



CS1002 – Programming Fundamentals

Lecture # 03
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Pseudo-Code: Decision Making

- If-then
- General form:
 - if (condition is met) then
 - statement(s)

Example:

if temperature < 0 then

wear a jacket



Algorithms and Pseudocode

Take and input of four marks and calculate average. If the average is above 50 the student is declared pass.



Algorithms and Pseudocode

Algorithm:

Input a set of four marks

Calculate their average by summing and dividing the sum by 4

If average is above 50

Print : "PASS"



Algorithms and Pseudocode

Pseudocode:

Start

1.0 Declare M1, M2, M3, M4, average

2.0 Input M1, M2, M3, M4

3.0 $\text{average} = (\text{M1} + \text{M2} + \text{M3} + \text{M4}) / 4$

4.0 if (average > 50) then

4.1 Print "PASS"

5.0 endif

End



Pseudo-Code: Decision Making

If-then-else

General form:

- if (condition is met) then
 - statement(s)
- else
 - statements(s)

Example:

- if (at work) then
 - Dress formally
- else
 - Dress casually



Algorithms and Pseudocode

Take and input of four marks and calculate average. If the average is above 50 the student is declared pass otherwise failed.



Algorithms and Pseudocode

Algorithm:

Input a set of four marks

Calculate their average by summing and dividing the sum by 4

- If average is above 50
 - Print : "PASS"
- Else
 - Print "FAIL"



Algorithms and Pseudocode

Pseudocode:

Start

1.0 Declare M1, M2, M3, M4, average

2.0 Input M1, M2, M3, M4

3.0 average = (M1+ M2+ M3+ M4) / 4

4.0 if (Grade > 50) then

 4.1 Print "PASS"

5.0 else

 5.1 Print "FAIL"

6.0 endif

End



Pseudocode – Comparing two numbers

1.0 start

2.0 declare n1, n2

3.0 input n1,n2

4.0 if (n1 > n2)

4.1 print "n1 is greater"

5.0 endif

6.0 if (n2 > n1)

6.1 print "n2 is greater"

7.0 if (n2 = n1)

7.1 print "they are equal"

8.0 endif

9.0 end



Pseudocode – Comparing two numbers with nested if-else

1.0 start

2.0 declare n1, n2

3.0 input n1,n2

4.0 if (n1 > n2)

 4.1 print "n1 is greater"

5.0 else if (n2 > n1)

 5.1 print "n2 is greater"

6.0 else if (n2 = n1)

 6.1 print "they are equal"

7.0 endif

8.0 end



Pseudo-Code: Fast Food Example

- Use pseudo-code to specify the algorithm for a person who is ordering food at a fast food restaurant
- At the food counter, the person can either order or not order the following items:
- a burger
- Fries
- a drink
- After placing his/her order the person then goes to the cashier and pays the bill



Algorithm: Fast Food Example

1. Approach counter
2. If want burger then
 - 2.1. order burger
3. If want fries then
 - 3.1. order fries
4. If want drink then
 - 4.1. order drink
5. Pay the bill to cashier



Pseudo-Code: Fast Food Example (Computer)

1. Start
2. Declare order_burger, order_fries, order_drink, Bill=0
3. Print "do you want to order burger?"
4. Input order_burger
5. If order_burger = yes then
 - 5.1. Bill = Bill + 300
6. Endif
7. Print "do you want to order fries?"
8. Input order_fries
9. If order_fries = yes then
 - 9.1. Bill = Bill + 100
10. Endif
11. Print "do you want to order drink?"
12. Input order_drink
13. If order_drink = yes then
 - 13.1. Bill = Bill + 100
14. Endif
15. Pay bill to cashier
16. End



Questions

