Problem Solving through Programming in C

COE 251

WEEK 1: HOW TO EXPRESS ALGORITHMS: FLOWCHARTS AND PSEUDOCODE

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How to Express Algorithms
– Flowchart and Pseudocode

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How to Express Algorithms

Algorithm → Sequence of steps to be followed to solve a problem.

Flow Chart → Diagram

Pseudo Code → English-Like Language

How to Express Algorithms

Fundamental Elements in a Flow chart.

START / STOP

Oblong / input (read)/ output (print)

$X = p * q$ Computation

$X > 7$ Y

Decision Box

N
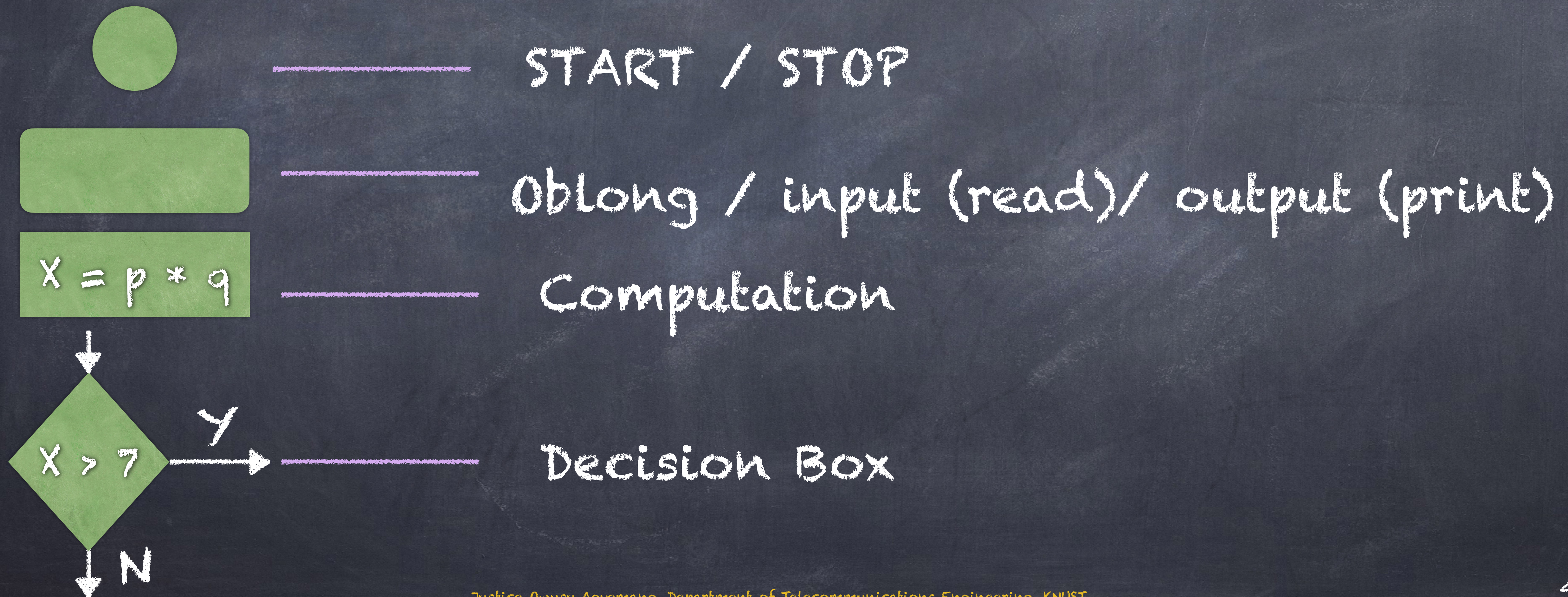
How to Express Algorithms

Example 1:

Finding the average of 3 numbers.

Example 2:

Finding the average of "n" numbers.

How to Express Algorithms

Example 3:

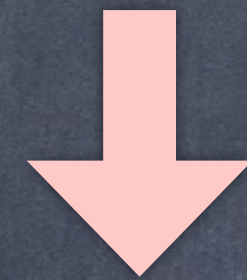Finding the maximum of 3 numbers.

Example 4:

Finding the maximum of "n" numbers.

How to Express Algorithms

Recall:

Programming = A set of instructions to be provided to a <u>computer</u> to solve a problem.

⬇

Electronic Machine. ⟶ Only '0' and '1's

Question:

How do we translate algorithms into instructions for a computer to execute?

Next ...

Programming Language Concepts