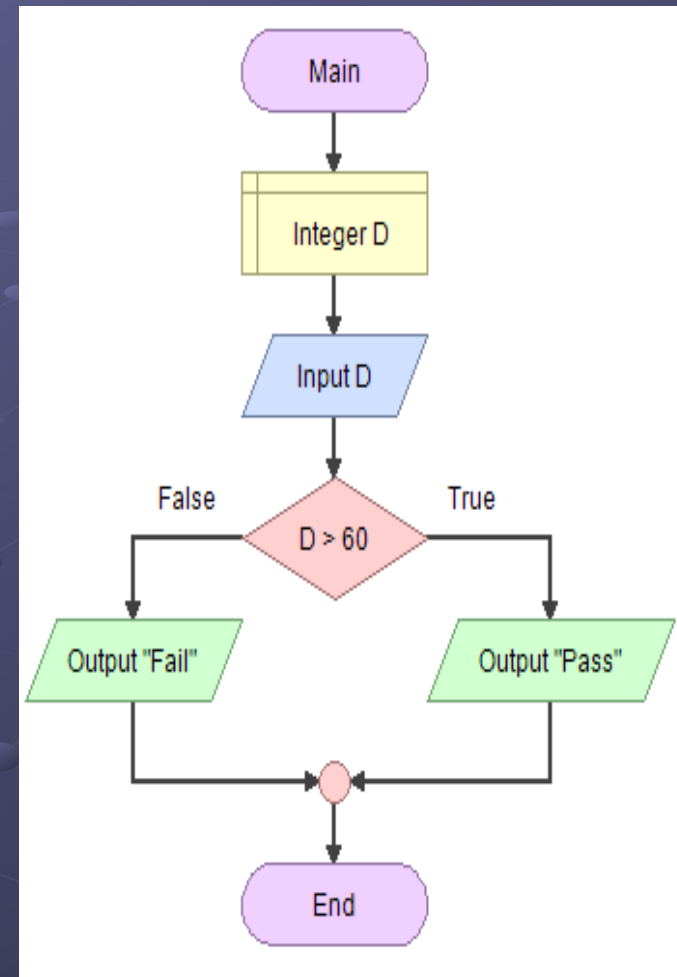
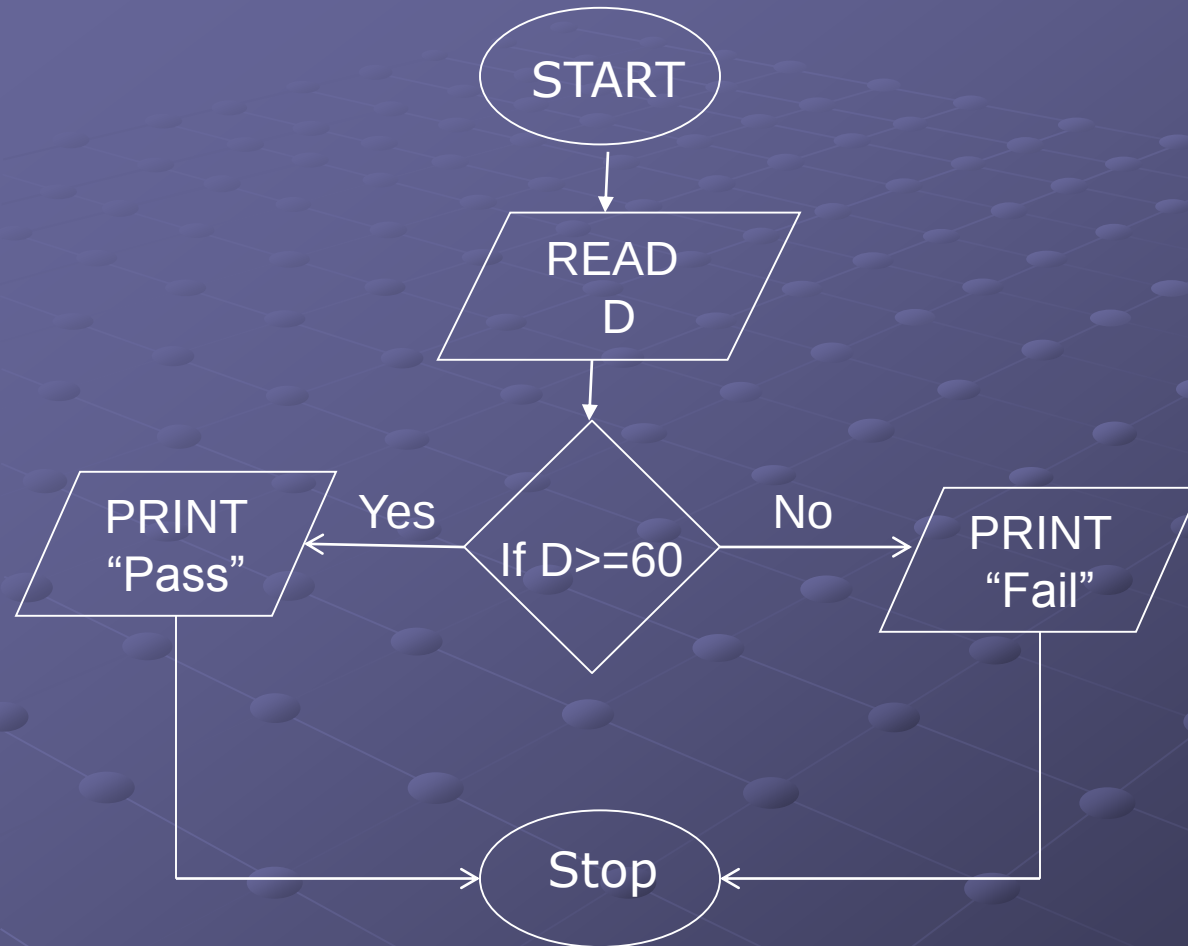


Decision Making (Selection)

Example: Max. of Two Number



Example: Pass or Fail



Example: Degree to Grade

