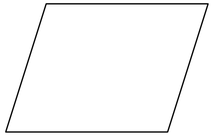
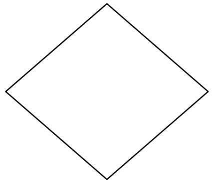
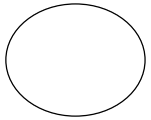
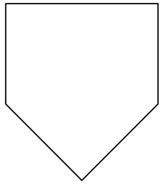
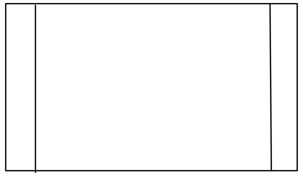
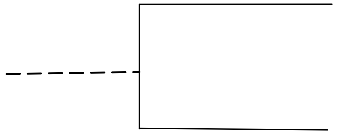
FLOW CHART

prepared by: Sheryar Sher

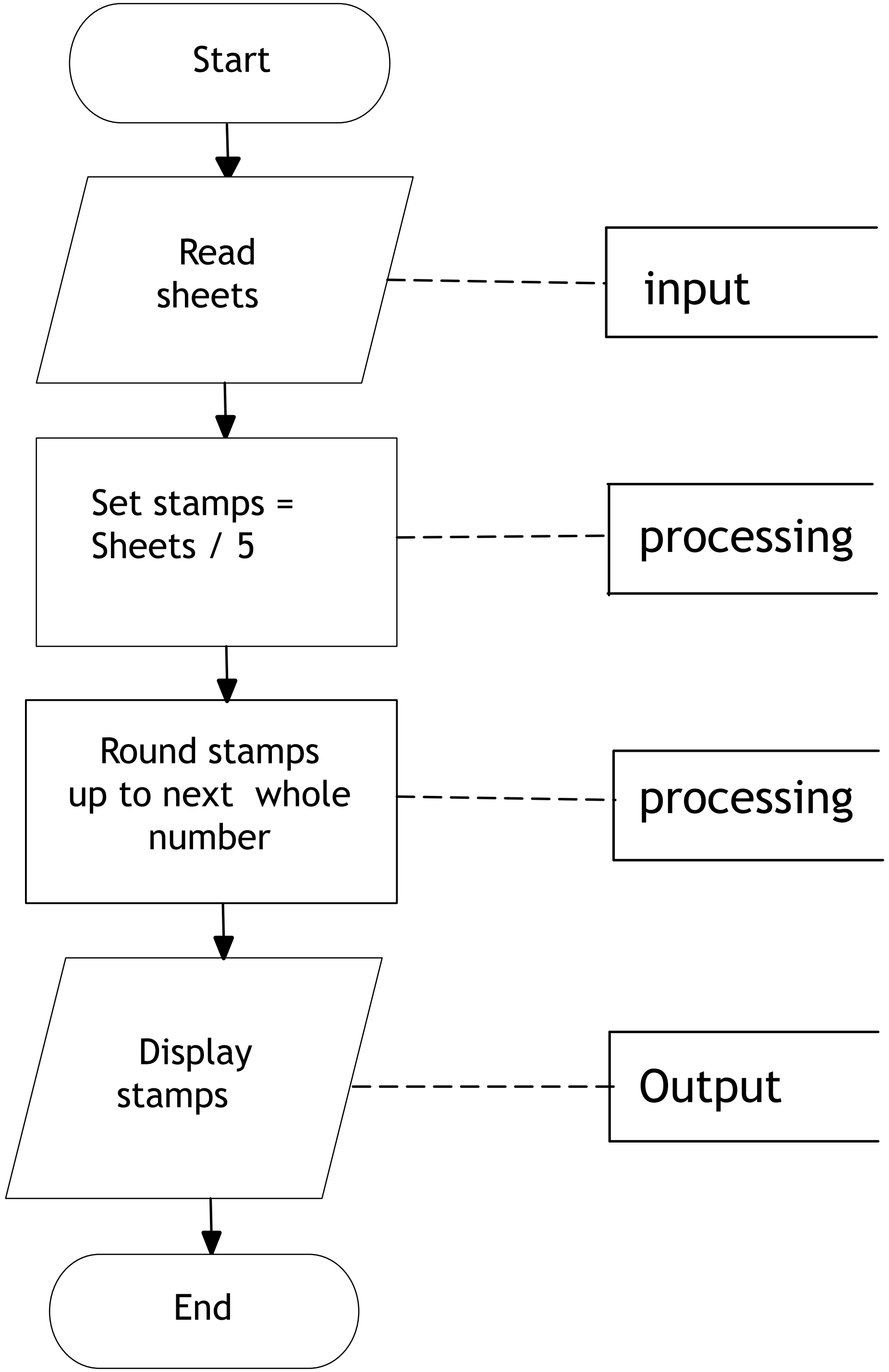
Flowchart symbols

Symbol	*Name*	*Meaning*
	***Flow line***	Used to connect symbols and indicate the flow of logic.
	***Terminal***	Used to represent the beginning (Start) or the end (End) of a task.
	***Input/output***	Used for input and output operations, such as reading and displaying. The data to be read or displayed are described inside.
	***Processing***	Used for arithmetic and data-manipulation operations. Instructions are listed inside the symbol.
	***Decision***	Used for any logic or comparison operations. Unlike the input/out and processing symbols, which have one entry and one exit flow line, the decision symbol ahs one entry and two exit paths. The path chosen depends on whether the answer to a question is “yes” or “no”.

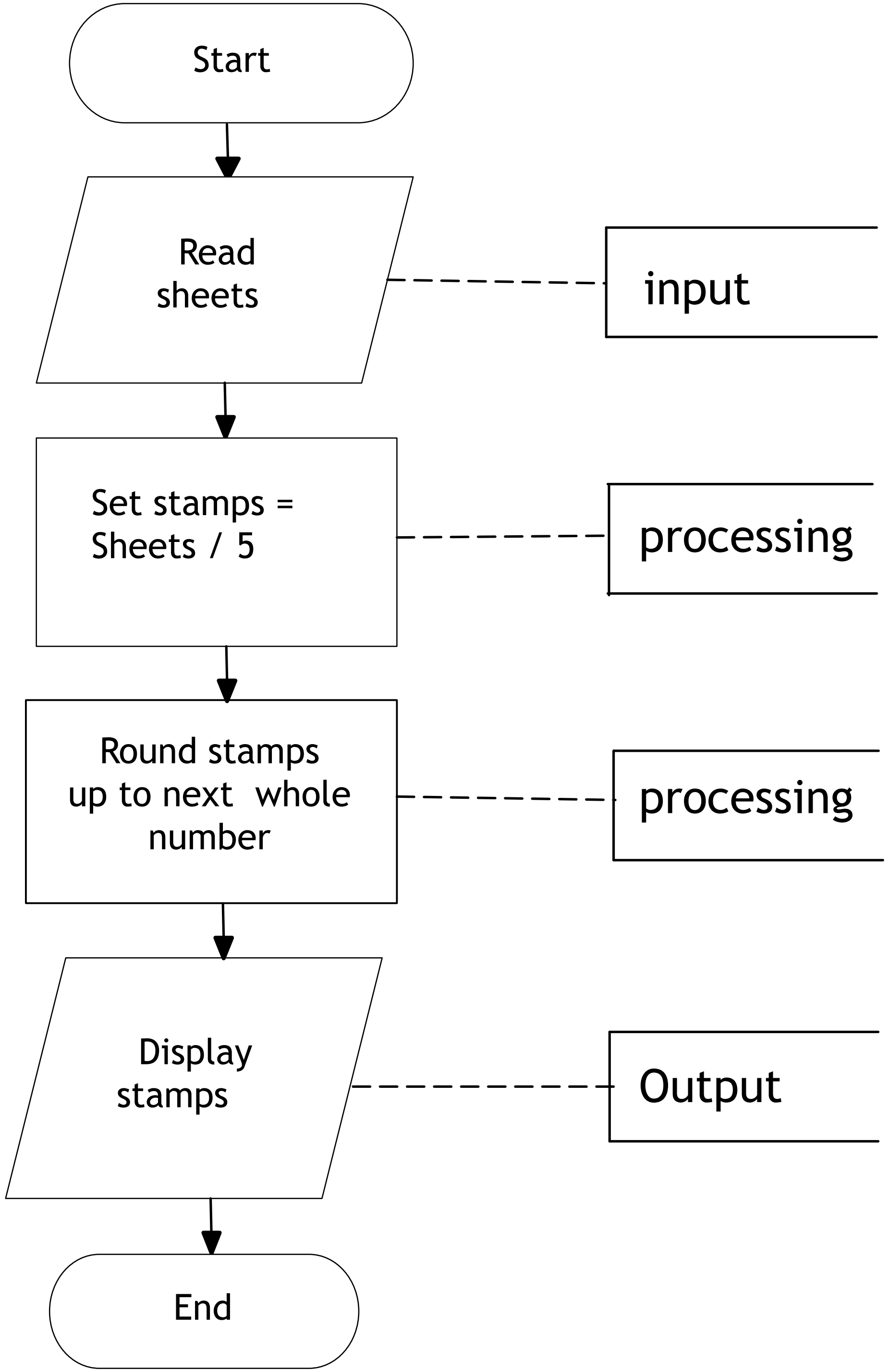
Flowchart symbols continued

	***Connector***	Used to join different flowlines.
	***Offpage connector***	Used to indicate that the flowchart continues to a second page.
	***Predefined Process***	Used to represent a group of statements that perform one processing task.
	***Annotation***	Used to provide additional information about another flowchart symbol

Flowchart example

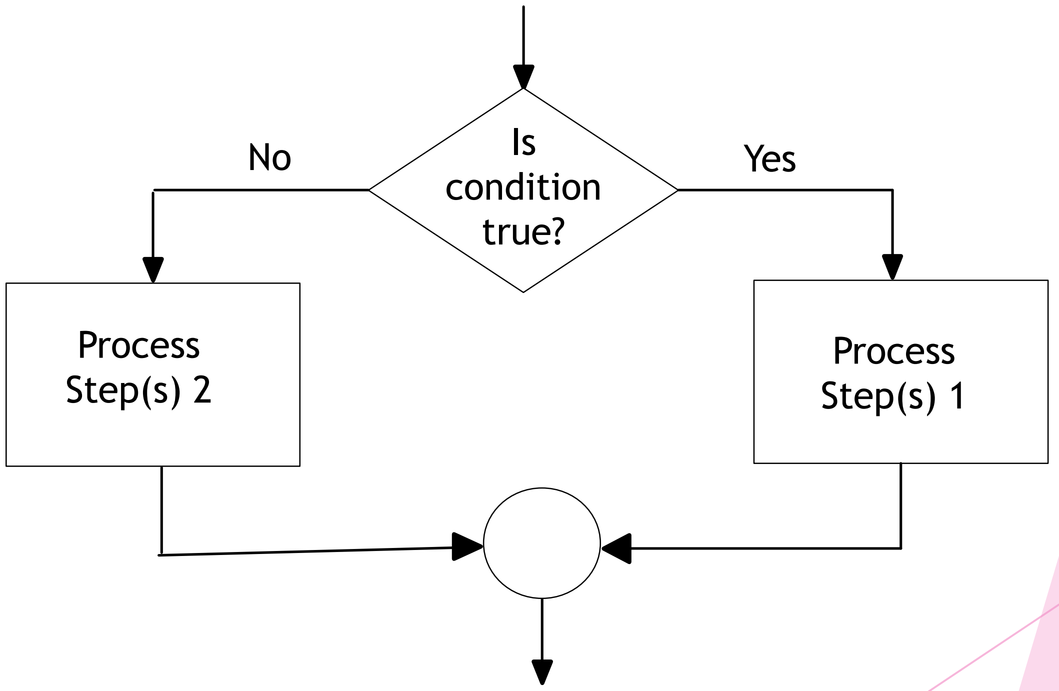


Sequence flow chart



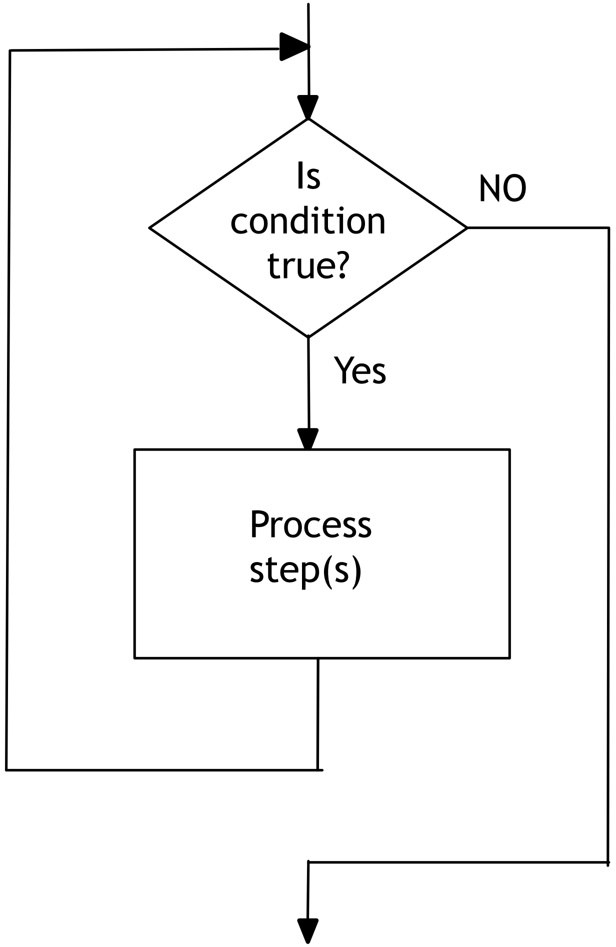
Decision flow chart

If condition is true Than
process step(s) 1
Else
process step(s) 2
End if



Looping flow chart

Do While condition is true
process step(s)
Loop



Direction of Numbered NYC Streets Algorithm

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- ***Problem***: Given street a number of a one-way street in New York City, decide the direction of the street, either eastbound or westbound.

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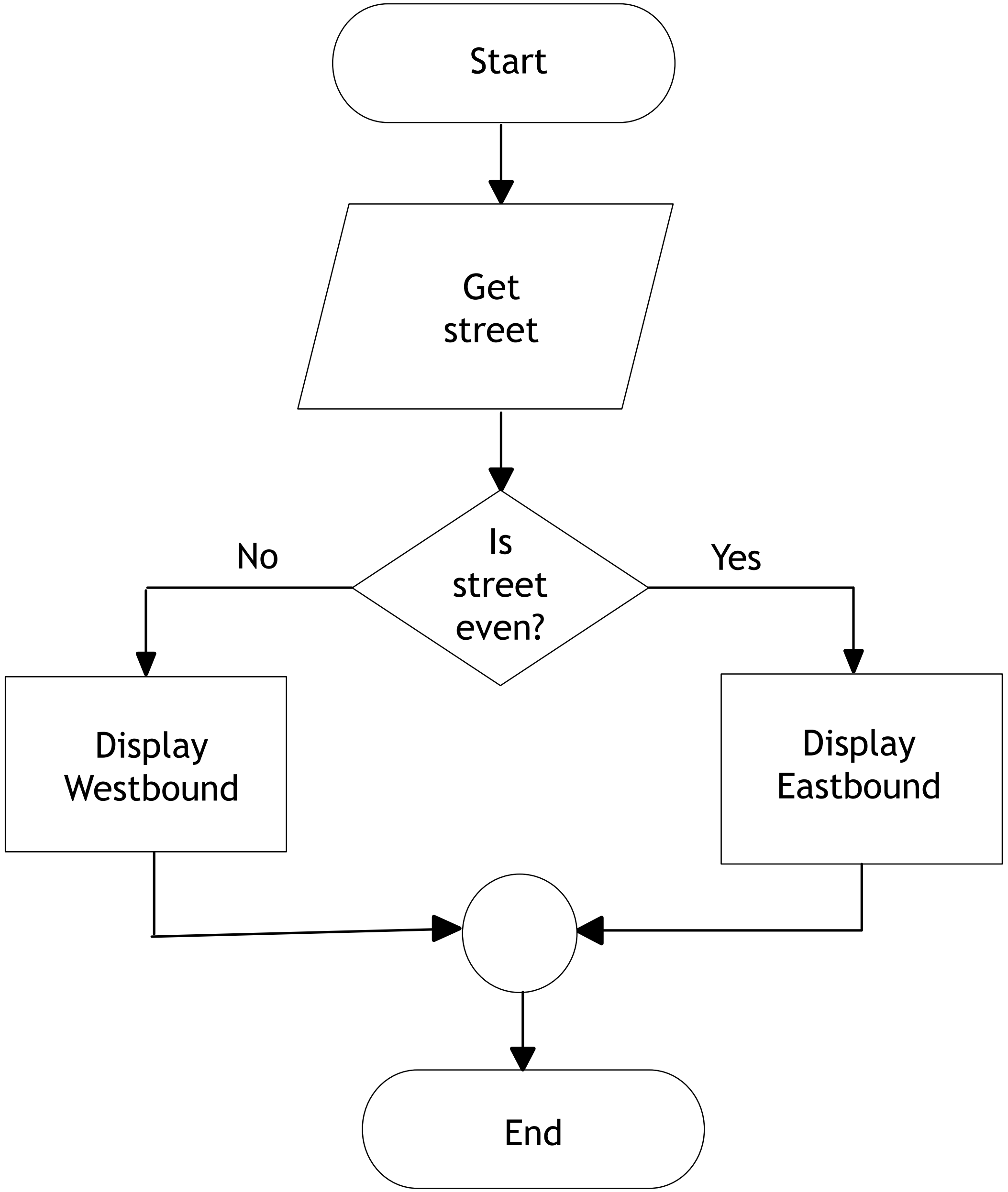
- ***Discussion***: in New York City even numbered streets are Eastbound, odd numbered streets are Westbound.

Flow chart


Start
Get street
Is street even?
No
Yes
Display Westbound
Display Eastbound
End

Pseudocode

Pseudocode

Program: Determine the direction of a numbered NYC street

Pseudocode

Program: Determine the direction of a numbered NYC street

Get street

Pseudocode

Program: Determine the direction of a numbered NYC street

Get street
If street is even Then
Display Eastbound

Pseudocode

Program: Determine the direction of a numbered NYC street

```
Get street
If street is even Then
   Display Eastbound
Else
   Display Westbound
End If
```

Class Average Algorithm

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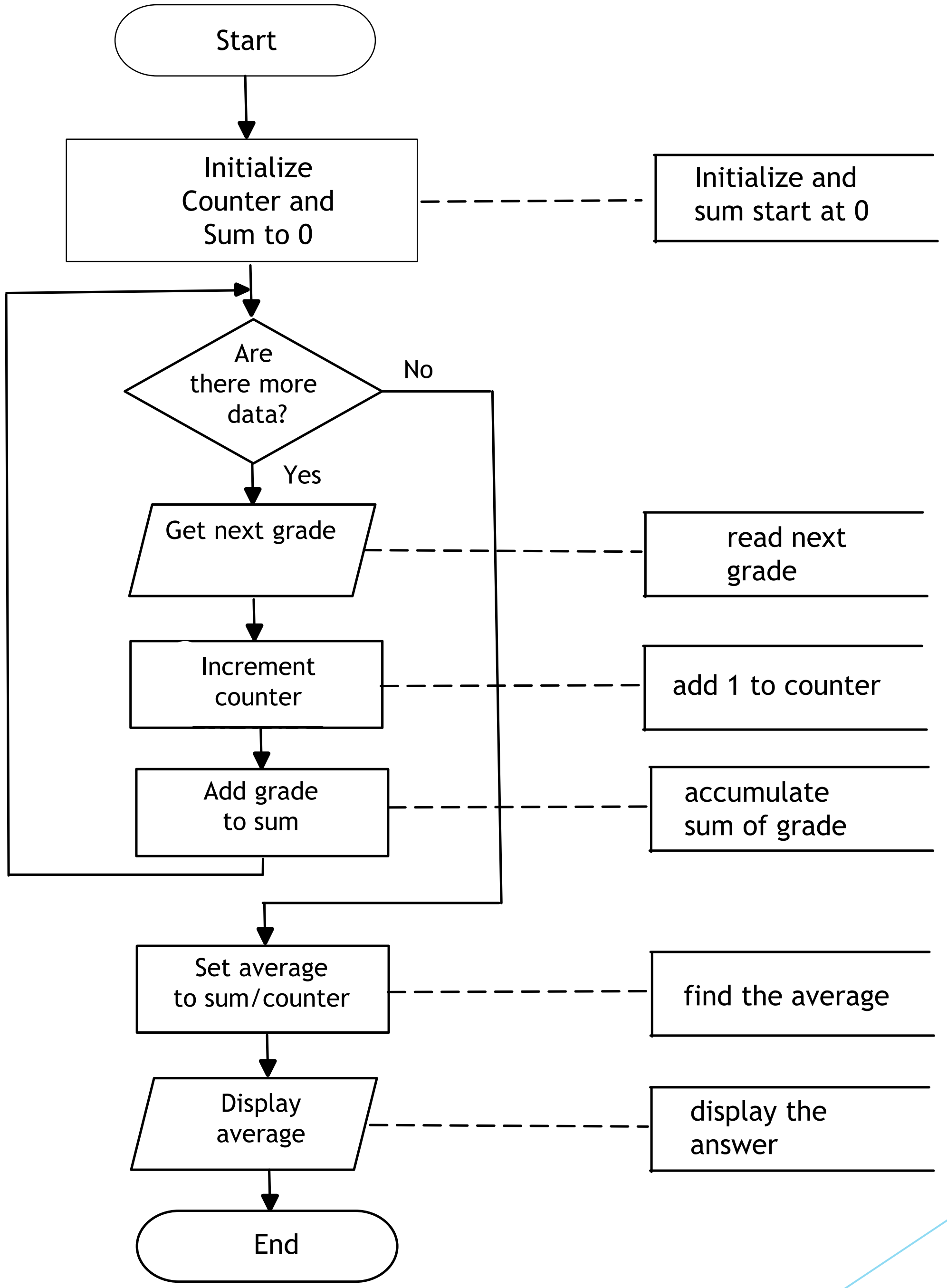
Output: Average grade

Input: Students grade

Processing: Find the sum of grades; count the number of students; calculate average

Flowchart


Start
Initialize Counter and Sum to 0
Initialize and sum start at 0
Are there more data?
No
Yes
Get next grade
read next grade
Increment counter
add 1 to counter
Add grade to sum
accumulate sum of grade
Set average to sum/counter
find the average
Display average
display the answer
End