IIT Madras

ONLINE DEGREE

Computational Thinking
Indian Institute of Technology – Madras
Tutorial 2.1

Hello computational thinking students. In this tutorial we are going to look at procedures which are very similar to what the professors have done in lecture 11. In the lecture, what the professors have done is to find the maximum total score in the scorecards data.

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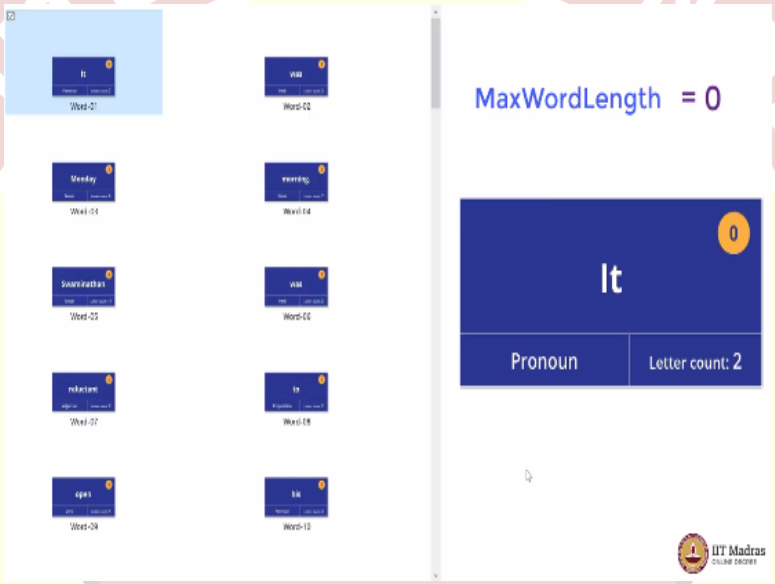

Now we will look at something very similar in the words data which is to find the word with maximum length that is maximum number, letters in a word. For that we will initialize a variable called max word length to 0 and this is a first word, now the words are arranged in their appropriate order and the first word is it with a letter count is 2. Since this is the first card and our max word length has been initialize to 0, 2 is greater than 0.

So max word length will now be 2 and then we go card by card. 3 is greater than 2, so max word length is now 3. 6 is greater than 3 so max word length is now 6. 7 is greater than 6 so max word length is now 7. Swaminathan is 11. 11 is the longest we have seen so far, so we again change the variable to 11. 3 is not greater than 11, 9 is not greater than 11. 2, 4, 3, 4, 2, 10 is close but not greater than 11.

6, 9, 10 again, 2, 3, 8, 5, 3, 9, 7, 2, 8, 3, 6, 2, 3, 9, 2, 3, 4, 3, 6, 4, 2, 4, 3, 10, 2, 9, 2, 3, 4, 7, 2, 6, 3, 6, 6, 8, 3, 8 another 11, but this is equal to 11. So even if we modified it would still be

11, so we are not letting it change. 3, 5, 7, 3, 10, 4, 3, 4, 4, and 4. So, max word length it has been 11 from Swaminathan is just word 5 in between Vedanayagam also showed up to be 11, but that did not require any change, this was also 11.

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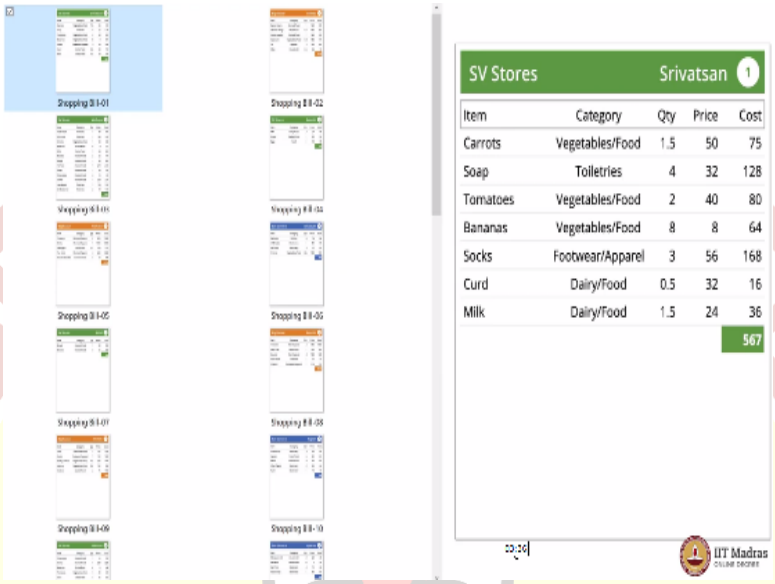

A very similar procedure can be done with shopping bills and here we are looking for maximum bill amount. So, we initialize the variable max bill amount to 0. This is our first card so 567 being greater than 0. We change our variable value to 567 then going card by card. 1525 is greater than 567 so max bill amount is 1525 and then we have 1341 not greater than 1525. 123 is small. 4174 is huge.

So max bill amount is now 4174 rupees. 354 is small. 96 is small. 3132 is not as large as 4,000. 595 no 378, 893, 186, 3060, 656, 229, 187, 279, 603, 592, 622, 128, 315, 888, 92, 1364, 276, 340, 514, 106, 798 and that is the last card which means our maximum bill amount is 4174. Thank you.