

What is a flowchart?

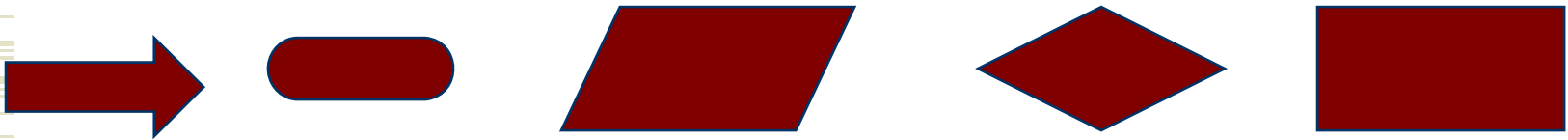
- ◆ Logic diagram to describe each step that the program must perform to arrive at the solution.
- ◆ A popular logic tool used for showing an algorithm in graphics form.

Purpose of Flowcharting:

- ◆ An aid in developing the logic of a program.
- ◆ Verification that all possible conditions have been considered in a program.
- ◆ Provides means of communication with others about the program.
- ◆ A guide in coding the program.
- ◆ Documentation for the program.

Continue flowchart

- ◆ Programmer prepares flowchart before coding.
- ◆ Most common flowchart symbols are:



Flowchart Symbols

◆ start/stop oval



◆ process rectangle



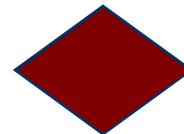
Declaring variables, assigning values, calculations.

◆ input/output parallelogram



Get info from user/displaying info.

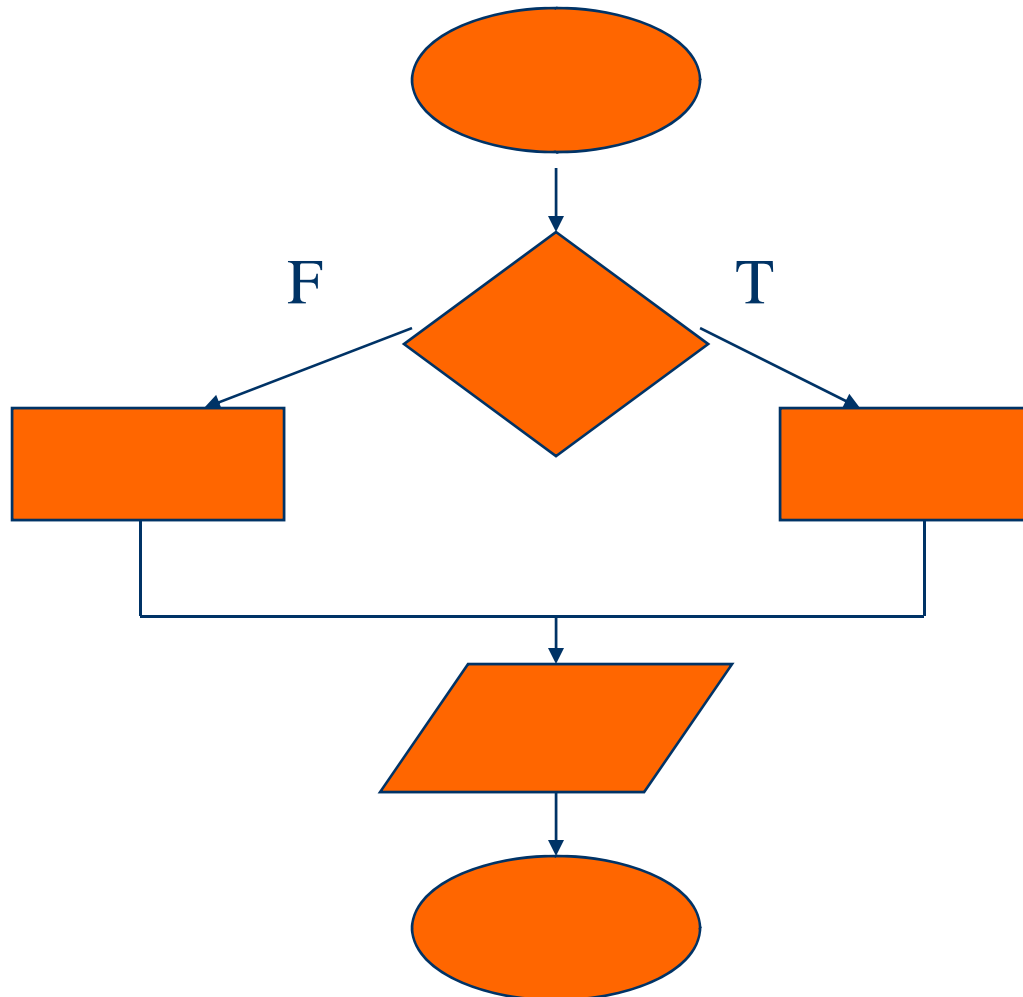
◆ selection/repetition diamond



T/F question.

◆ symbols are connected by flowlines

Selection Structure Flowcharts

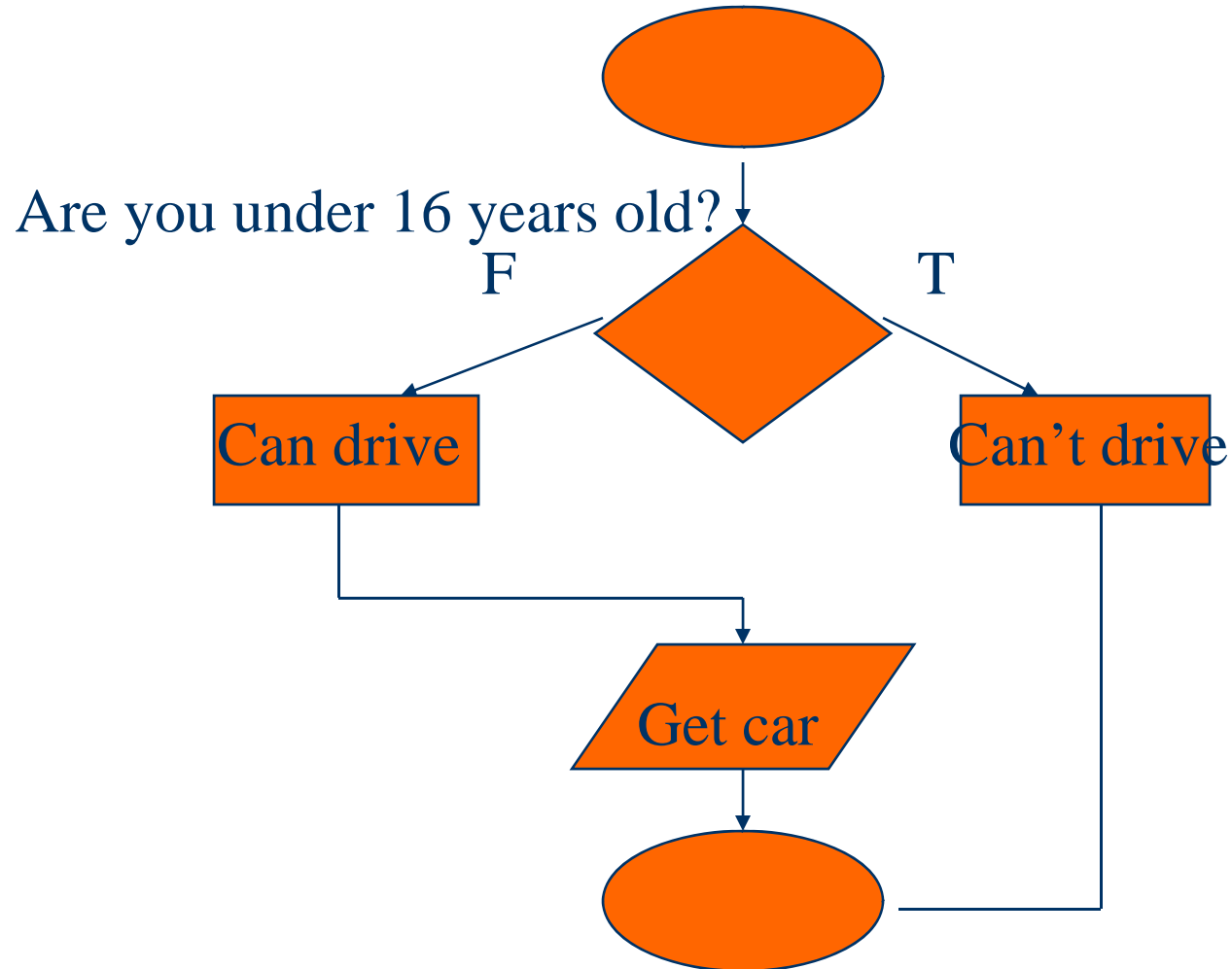




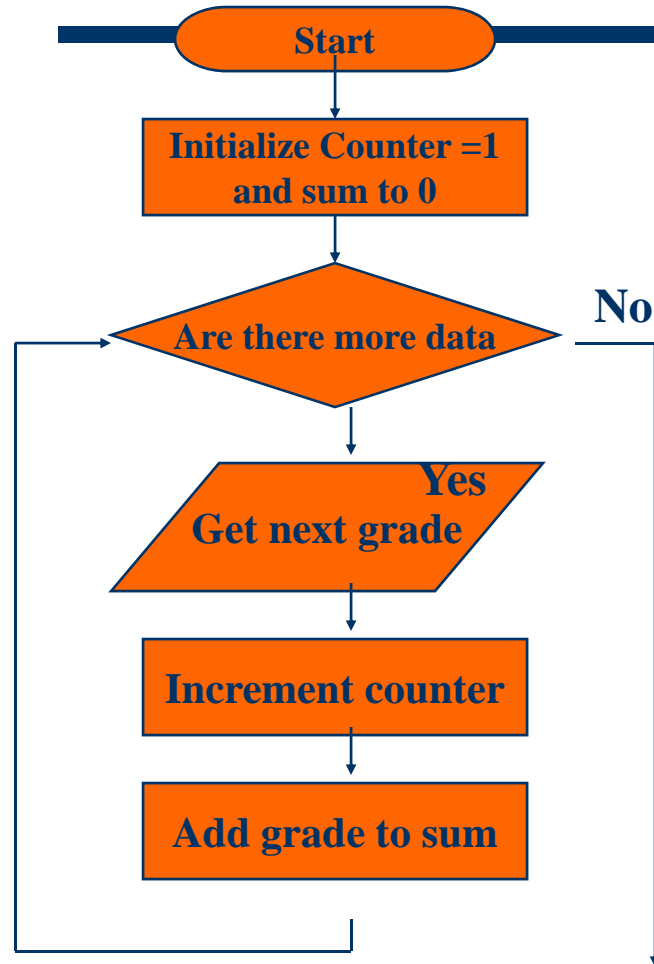
Selection Structure

- ◆ Use to make a decision or comparison.
- ◆ The *condition* must result in either a true (yes) or false (no) answer

Practice Flowchart



Example of Flowchart:



If..Then...Else Statement

If *condition* **Then**

[instructions when the *condition* is true]

[Else

[instructions when the *condition* is false]]

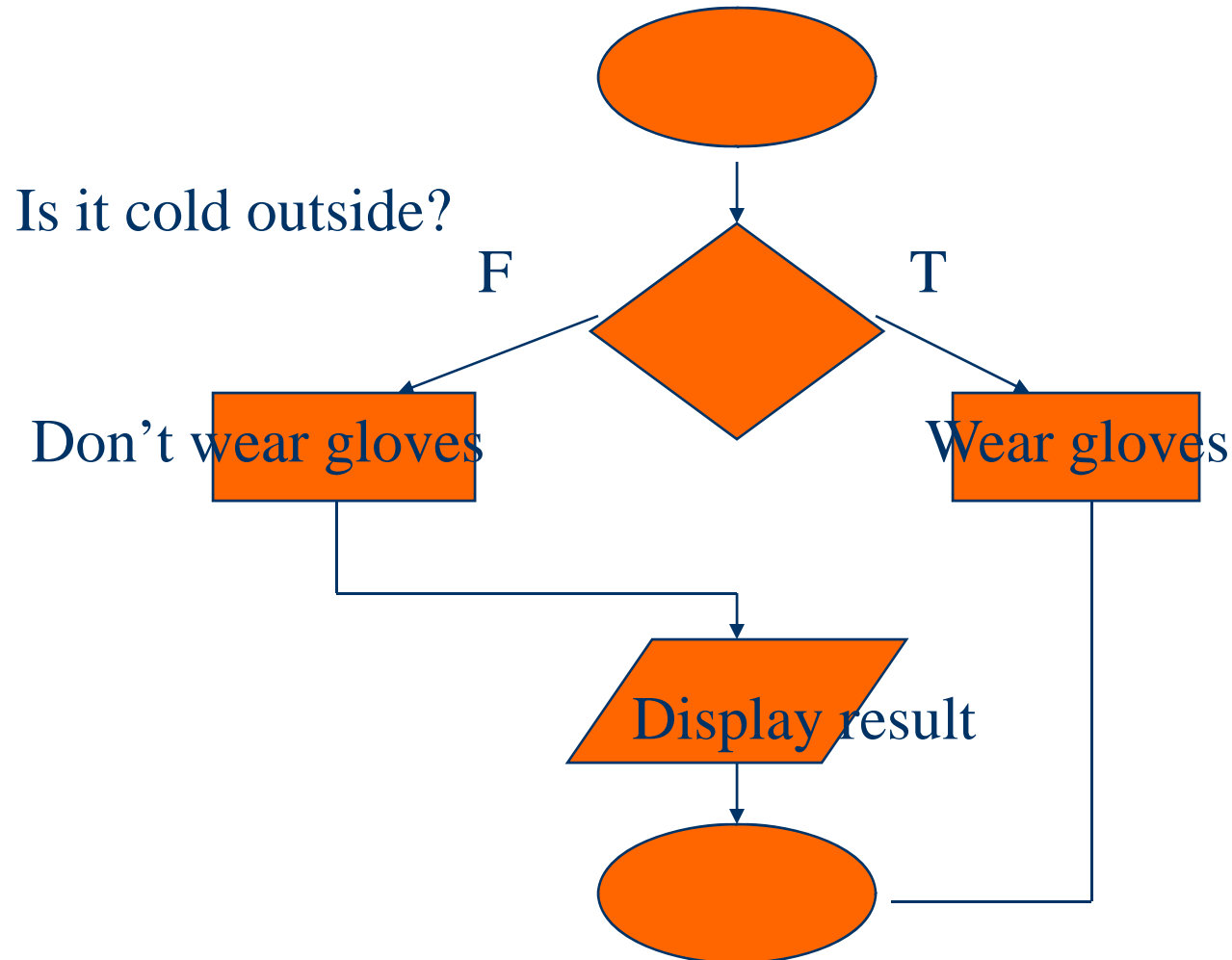
End If



Practice Flowcharts

- ◆ If it's cold outside then wear gloves.
- ◆ Create a flowchart for this t/f question

Cold Outside



Voting

- ◆ If a person is at least 18 years old then
 - If person is registered then “You can to vote”
 - If person is not registered then “You need to register before you can vote
- ◆ If a person is under 18 then “You are too young to vote”

Voting

