Group 1. Review group 6

1. What is an algorithm?
2. Enter a sequence of positive integers. Describe the algorithm to find the largest number.
- Use natural language
- Use flow charts

Should: --> What are the 3 benefits of using flowchart?
--> What are the 8 basic symbols of flowchart?

- Given a sequence of numbers, use the above algorithm to find the largest number

Group 2. --> Review group 1

1. An algorithm must possess the following properties:

--> Explain properties and give examples: finiteness, definiteness, input, output and effectiveness

2. Give an example of an algorithm and clarify its properties
3. An algorithm may be expressed in a number of ways, including: natural language, flow charts, pseudo-code and programming language.

Can you tell me the characteristics of the above methods?

Group 3. Review group 2

1. What are the key features of good algorithm?
2. Common Elements of Algorithms?

--> Clarifying issues: acquire data (input), computation, selection, iteration, and report results (output)

3. Computer scientists have defined three constructs for a structured program or algorithm. Show these structures and give examples.

--> Clarifying issues: sequence, decision, and repetition

Group4. Review group 3

1. Problem: Write an algorithm in pseudocode that finds the sum of two integers.

--> Solution: use only the sequence construct. Note also that we name the algorithm, define the input to the algorithm and, at the end, we use a return instruction to return the sum.

2. Problem: Write the algorithm for finding the largest among a list of integers

--> We put this construct in a loop, we can find the largest of a list of integers
--> First, we use a decision construct to find the smaller of two integers.
--> Second, we initialize with a very large integer instead of a very small one.
--> Next, we will use a loop to go through the list to find the largest number
--> At the end of the algorithm, announce the largest number in the sequence

Group5. Review group 4

1. One of the most common applications in computer science is sorting, which is the process by which data is arranged according to its values. why?
2. To sort data, we have many different methods. Please present in natural language and flow chart for selection sorting algorithm. Give an example (input giving output)

3. To sort data, we have many different methods. Please present in natural language and flow chart for bubble sorting algorithm. Give an example (input giving output)

Group6. *Review group 5*

Another common algorithm in computer science is searching, which is the process of finding the location of a target among a list of objects.

1. How do you write a linear search algorithm? (step by step)

--> Use natural language and pseudocode to present the algorithm. Get example (input data, apply algorithm, and output data)

2. How do you write a binary search algorithm? (step by step)

--> Use natural language and pseudocode to present the algorithm. Get example (input data, apply algorithm and output data)