CLASS NAME: CS323 SPRING 2014

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PROJECT NAME: C++ —- RUN-LENGTH

DUE DATE: 3/13/2014

SUBMIT DATE:

PROFESSOR: DR T. PHILIPS

Algorithm Steps:

1. Include and declare everything that are needed for the program
2. Open the input file, data.txt
3. Read from the input file, add the header information into the variables rowNumber, colNumber, minValue, maxValue.
4. Dynamically allocate an integer 2d array, named data, with the row of rowNumber and column of colNumber.
5. Store the data into a 2D array called data, if the input is invalid the program closes
6. Close the input file
7. Open the output file, RunLength.txt
8. Add the header information into RunLength.txt
9. i = 0
10. j = 0

if i == 0 && j == 0

value = data[0][0];

rowPosition = 0;

colPosition = 0;

appearCount = 1;

else if data[i][j] == value

appearCount++;

else

outFile << rowPosition << " " << colPosition << " " << value << " " << appearCount << endl;

value = data[i][j];

rowPosition = i;

colPosition = j;

appearCount = 1;

1. j++
2. repeat step 10 and 11 until j >= colNumber
3. i++
4. repeat step 9 through 13 until i >= rowNumber
5. add the last pair of output into output file
6. close the output file
7. delete the memory from the dynamically allocated array to prevent memory leaks