

S3\_1

# Flowchart - Tutorial





# Learning objectives!!!

To learn and appreciate the following concepts

- ✓ Draw flowcharts for simple problems
- ✓ Run and check output in RAPTOR tool

# Area of the circle – Algorithm to Flowchart

Name of the algorithm: Compute the area of a circle

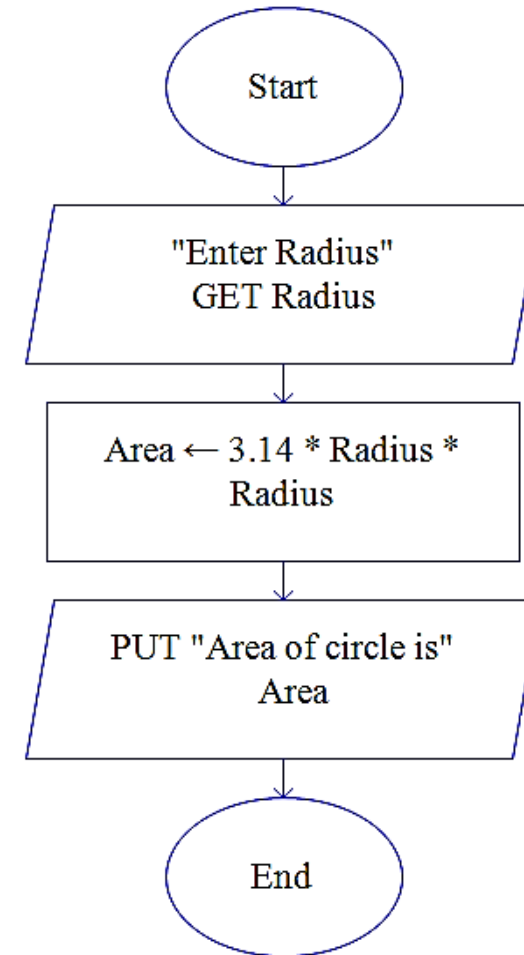
Step1: Input radius

Step 2: [Compute the area]  
 $\text{Area} \leftarrow 3.1416 * \text{radius} * \text{radius}$

Step 3: [Print the Area]  
Print 'Area of a circle =', Area

Step 4: [End of algorithm]  
Stop

## Flowchart



# Let's add two numbers!! – Check output in console

The screenshot displays the Raptor IDE interface with a flowchart for adding two numbers. The flowchart starts with an oval 'Start' node, followed by two parallelogram input nodes: 'Enter a number' GET a and 'Enter second number' GET b. These are followed by a rectangle assignment node 'c ← a + b', then a parallelogram output node 'PUT a + " " + b + " = " + c', and finally an oval 'End' node. The left sidebar shows a 'Symbols' panel with icons for Assignment, Call, Input, Output, Selection, and Loop, along with a variable list containing 'a: 5', 'b: 8', and 'c: 13'. The MasterConsole window on the right shows the output '5 + 8 = 13' and a status message '----Run complete. 6 symbols evaluated.----'.

```
graph TD; Start([Start]) --> Input1[/"Enter a number" GET a/]; Input1 --> Input2[/"Enter second number" GET b/]; Input2 --> Assignment[c ← a + b]; Assignment --> Output[/PUT a + " " + b + " = " + c/]; Output --> End([End]);
```

MasterConsole

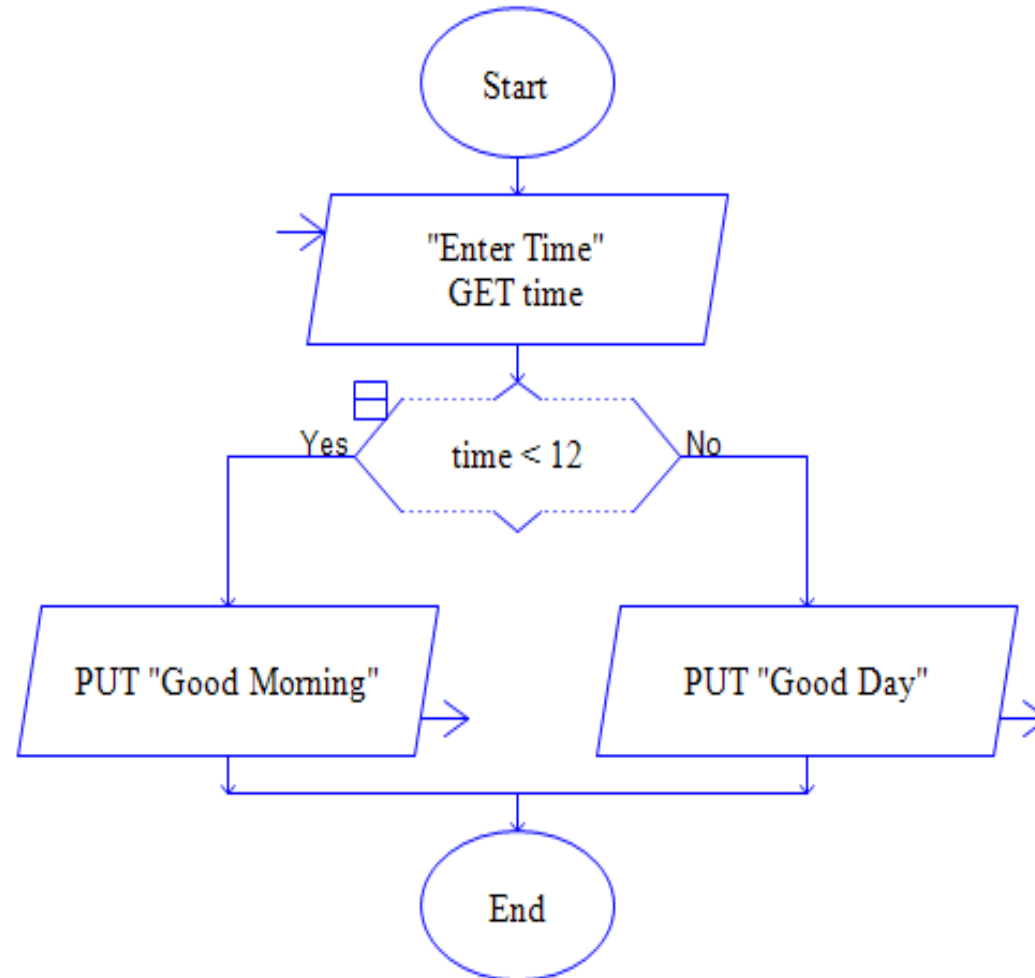
Font Font Size Edit Help

5 + 8 = 13

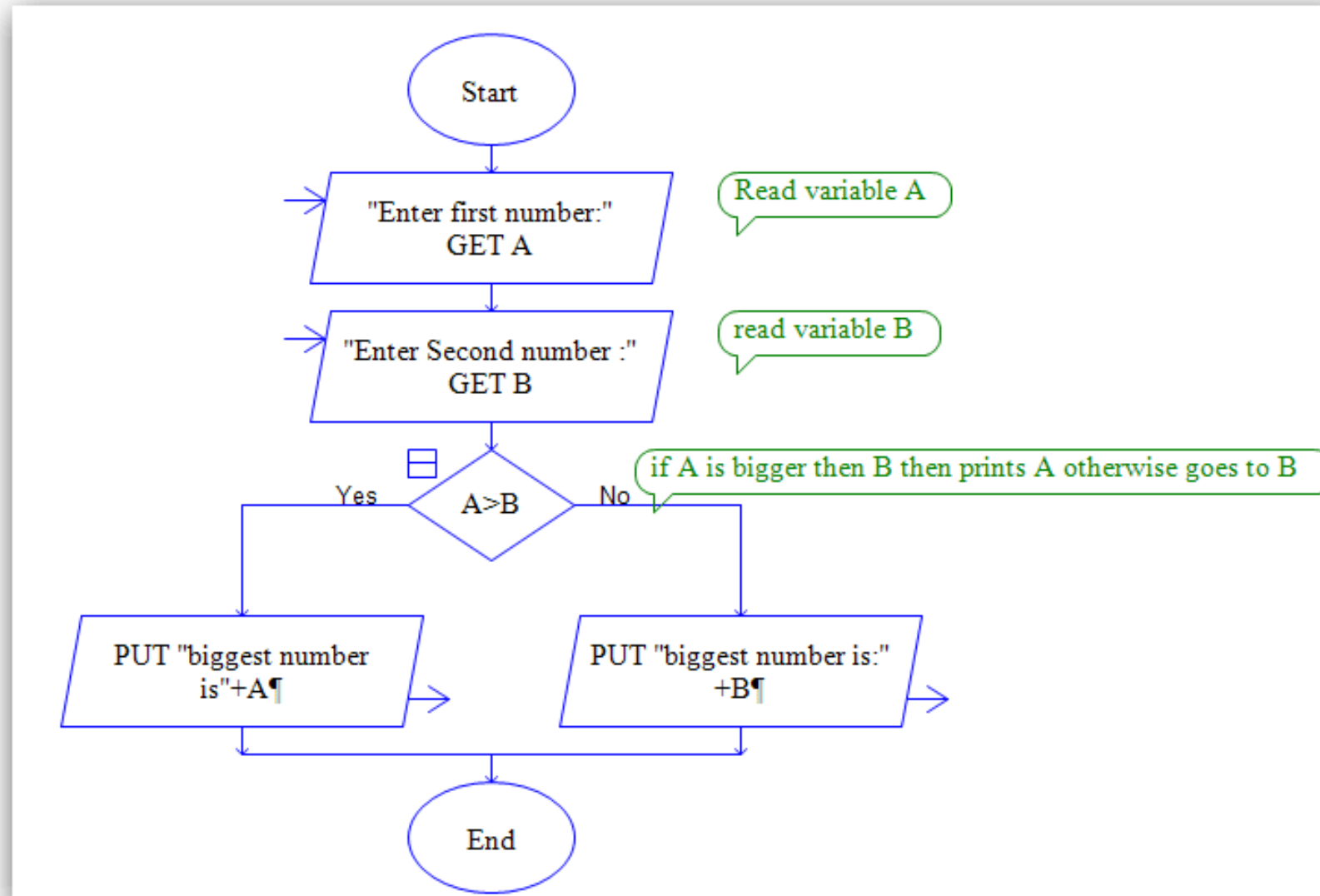
----Run complete. 6 symbols evaluated.----

Clear

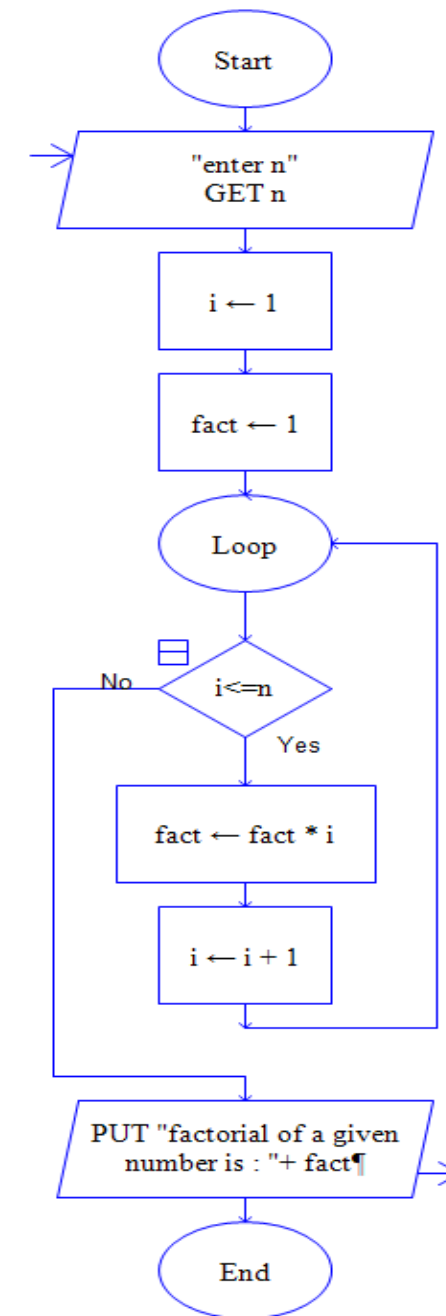
# Learn to use selection control!!!



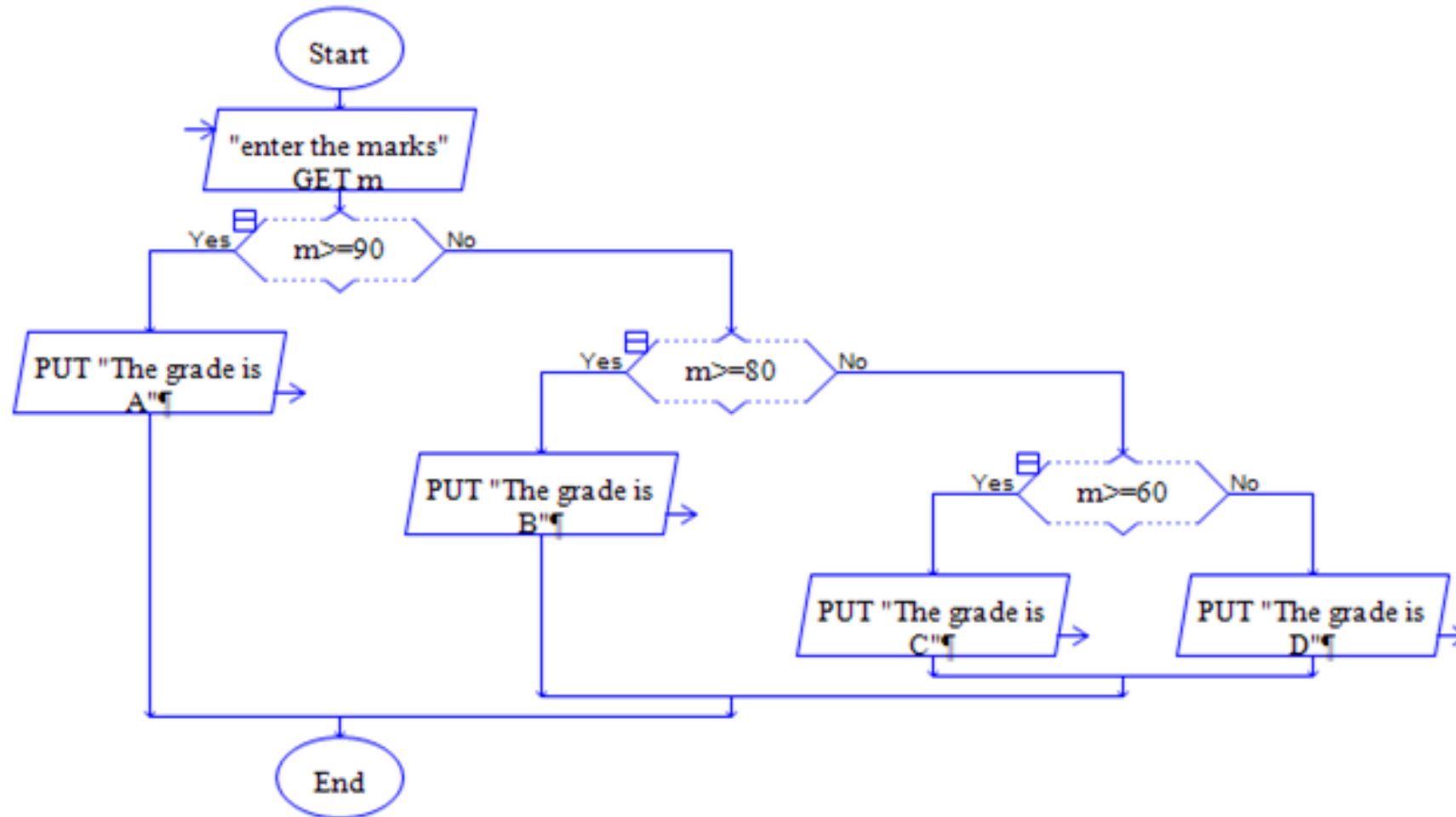
# Largest of two numbers!!!



# Factorial of a number!!!



# Flowchart for mark and grades!!!

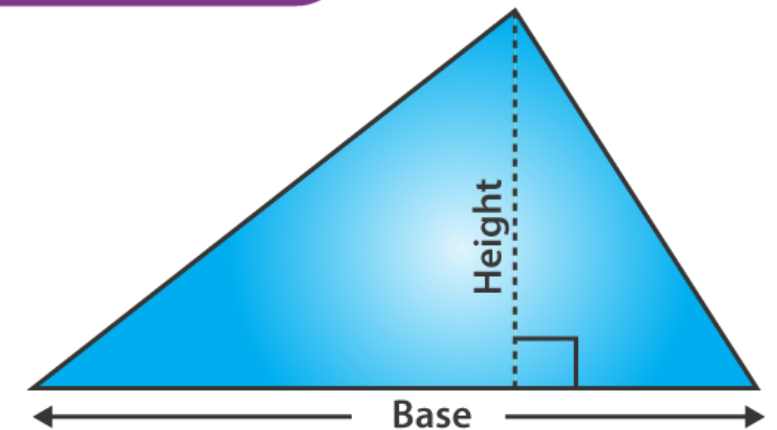




# Tutorial

- Realize a flowchart to find the area of triangle when three sides are given using RAPTOR tool
- Realize a flowchart to check whether given integer is positive or negative using RAPTOR tool

## AREA OF TRIANGLE



$$\text{Area} = \frac{1}{2} \times \text{base} \times \text{perpendicular height}$$