

IT 105: Introduction to Programming

Dr. Manish Khare

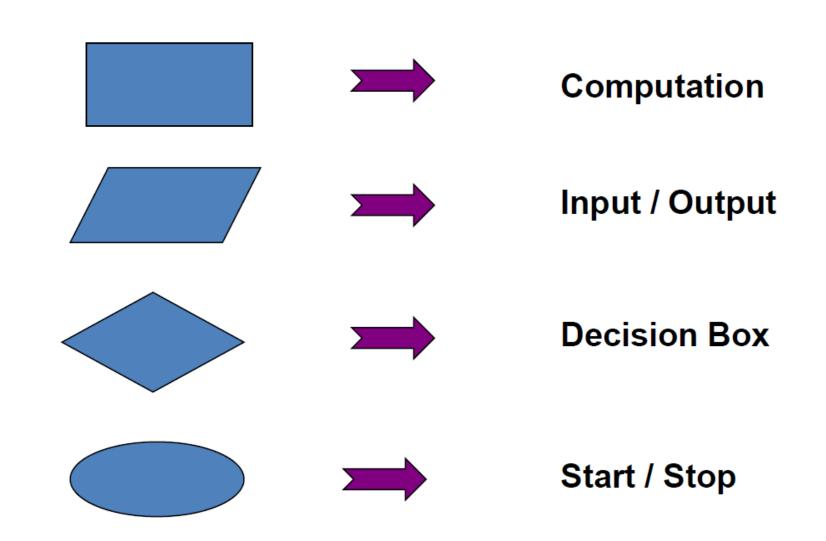
Dr. Saurabh Tiwari

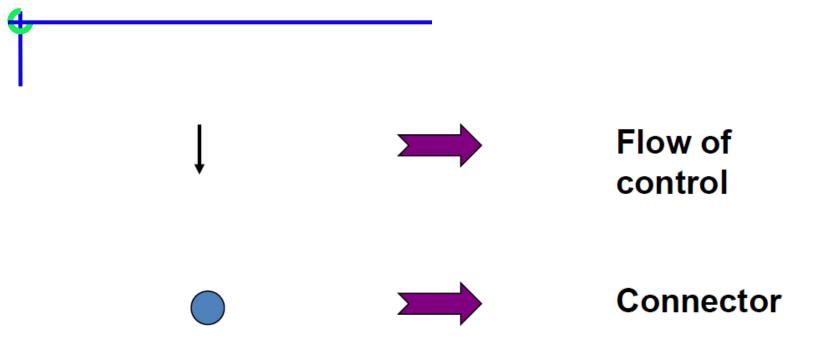


Lecture 3

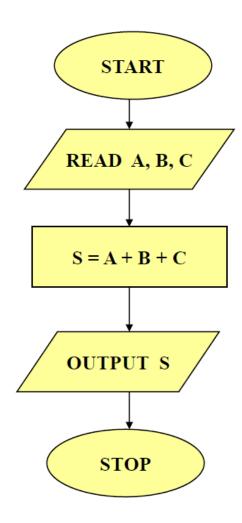
Flow Chart

Flow Chart: Basic Symbol

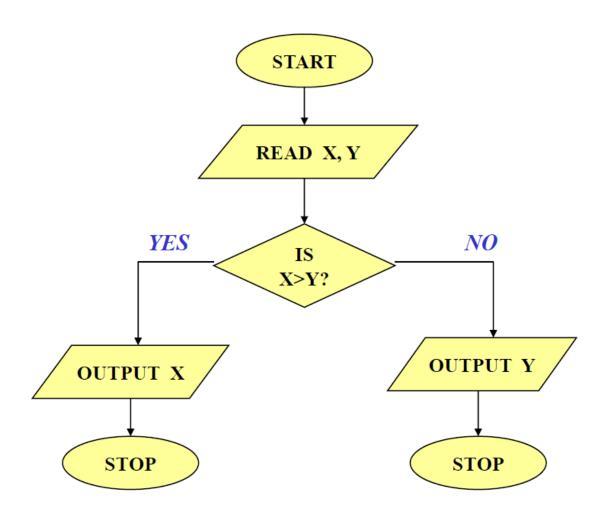




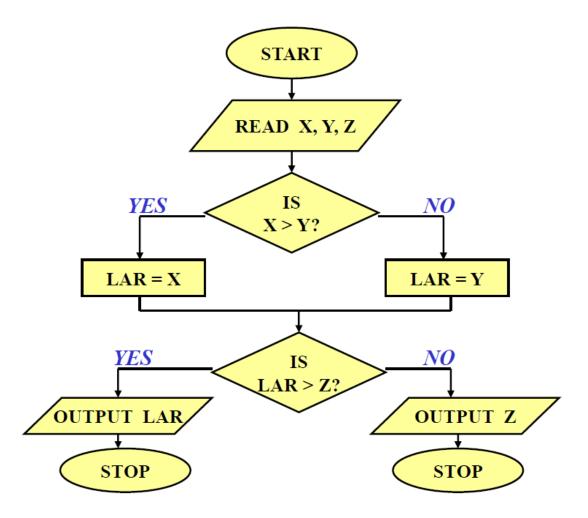
Example: Adding Three Numbers



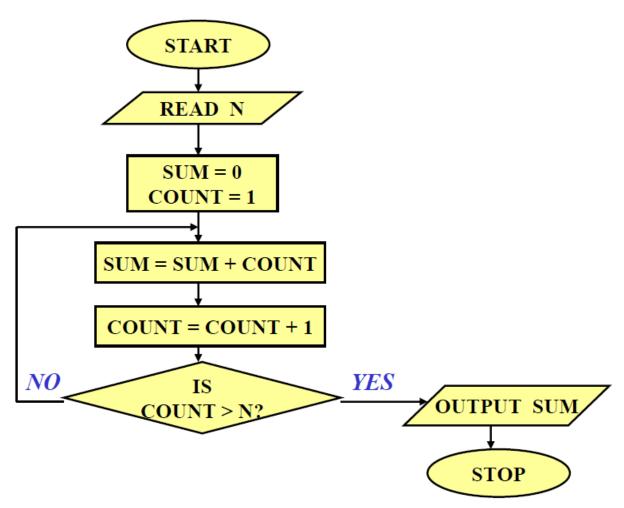
Example: Larger of two numbers



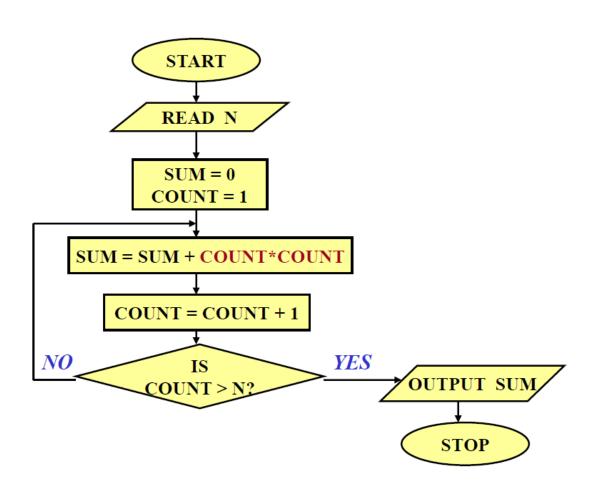
Example: Largest of three numbers



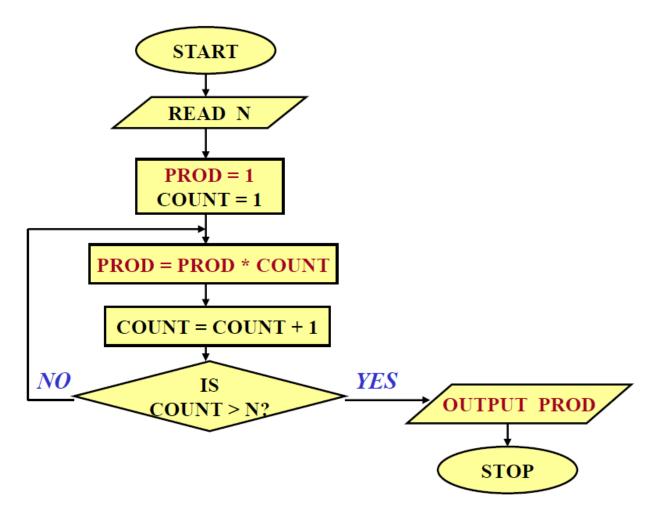
Example: Sum of first N natural numbers



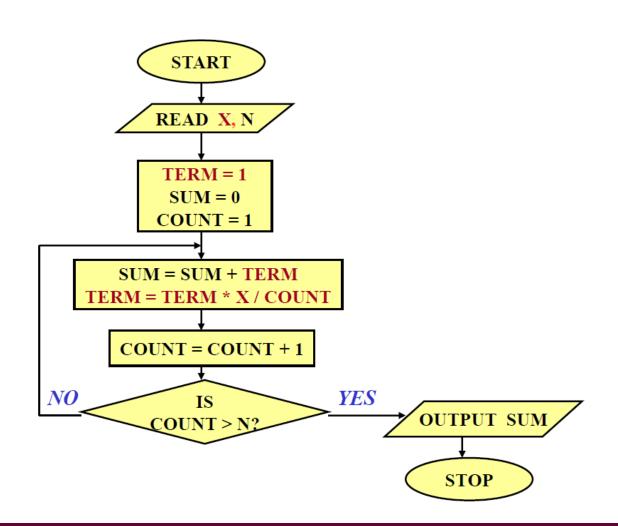
Example: $SUM = 1^2 + 2^2 + 3^2 + N^2$



Example: Computing factorial

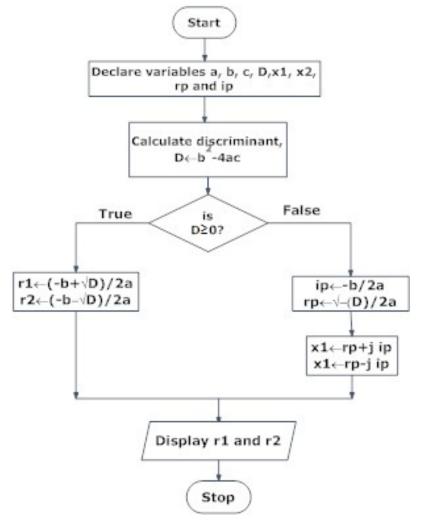


Example: Computing e^x series up to N terms



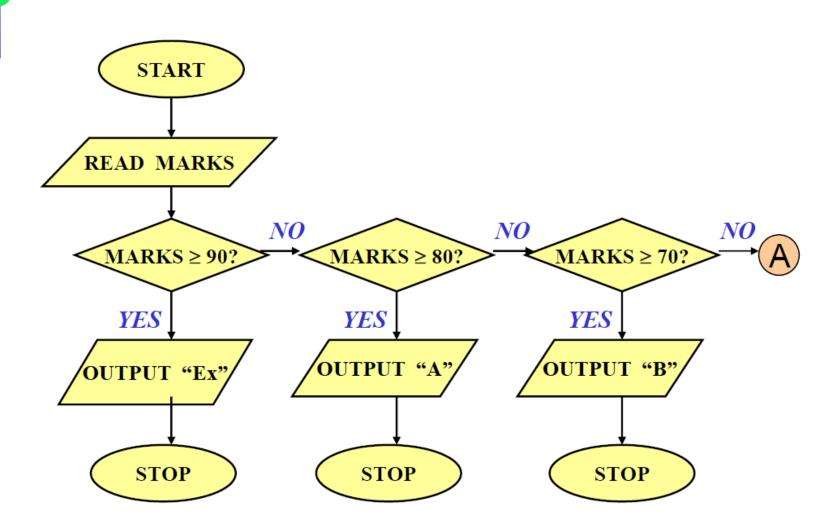
Example: Roots of a quadratic equation

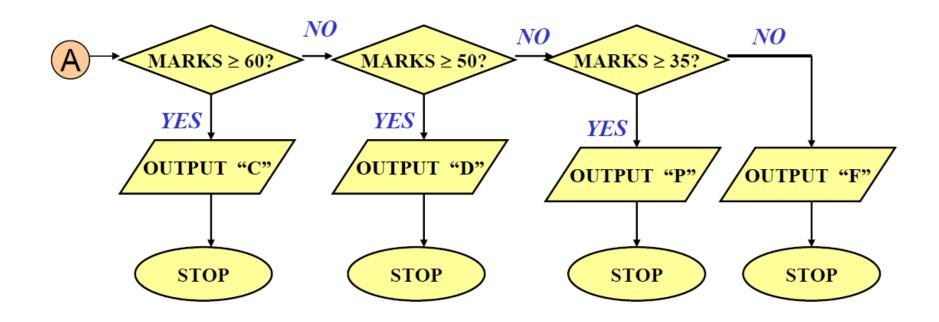
$$ax^2 + bx + c = 0$$



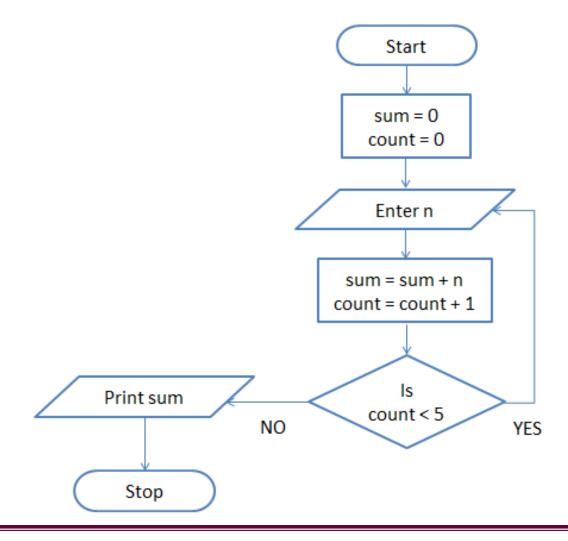
Example: Grade Computation

MARKS
$$\geq$$
 90 \Rightarrow EX
89 \geq MARKS \geq 80 \Rightarrow A
79 \geq MARKS \geq 70 \Rightarrow B
69 \geq MARKS \geq 60 \Rightarrow C
59 \geq MARKS \geq 50 \Rightarrow D
49 \geq MARKS \geq 35 \Rightarrow P
34 \geq MARKS

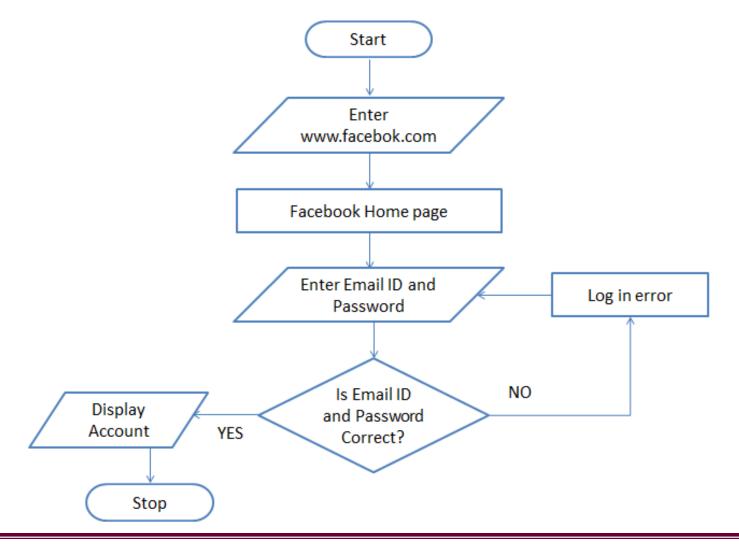




Example: Find the sum of 5 numbers

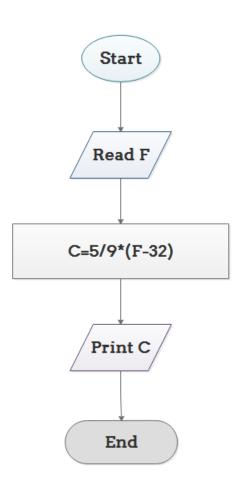


Example: Draw a flowchart to log in to facebook account



Example: Convert Temperature from Fahrenheit (°F) to

Celsius (°C)



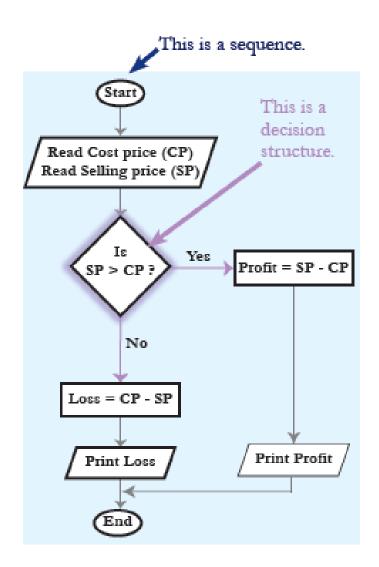
Exercise

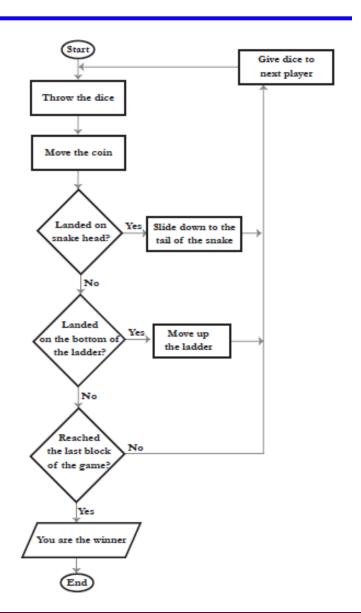
Flowchart for computing factorial N (N!)

Flowchart for finding area of a rectangle whose length and breadth are given

Snakes and Ladder game

How to find profit or loss.







Exercise

Flowchart for compute the area of a rectangle

Flowchart for compute the perimeter of a rectangle

Flowchart for Calculate Pay – sequence

Flowchart for Calculate Pay with Overtime