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CS 213 – Data Structures

Assessment:

1. In your own words, how do we solve problems in a computer? Explain.
2. What is the difference between contiguous design and linked design?
3. Flowchart and pseudocode are two different design tools. How do they differ?
4. Create an algorithm using pseudocode that will count the numbers from 1-10 and will get the sum.

Answers:

1. In order to solve problems in a computer, we need to follow the steps accordingly to lessen the risk of a computer. Primarily, know what the problem is in order to know what needs to be fix. Next, think and figure out what would be the possible way that we use to overcome the problem. After that, develop a plan on how we are going to make this thing happen, so that the computer will work in good condition. However, evaluate the results to see if the computer is working better than before.
2. Contiguous design store all the elements in a single chunk of memory include arrays, matrices, heaps and hash tables.

Linked design hold the data in multiple chunk of memory (also known as nodes) which

may be placed at different places in the memory include lists, trees, and graph adjacency

lists.

1. Flowchart is a diagrammatic description (pictorial) of an algorithm where each command is placed in a box of the appropriate shape and arrows decide the flow of the boxes.

Pseudocode is an informal high-level description of an algorithm and a textual

representation where it lists out all the logical functions and will do including the input

and the output of the program.

1. Start

Initialize i = 1, sum = 0;

Loop number using i = 1

For (int i = 1; i<=n; i++)

Stop the loop if >=10

Display the i

Total the sum = sum + i

Feature the sum

End