

## Assignment #03 – IF STATEMENTS (Worth 15 points)

### MATERIALS TO ASSIST YOU WITH COMPLETING ASSIGNMENT #03

#### LOCATED UNDER THE CONTENT LINK: WEEK #05

1. HANDOUTS OF SAMPLE STATEMENTS
2. ACTUAL SAMPLE PROGRAMS OF IF STATEMENTS [FLOWGORITHM & PYTHON]
3. VIDEOS -IF STATEMENTS

### DO PRACTICE EXERCISES 3-1, 3-2, 3-4, 3-7, 3-8, 3-9 TO BETTER UNDERSTAND HOW TO WRITE IF STATEMENTS USING PYTHON LANGUAGE

#### Calculating Software Sales (Problem #12 in Chapter 3)

#### PART 1: Use Flowgorithm or Visio to design a flowchart to solve the following Problem:

1. ☐ Write a program using Flowgorithm to calculate Software Sales based on the following chart: [Software Sales]

Quantity	Discount
1-9	0%
10-19	10% or decimal version (0.10)
20-49	20% or decimal version (0.20)
50-99	30% or decimal version (0.30)
100 or more	40% or decimal version (0.40)

#### INPUT STATEMENT(S):

- Enter the retail cost of a software package to be purchased (real/float data type)
- Enter the quantity or number of software packages to be purchased (integer data type)

Continue next page



## PROCESSING:

- Determine discount rate using an if statements
- Do Calculations for discount Amount, Cost of software purchases before discount, and final software total sales after the discount

## OUTPUT STATEMENTS: (Display the following content)

=====

**The Retail Cost Per Software Package = \$**

**The Quantity / Number of Packages Purchased =**

=====

=====

**The Discount % rate =**

**The Calculated Discount Amount =**

**Actual Amount of software purchase Before the Discount =**

**Total Amount of software purchase After the Discount =**

=====

## SAVE FLOWCHART AS:

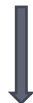
### 2. Save as:

**yourlastname\_firstname\_A3\_Software\_Sales.fprg**

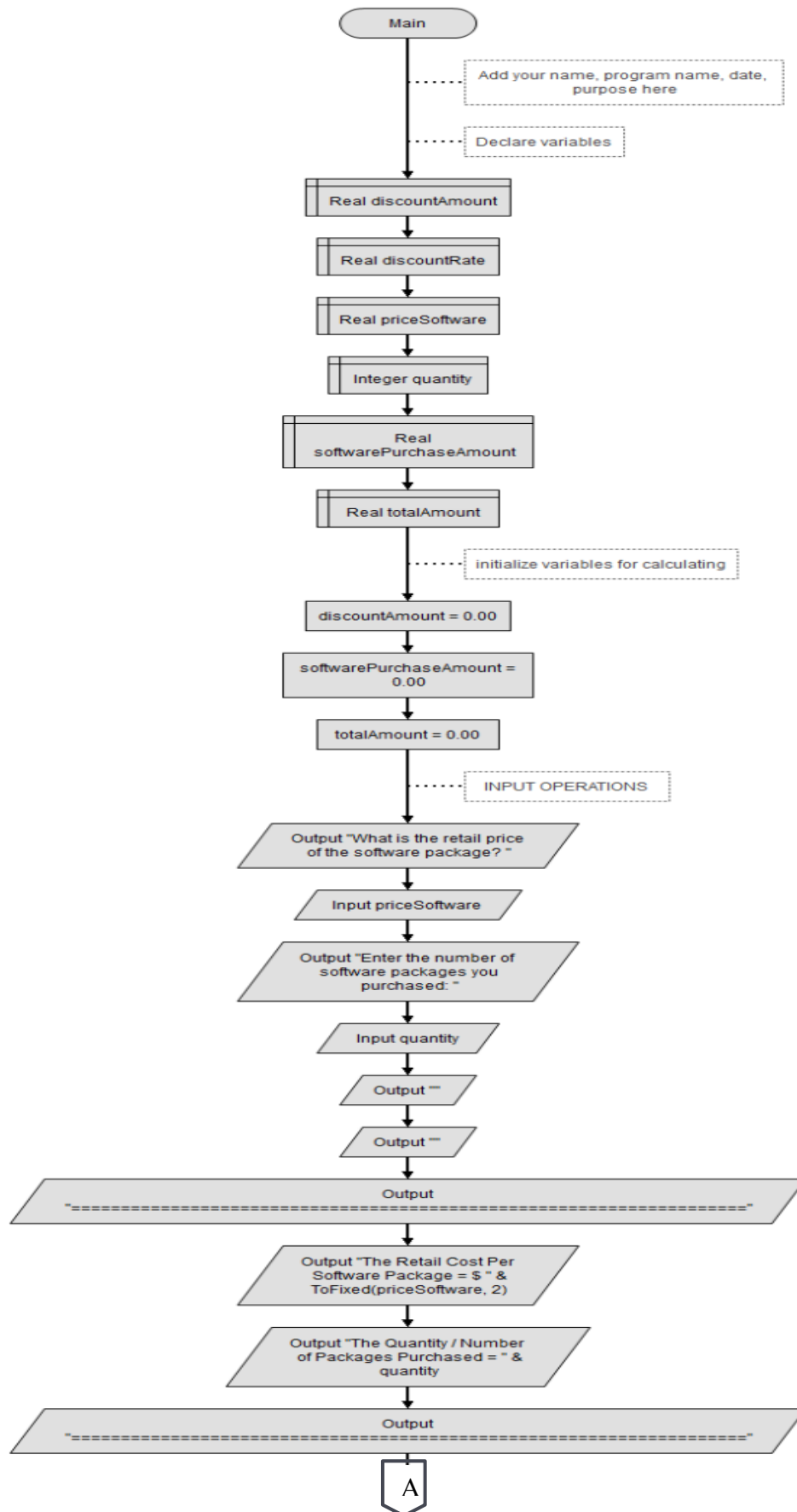
Try creating your own flowchart **OUTLINE**.

**Compare it against this sample version where the IF statements are used to determine the discount rate:**

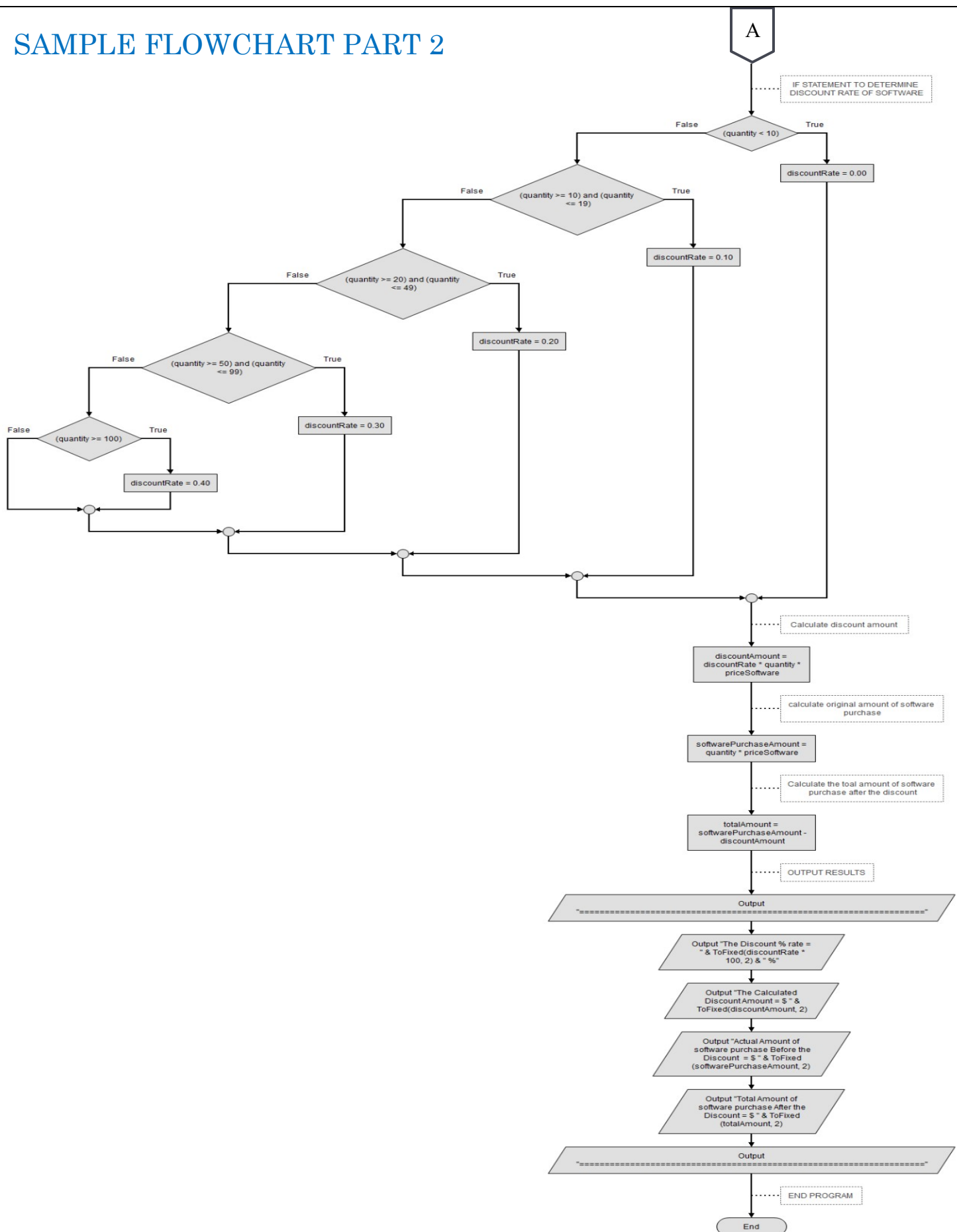
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## Sample Flowchart – Part 1



## SAMPLE FLOWCHART PART 2



## FLOWGORITHM OUTPUT RESULTS:

**Sample Display follows:**

- ☐ **The Retail Cost Per Software Package**
- ☐ **The Quantity or Number of Software Packages Purchased**
- ☐ **Display the original Discount for the quantity i.e. 0%, 10%, 20% etc.**
- ☐ **The calculated Discounted amount**
- ☐ **The Amount of the purchase before the Discounted Amount**
- ☐ **The Total Amount of the Purchase After the Discount**

3. ☐ **You will execute the flowgorithm program and save the output as:**

## SAVE FLOWCHART OUTPUT:

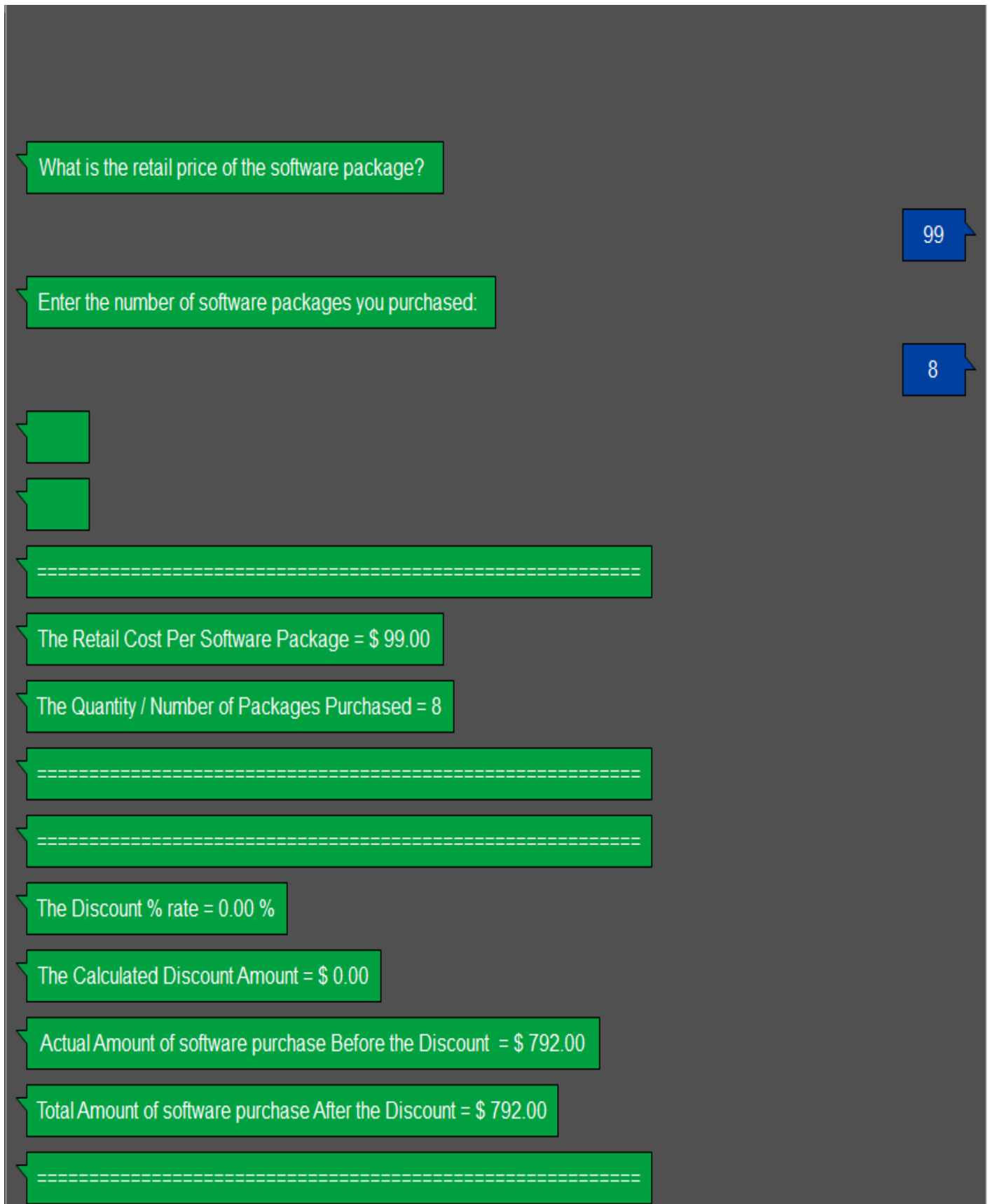
**yourlastname\_firstname\_A3\_Software\_Sales\_Flow\_Output.txt**

## SAMPLE OUTPUT USING FLOWGORITHM:

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## SAMPLE OUTPUT USING FLOWGORITHM:



## ANOTHER SAMPLE OUTPUT EXAMPLE:

What is the retail price of the software package?

99

Enter the number of software packages you purchased:

10

=====

The Retail Cost Per Software Package = \$ 99.00

The Quantity / Number of Packages Purchased = 10

=====

=====

The Discount % rate = 10.00 %

The Calculated Discount Amount = \$ 99.00

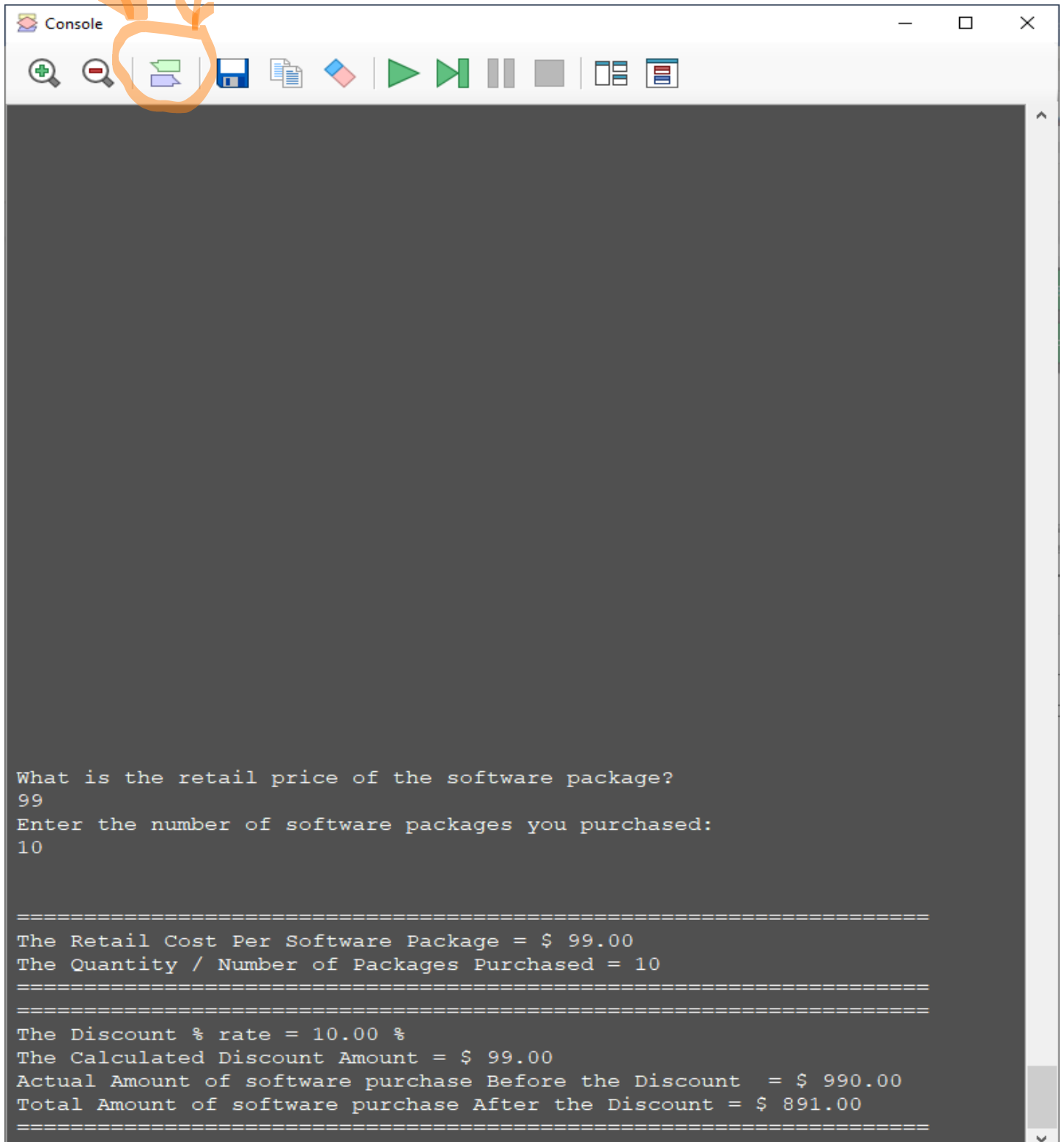
Actual Amount of software purchase Before the Discount = \$ 990.00

Total Amount of software purchase After the Discount = \$ 891.00

=====

## CHAT BUBBLE ICON (VIEW/DISPLAY):

Clicking the chat bubble will display the output as a basic text layout in Flowgorithm as shown below. This is a toggle icon. Pressing it turns on/ off the chat bubble



The screenshot shows the Flowgorithm software interface. The title bar reads "Console". The toolbar contains several icons, including a chat bubble icon (two overlapping speech bubbles) which is circled in orange. An orange arrow points from the text above to this icon. The main area of the console is dark gray and displays the following text:

```
What is the retail price of the software package?
99
Enter the number of software packages you purchased:
10

=====
The Retail Cost Per Software Package = $ 99.00
The Quantity / Number of Packages Purchased = 10
=====
=====
The Discount % rate = 10.00 %
The Calculated Discount Amount = $ 99.00
Actual Amount of software purchase Before the Discount = $ 990.00
Total Amount of software purchase After the Discount = $ 891.00
=====
```



3. ☐ Please place comments throughout the program as was done in the examples in part 1 of this assignment.

## PART 2: PYTHON VERSION

Express the logic from the Flowgorithm flowchart program using Python



### SAVE PYTHON FILE AS:

`yourlastname_firstname_A3_Software_Sales.py`

1. ☐ Please use the format function or f'- String to display the results.  
Make sure you have an attractive design.
2. ☐ Run / Execute the python program

### SAVE OUTPUT FILE AS:

`yourlastname_firstname_A3_Software_Sales_Python_output.txt`

### SAMPLE PYTHON OUTPUT:

```
What is the retail price of the software package?
99.00
Enter the number of software packages you purchased:
8

=====
The Retail Cost Per Software Package = $      99.00
The Quantity / Number of Packages Purchased =      8
=====

The Discount % rate =      0.00 %
The Calculated Discount Amount = $      0.00
Actual Amount of software purchase Before the Discount = $      792.00
Total Amount of software purchase After the Discount = $      792.00
=====
>>>
```

## ANOTHER PYTHON SAMPLE EXAMPLE OF OUTPUT:

```
What is the retail price of the software package?
99.00
Enter the number of software packages you purchased:
10

=====

The Retail Cost Per Software Package = $      99.00
The Quantity / Number of Packages Purchased =      10

=====

=====

The Discount % rate =      10.00 %
The Calculated Discount Amount = $      99.00
Actual Amount of software purchase Before the Discount = $      990.00
Total Amount of software purchase After the Discount = $      891.00

=====

>>>
```

3. ☐ Your labels may align to the left. However, make sure the values vertically align by the decimal point.

4. ☐ Please place comments throughout the python program.

## **FILES TO SUBMIT**

**Total # of files to submit inside the designated drop box:**

**You will submit at least 4 different files inside the drop box for assignment #03 [FLOWGORITHM or flowgorithm and Python]:**

**If using Visio & Python, you will submit at least 3 files**

**yourlastname\_firstname\_A3\_Software\_Sales.fprg (worth 3 points)**

**yourlastname\_firstname\_A3\_Software\_Sales\_Flow\_output.txt  
(worth 2 points)**

**yourlastname\_firstname\_A3\_Software\_Sales.py (worth 7 points)**

**yourlastname\_firstname\_A3\_Software\_Sales\_Python\_output.txt  
(Worth 3 points)**