|  |
| --- |
| Worksheet 9  Introduction to Flowchart |

Flowchart is a diagrammatic representation of an algorithm. Flowchart are very helpful in writing program and explaining program to others.

## Basic Symbols Used in Flowchart

## Different symbols are used for different states in flowchart, For example: Input/Output and decision making has different symbols. The table below describes all the symbols that are used in making flowchart

| Symbol | Purpose | Description |
| --- | --- | --- |
| lowline symbol in flowchart of programming | Flow line | Used to indicate the flow of logic by connecting symbols. |
| erminal symbol in flowchart of programming | Terminal(Stop/Start) | Used to represent start and end of flowchart. |
| nput/Output symbol in flowchart of programming | Input/Output | Used for input and output operation. |
| rocessing symbol in flowchart of programming | Processing | Used for airthmetic operations and data-manipulations. |
| ecision making symbol in flowchart of programming | Decision | Used to represent the operation in which there are two alternatives, true and false. |



Example of flowchart for if-elif-else code.

### ../../../../Desktop/flow_for.png ../../../../Desktop/python-conditional-exercise-1.png ../../../../Desktop/python-conditional-exercise-43.png

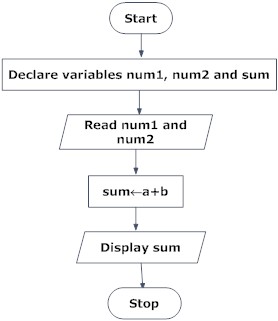
**Example of flowchart for for-loop**

### ../../../../Desktop/flow_while.png

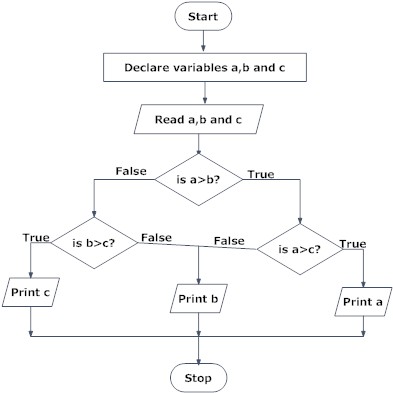
**Example of flowchart for while-loop**

### Examples of flowcharts in programming

**Draw a flowchart to add two numbers entered by user.**



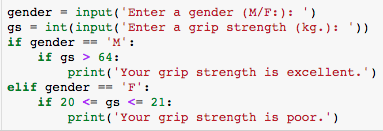
**Draw flowchart to find the largest among three different numbers entered by user.**



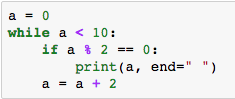
Though, flowchart are useful in efficient coding, debugging and analysis of a program, drawing flowchart in very complicated in case of complex programs and often ignored.

**Exercises:**

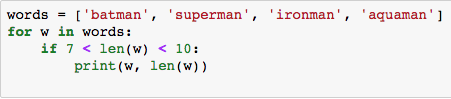
1) Draw a flowchart for the following Python code.



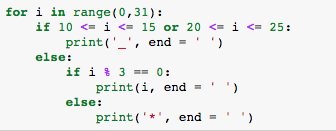
2) Draw a flowchart for the following Python code.



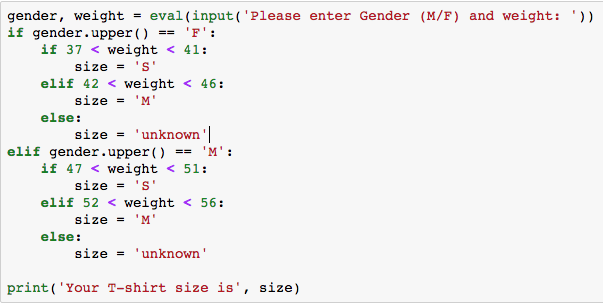
3) Draw a flowchart for the following Python code.



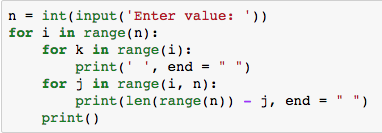
4) Draw a flowchart for the following Python code.



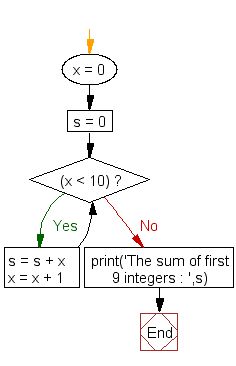
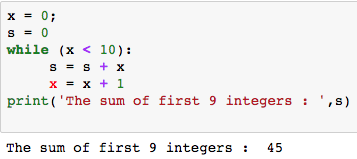
5) Draw a flowchart for the following Python code.



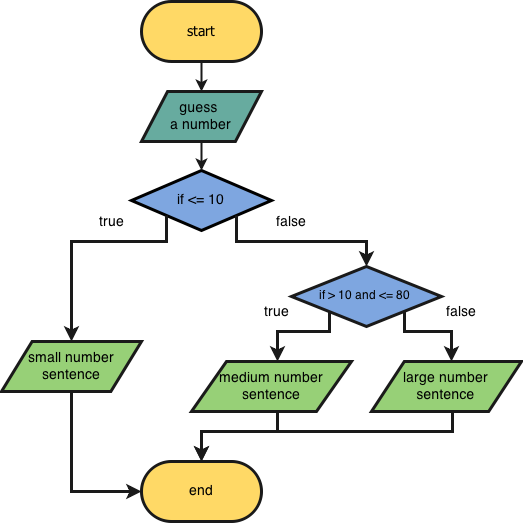
6) Write a flowchart for the following Python code.



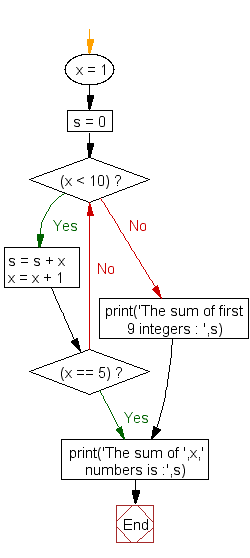
**The give flowchart can be translated back to the following Python code.**

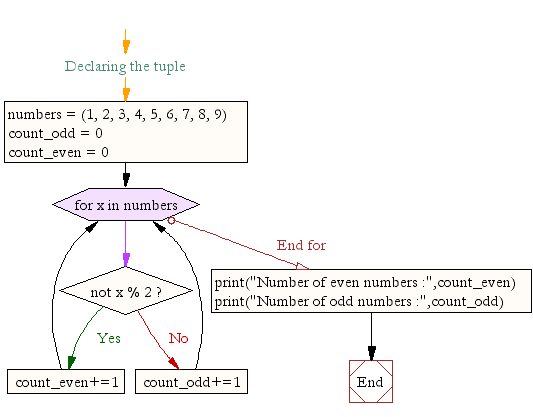
7) Translate the given flowchart below to a Python code.



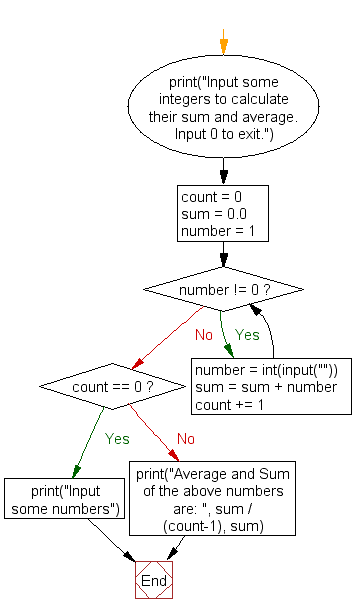
8) Translate the given flowchart below to a Python code.



9) Translate the given flowchart below to a Python code.



10) Translate the given flowchart below to a Python code.



End of while-loop and continue here here

While-loop here

11) Translate the given flowchart below to a Python code.

