**CS381-37: Project 1.2 (CPP)**

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**Due date: Feb. 07, 2018**

Algorithm Steps:

step 0: - open input file

- open the output file with the required name.

step 1: - read the image header from input file, the four numbers.

step 2: // process the input file from left to right and top to bottom

// For easier reading use two loops: i for rows and j for column

pixel\_val <- read from input

if pixel\_val > 0

output pixel\_val

else

output ' ' // 2 blanks

step 3: repeat step 2 until input file is empty

step 4: close input and output file

**Source Code**

#include <iostream>

#include <fstream>

#include <string>

using namespace std;

int main(int argc, char \*argv[]){

//input check

if(argv[1]==NULL) {

cout<<"no parameter"<<endl;

return 0;

}

ifstream inFile;

inFile.open(argv[1]);

if(!inFile.is\_open()){

cout<<"cant find file"<<endl;

return 0;

}

//remove extension

string fileName = argv[1];

string fileNameWithoutExtension = fileName.substr(0, fileName.rfind("."));

string outfile = fileNameWithoutExtension + "\_PP.txt";

streambuf \*console = cout.rdbuf();

ofstream out1;

out1.open(outfile);

//set output to outfile 1

cout.rdbuf(out1.rdbuf());

int numRows = 0;

int numCols = 0;

int minVal = 0;

int maxVal = 0;

int i = 0;

inFile >> numRows;

inFile >> numCols;

inFile >> minVal;

inFile >> maxVal;

// step2 , 3

cout << numRows << " " << numCols << " " << minVal << " " << maxVal <<endl;

int counter = 0;

while(inFile >> i){

if(i > 0){

cout << i << " ";

}

else{

cout << " ";

}

counter++;

if(counter%numCols == 0){

cout<<endl;

}

}

//step 4

inFile.close();

cout.rdbuf(console);

cout<<"done"<<endl;

out1.close();

return 0;

}

**Input1: proj1Data\_thr\_4.txt**

31 40 0 9

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0

0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0

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**Output1: proj1Data\_thr\_4\_PP.txt**

31 40 0 9

1 1

1

1

1 1

1 1

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1 1 1

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1 1 1

1 1

1