

# Rutgers Learning Centers

At Camden Campus

## PROGRAMMING: COMMON LANGUAGE STRUCTURES II

```
IF condition THEN
    do_something
ELSE
    do_something_else
END IF
statement_executed_when_if/then_is_complete*
```

\* In this example and the next, "statement\_executed\_when\_if/then\_is complete" simply refers to the statement that comes directly after the IF/THEN block. This does not have to be a single-line statement; it may be another loop or programming structure, the end of the program, or any other thing allowed in the programming language in which you are working.

- ◆ Statements are executed only if the corresponding *condition(s)* is (are) satisfied.
- ◆ The condition is tested.
  1. If the condition **is** satisfied, the statements following **THEN** are **executed**.
  2. If the condition **is not** satisfied, the statements following **THEN** are **skipped**, and the statements following **ELSE** are **executed**.
  3. **After** one of these choices is made and processing is complete, control is **transferred** to the statement following **END IF**.

```
IF condition1 THEN
    do_something_for_condition1
ELSE IF condition2 THEN
    do_something_for_condition2
    . . .
ELSE IF conditionN THEN
    do_something_for_conditionN*
ELSE
    do_something_else
END IF
statement_executed_when_if/then_is_complete
```

\* N refers to an *integer* that stands for some number that you have chosen as the number of the last condition. The numbers 5, 23, and 57 are all valid (acceptable) integers. Therefore, you would have condition5, condition23, and condition 57, instead of the generic term "conditionN" in the last ELSE IF statement above.

- ◆ Statements are executed only if the corresponding *condition(s)* is (are) satisfied.
- ◆ Condition1 is tested.
  1. If it **is** satisfied, the statements after the first **THEN** are **executed** and control is passed to "statement\_executed\_when\_if/then\_is complete."
  2. If condition1 **is not** satisfied, statements after the first THEN are **not executed**, the **ELSE IF** keyword says to **test** condition2 and to **execute** the statements following the **second THEN**, if condition2 is satisfied.
  3. If the condition **is not** satisfied, the **next** condition is tested.
  4. The process of testing conditions and executing the statements that follow them if they are satisfied is **continued** either **until one** of the conditions is satisfied **or until all** of the conditions, up to and including the last condition, conditionN, have been **tested**.
  5. If a condition **is** satisfied, the statements after the accompanying **THEN** are executed and **control is passed** to "statement\_executed\_when\_if/then\_is complete."
  6. If **no** conditions have been satisfied, the statements following the **ELSE** statement are executed and **control is transferred** to "statement\_executed\_when\_if/then\_is complete."

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