Cover Sheet

CV Project 2: Noise Filters C++

Student: Fengzhang Du

Project Due Date: 02/21/2021

Algorithm Steps for Compute Noise Filters:

```
step 0: open inFile and open all outfiles.
        thresholdVal <- get from argv[2]
step 1: numRows, numCols, minVal, maxVal <- read from input file.
        newMin <- minVal
        newMax <- maxVal
step 2: loadImage (input);
step 3: mirrorFraming (mirror3x3,1);
        imgReformat (mirror3x3, output[0], 1);
step 4: computeAvg ( );
        imgReformat (avgAry, output[1], 1);
        threshold (avgAry, output[2],thresholdVal, 1);
        prettyPrint (avgAry, output[3], 1);
step 5: computeMedian ( );
        imgReformat (medianAry, output[4], 1);
        threshold (medianAry, output[5], thresholdVal, 1);
        prettyPrint (medianAry, output[6], 1);
Step 6: mirrorFraming (mirror5x5, 2);
Step 7: computeCPfilter (...);
        imgReformat (CPAry, output[7], 2);
        threshold (CPAry, output[8], thresholdVal, 2);
        prettyPrint (CPAry, output[9], 2);
step 8: free heap and close all files.
```

Source Code

```
#include <string>
#include <iostream>
#include <fstream>
#include <cstdlib>
#include <vector>
#include <cmath>
using namespace std;

class ImageProcessing{
   private:
       int numRows, numCols, minVal, maxVal, newMin, newMax, thrVal;
   public:
       // mirror framing
       int** mirror3x3;
       int** mirror5x5;
       // result arrays
       int** avgAry;
       int** medianAry;
       int** CPAry;
   public: // constructor
       ImageProcessing(ifstream &input){
           read_header(input);
           // initialize array to 0.
           init(mirror3x3, 2);
           init(avgAry, 2);
           init(medianAry, 2);
           init(mirror5x5, 4);
           init(CPAry, 4);
       }

   // pass array by reference !!!!
   void init(int**& arr, int p){ // p is for padding
       arr = new int*[numRows+p];
       for(int i=0; i<numRows+p; i++){
           arr[i] = new int[numCols+p];
           for(int j=0; j<numCols+p; j++){
               arr[i][j] = 0;
           }
       }
   }
   void imgReformat(int** arr, ofstream &w, int frameSize){
       write_header(w);
       int max = to_string(newMax).length();
       for(int i=frameSize; i<numRows+frameSize; i++){
           for(int j=frameSize; j<numCols+frameSize; j++){
               int l = to_string(arr[i][j]).length();
               while(l < max){
                   w << " ";
                   l++;
               }
```

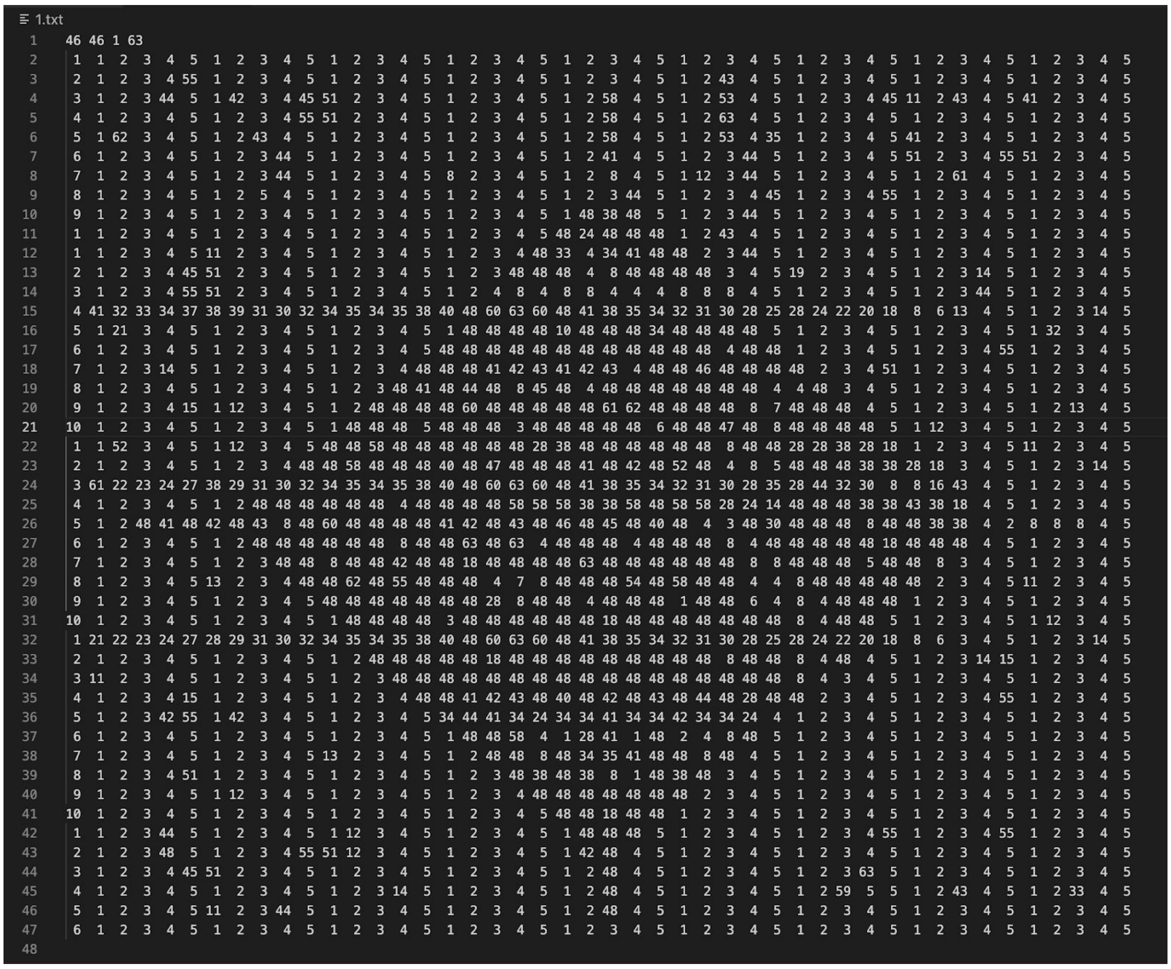
```
            w << arr[i][j] << " ";
        }
        w << endl;
    }
}
void write_header(ofstream &w){
    w << numRows<< " " << numCols<< " " << newMin << " " << newMax << endl;
}
void read_header(ifstream &input) {
    int tempMin;
    int tempMax;
    input >> numRows >> numCols;
    input >> tempMin;
    minVal = tempMin;
    newMin = tempMin;
    input >> tempMax;
    maxVal = tempMax;
    newMax = tempMax;
}
void loadImage(ifstream &input) {
    int temp = 0;
    for(int i=0; i<numRows; ++i){
        for(int j=0; j<numCols; ++j){
            input >> temp;
            mirror3x3[i+1][j+1] = temp;
            mirror5x5[i+2][j+2] = temp;
        }
    }
}
void mirrorFraming(int**& arr, int frameSize){
    // copy row
    for(int j=frameSize; j<numCols+frameSize; j++){
        int f = frameSize;
        for(int i=0; i<frameSize; i++){
            arr[i][j] = arr[2*f - 1 + i][j];
            arr[numRows+frameSize*2-1-i][j] = arr[numRows+frameSize*2 - 2*f - i][j];
            f--;
        }
    }
    // copy column
    for (int i=0; i<numRows+frameSize*2; i++){
        int f = frameSize;
        for(int j=0; j<frameSize; j++){
            arr[i][j] = arr[i][2*f - 1 + j];
            arr[i][numCols+frameSize*2-1-j] = arr[i][numCols+frameSize*2 - 2*f - j];
            f--;
        }
    }
}

void computeAvg(){
    newMin = 9999;
    newMax = 0;
    // int mask[3][3] = { {1,1,1,1,1,1,1,1,1} };
    for (int i=1; i<numRows+1; i++){
        for(int j=1; j<numCols+1; j++){
            avgAry[i][j] = (mirror3x3[i][j] + mirror3x3[i-1][j-1] + mirror3x3[i-1][j] +
                         mirror3x3[i-1][j+1] + mirror3x3[i][j-1] + mirror3x3[i][j+1] +
                         mirror3x3[i+1][j-1] + mirror3x3[i+1][j]+ mirror3x3[i+1][j+1])/9;
            if (avgAry[i][j] < newMin) newMin = avgAry[i][j];
            if (avgAry[i][j] > newMax) newMax = avgAry[i][j];
        }
    }
}

void computeMedian(){
    newMin = 9999;
    newMax = 0;
    for (int i=1; i<numRows+1; i++){
        for(int j=1; j<numCols+1; j++){
            vector<int> neighbor3;
            for(int k=i-1; k<=i+1; k++){
                for(int d=j-1; d<=j+1; d++){
                    neighbor3.push_back(mirror3x3[k][d]);
                }
            }
            sort(neighbor3.begin(), neighbor3.end());
            medianAry[i][j] = neighbor3[4];
            if (medianAry[i][j] < newMin) newMin = medianAry[i][j];
            if (medianAry[i][j] > newMax) newMax = medianAry[i][j];
        }
    }
}

void computeCPfilter() {
   int g[8][25]={{0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 1, 1, 1, 0, 1, 1, 1, 1, 1},
                 {1, 0, 0, 0, 0, 1, 1, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 0, 0, 0, 1, 0, 0, 0, 0},
                 {1, 1, 1, 1, 1, 0, 1, 1, 1, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
                 {0, 0, 0, 0, 1, 0, 0, 0, 1, 1, 0, 0, 1, 1, 1, 0, 0, 0, 1, 1, 0, 0, 0, 0, 1},
                 {1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
                 {0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0},
                 {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1},
                 {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0, 1, 1, 1, 0, 0}};

    newMin = 9999;
    newMax = 0;
    for (int i=2; i<numRows+2; i++){
        for(int j=2; j<numCols+2; j++){
            int x = mirror5x5[i][j];
            vector<int> avg8; // store a1 ... a8, 8 in 1D
            vector<int> neighbor5; // 25 in 1D
            // build neighbor array.
            for(int k=i-2; k<=i+2; k++){
                for(int d=j-2; d<=j+2; d++){
                    neighbor5.push_back(mirror5x5[k][d]); // 25 in 1D
                }
            }
            // calculate x' for each pixel in the framed image.
            for (int v=0; v<8; v++){
                int total = 0;
                for(int u=0; u<25; u++){
                    int t = neighbor5[u] * g[v][u];
                    total += t;
                }
                avg8.push_back(total/9);
            }
            sort(avg8.begin(), avg8.end(), [x](int a, int b){
                return abs(x-a) < abs(x-b);
            });
            CPAry[i][j] = avg8[0];
            if (CPAry[i][j] < newMin) newMin = CPAry[i][j];
            if (CPAry[i][j] > newMax) newMax = CPAry[i][j];
        }
    }
}

void threshold(int**& arr, ofstream &w, int thresholdVal, int frameSize){
    newMin = 9999;
    newMax = 0;
    for(int i=frameSize; i<numRows+frameSize; i++){
        for(int j=frameSize; j<numCols+frameSize; j++){
            if(arr[i][j] < thresholdVal){
                arr[i][j] = 0;
            }else{
                arr[i][j] = 1;
            }
            if (arr[i][j] < newMin) newMin = arr[i][j];
            if (arr[i][j] > newMax) newMax = arr[i][j];
        }
    }
    imgReformat(arr, w, frameSize);
}

void prettyPrint(int**& arr, ofstream &w, int frameSize){
    write_header(w);
    for(int i=frameSize; i<numRows+frameSize; i++){
        for(int j=frameSize; j<numCols+frameSize; j++){
            if(arr[i][j] == 0){
                w << "." << " ";
            }else{
                w << arr[i][j] << " ";
            }
        }
```

```
            w << endl;
        }
    }

    void free_Heap(){
        for(int i=0; i<numRows+2; i++){
            delete[] mirror3x3[i];
            delete[] avgAry[i];
            delete[] medianAry[i];
        }
        delete[] mirror3x3;
        delete[] avgAry;
        delete[] medianAry;

        for(int i=0; i<numRows+4; i++){
            delete[] mirror5x5[i];
            delete[] CPAry[i];
        }
        delete[] mirror5x5;
        delete[] CPAry;

        cout << "Heap freed!"<< endl;
    }
};

int main(int argc, const char * argv[]){
    ifstream input;
    // open the data txt file.
    input.open(argv[1]);
    int thresholdVal = atoi(argv[2]);
    cout << "The threashold value is : " << thresholdVal << endl;

    // array to store 10 output files.
    ofstream* output = new ofstream[10];
    // open 10 output files.
    int openCount = 0;
    for (int i=0; i<10; i++){
        output[i].open(argv[i+3]);
        if (output[i].is_open()){
            openCount++;
        }
    }
    if (input.is_open() && openCount == 10){
        ImageProcessing* img = new ImageProcessing(input);
        img->loadImage(input);

        // Mirror Framing.
        img->mirrorFraming(img->mirror3x3, 1);

        // align the number of different digits.
        img->imgReformat(img->mirror3x3, output[0], 1);
        // 1. average filter
        img->computeAvg();
        img->imgReformat(img->avgAry, output[1], 1);
        img->threshold(img->avgAry, output[2], thresholdVal, 1);
        img->prettyPrint(img->avgAry, output[3], 1);

        // 2. median filter
        img->computeMedian();
        img->imgReformat(img->medianAry, output[4], 1);
        img->threshold(img->medianAry, output[5], thresholdVal, 1);
        img->prettyPrint(img->medianAry, output[6], 1);

        // 3. 5x5 corner perserve filter;
        img->mirrorFraming(img->mirror5x5, 2);
        img->computeCPfilter();
        img->imgReformat(img->CPAry, output[7], 2);
        img->threshold(img->CPAry, output[8], thresholdVal, 2);
        img->prettyPrint(img->CPAry, output[9], 2);

        img->free_Heap();
    }else{
        cout<< "Error: input file or output file is not open!" <<endl;
    }

    input.close();
    for (int i=0; i<10; i++){
        output[i].close();
    }

    return 0;
}
```

Output on the next page.

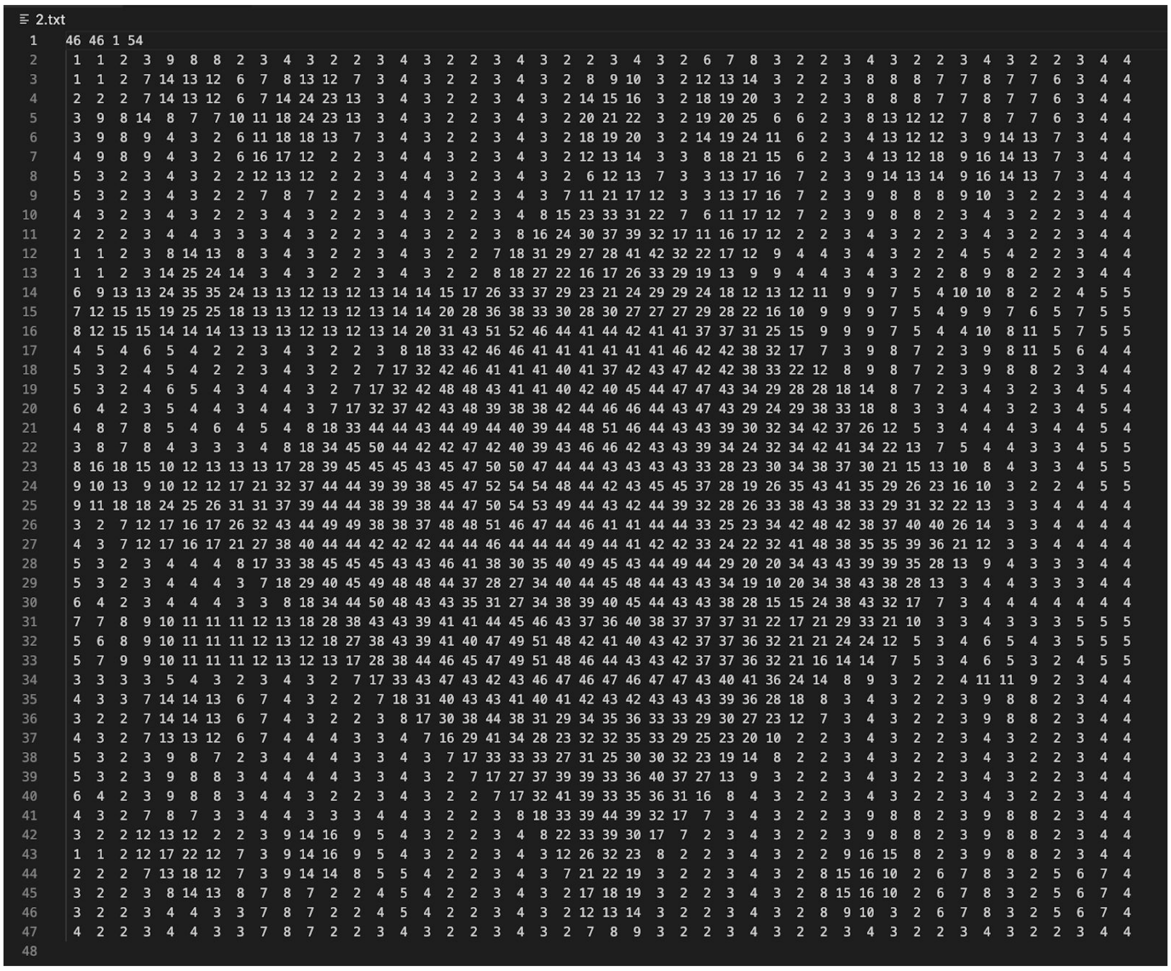
Program Output

rfImg



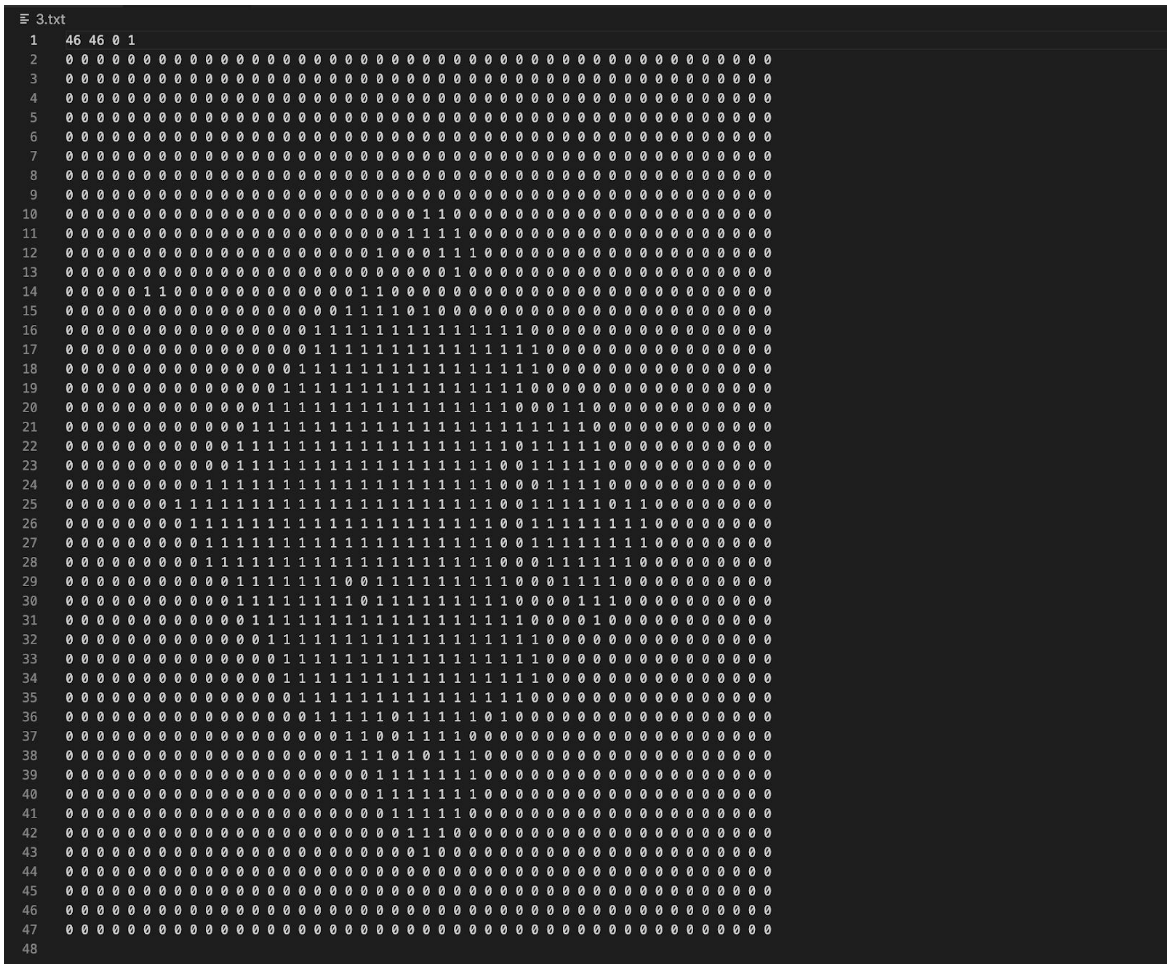
```
46 46 1 63
 1  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 2  1  2  3  4 55  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2 43  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 3  1  2  3 44  5  1 42  3  4 45 51  2  3  4  5  1  2  3  4  5  1  2 58  4  5  1  2 53  4  5  1  2  3  4 45 11  2 43  4  5 41  2  3  4  5
 4  1  2  3  4  5  1  2  3  4 55 51  2  3  4  5  1  2  3  4  5  1  2 58  4  5  1  2 63  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 5  1 62  3  4  5  1  2 43  4  5  1  2  3  4  5  1  2  3  4  5  1  2 58  4  5  1  2 53  4 35  1  2  3  4  5 41  2  3  4  5  1  2  3  4  5
 6  1  2  3  4  5  1  2  3 44  5  1  2  3  4  5  1  2  3  4  5  1  2 41  4  5  1  2  3 44  5  1  2  3  4  5 51  2  3  4 55 51  2  3  4  5
 7  1  2  3  4  5  1  2  3 44  5  1  2  3  4  5  8  2  3  4  5  1  2  8  4  5  1 12  3 44  5  1  2  3  4  5  1  2 61  4  5  1  2  3  4  5
 8  1  2  3  4  5  1  2  5  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3 44  5  1  2  3  4 45  1  2  3  4 55  1  2  3  4  5  1  2  3  4  5
 9  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1 48 38 48  5  1  2  3 44  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 1  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5 48 24 48 48 48  1  2 43  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 1  1  2  3  4  5 11  2  3  4  5  1  2  3  4  5  1  2  3  4 48 33  4 34 41 48 48  2  3 44  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 2  1  2  3  4 45 51  2  3  4  5  1  2  3  4  5  1  2  3 48 48 48  4  8 48 48 48 48  3  4  5 19  2  3  4  5  1  2  3 14  5  1  2  3  4  5
 3  1  2  3  4 55 51  2  3  4  5  1  2  3  4  5  1  2  4  8  4  8  8  4  4  4  8  8  8  4  5  1  2  3  4  5  1  2  3 44  5  1  2  3  4  5
 4 41 32 33 34 37 38 39 31 30 32 34 35 34 35 38 40 48 60 63 60 48 41 38 35 34 32 31 30 28 25 28 24 22 20 18  8  6 13  4  5  1  2  3 14  5
 5  1 21  3  4  5  1  2  3  4  5  1  2  3  4  5  1 48 48 48 48 10 48 48 48 34 48 48 48 48  5  1  2  3  4  5  1  2  3  4  5  1 32  3  4  5
 6  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5 48 48 48 48 48 48 48 48 48 48 48 48  4 48 48  1  2  3  4  5  1  2  3  4 55  1  2  3  4  5
 7  1  2  3 14  5  1  2  3  4  5  1  2  3  4 48 48 48 41 42 43 41 42 43  4 48 48 46 48 48 48 48  2  3  4 51  1  2  3  4  5  1  2  3  4  5
 8  1  2  3  4  5  1  2  3  4  5  1  2  3 48 41 48 44 48  8 45 48  4 48 48 48 48 48 48 48  4  4 48  3  4  5  1  2  3  4  5  1  2  3  4  5
 9  1  2  3  4 15  1 12  3  4  5  1  2 48 48 48 48 60 48 48 48 48 48 61 62 48 48 48 48  8  7 48 48 48  4  5  1  2  3  4  5  1  2 13  4  5
10  1  2  3  4  5  1  2  3  4  5  1 48 48 48  5 48 48 48  3 48 48 48 48 48  6 48 48 47 48  8 48 48 48 48  5  1 12  3  4  5  1  2  3  4  5
 1  1 52  3  4  5  1 12  3  4  5 48 48 58 48 48 48 48 48 48 28 38 48 48 48 48 48 48  8 48 48 28 28 38 28 18  1  2  3  4  5 11  2  3  4  5
 2  1  2  3  4  5  1  2  3  4 48 48 58 48 48 48 40 48 47 48 48 48 41 48 42 48 52 48  4  8  5 48 48 48 38 38 28 18  3  4  5  1  2  3 14  5
 3 61 22 23 24 27 38 29 31 30 32 34 35 34 35 38 40 48 60 63 60 48 41 38 35 34 32 31 30 28 35 28 44 32 30  8  8 16 43  4  5  1  2  3  4  5
 4  1  2  3  4  5  1  2 48 48 48 48 48 48  4 48 48 48 48 58 58 58 38 38 58 48 58 58 28 24 14 48 48 48 38 38 43 38 18  4  5  1  2  3  4  5
 5  1  2 48 41 48 42 48 43  8 48 60 48 48 48 48 41 42 48 43 48 46 48 45 48 40 48  4  3 48 30 48 48 48  8 48 48 38 38  4  2  8  8  8  4  5
 6  1  2  3  4  5  1  2 48 48 48 48 48 48  8 48 48 63 48 63  4 48 48 48  4 48 48 48  8  4 48 48 48 48 48 18 48 48 48  4  5  1  2  3  4  5
 7  1  2  3  4  5  1  2  3 48 48  8 48 48 42 48 48 18 48 48 48 48 63 48 48 48 48 48 48  8  8 48 48 48  5 48 48  8  3  4  5  1  2  3  4  5
 8  1  2  3  4  5 13  2  3  4 48 48 62 48 55 48 48 48  4  7  8 48 48 48 54 48 58 48 48  4  4  8 48 48 48 48 48  2  3  4  5 11  2  3  4  5
 9  1  2  3  4  5  1  2  3  4  5 48 48 48 48 48 48 48 28  8 48 48  4 48 48 48  1 48 48  6  4  8  4 48 48 48  1  2  3  4  5  1  2  3  4  5
10  1  2  3  4  5  1  2  3  4  5  1 48 48 48 48  3 48 48 48 48 48 48 18 48 48 48 48 48 48 48  8  4 48 48  5  1  2  3  4  5  1 12  3  4  5
 1 21 22 23 24 27 28 29 31 30 32 34 35 34 35 38 40 48 60 63 60 48 41 38 35 34 32 31 30 28 25 28 24 22 20 18  8  6  3  4  5  1  2  3 14  5
 2  1  2  3  4  5  1  2  3  4  5  1  2 48 48 48 48 48 18 48 48 48 48 48 48 48 48 48  8 48 48  8  4 48  4  5  1  2  3 14 15  1  2  3  4  5
 3 11  2  3  4  5  1  2  3  4  5  1  2  3 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  8  4  3  4  5  1  2  3  4  5  1  2  3  4  5
 4  1  2  3  4 15  1  2  3  4  5  1  2  3  4 48 48 41 42 43 48 40 48 42 48 43 48 44 48 28 48 48  2  3  4  5  1  2  3  4 55  1  2  3  4  5
 5  1  2  3 42 55  1 42  3  4  5  1  2  3  4  5 34 44 41 34 24 34 34 41 34 34 42 34 34 24  4  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 6  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1 48 48 58  4  1 28 41  1 48  2  4  8 48  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 7  1  2  3  4  5  1  2  3  4  5 13  2  3  4  5  1  2 48 48  8 48 34 35 41 48 48  8 48  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 8  1  2  3  4 51  1  2  3  4  5  1  2  3  4  5  1  2  3 48 38 48 38  8  1 48 38 48  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 9  1  2  3  4  5  1 12  3  4  5  1  2  3  4  5  1  2  3  4 48 48 48 48 48 48 48  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
10  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5 48 48 18 48 48  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 1  1  2  3 44  5  1  2  3  4  5  1 12  3  4  5  1  2  3  4  5  1 48 48 48  5  1  2  3  4  5  1  2  3  4 55  1  2  3  4 55  1  2  3  4  5
 2  1  2  3 48  5  1  2  3  4 55 51 12  3  4  5  1  2  3  4  5  1 42 48  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 3  1  2  3  4 45 51  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2 48  4  5  1  2  3  4  5  1  2  3 63  5  1  2  3  4  5  1  2  3  4  5
 4  1  2  3  4  5  1  2  3  4  5  1  2  3 14  5  1  2  3  4  5  1  2 48  4  5  1  2  3  4  5  1  2 59  5  5  1  2 43  4  5  1  2 33  4  5
 5  1  2  3  4  5 11  2  3 44  5  1  2  3  4  5  1  2  3  4  5  1  2 48  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
 6  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5  1  2  3  4  5
```

AvgOutImg



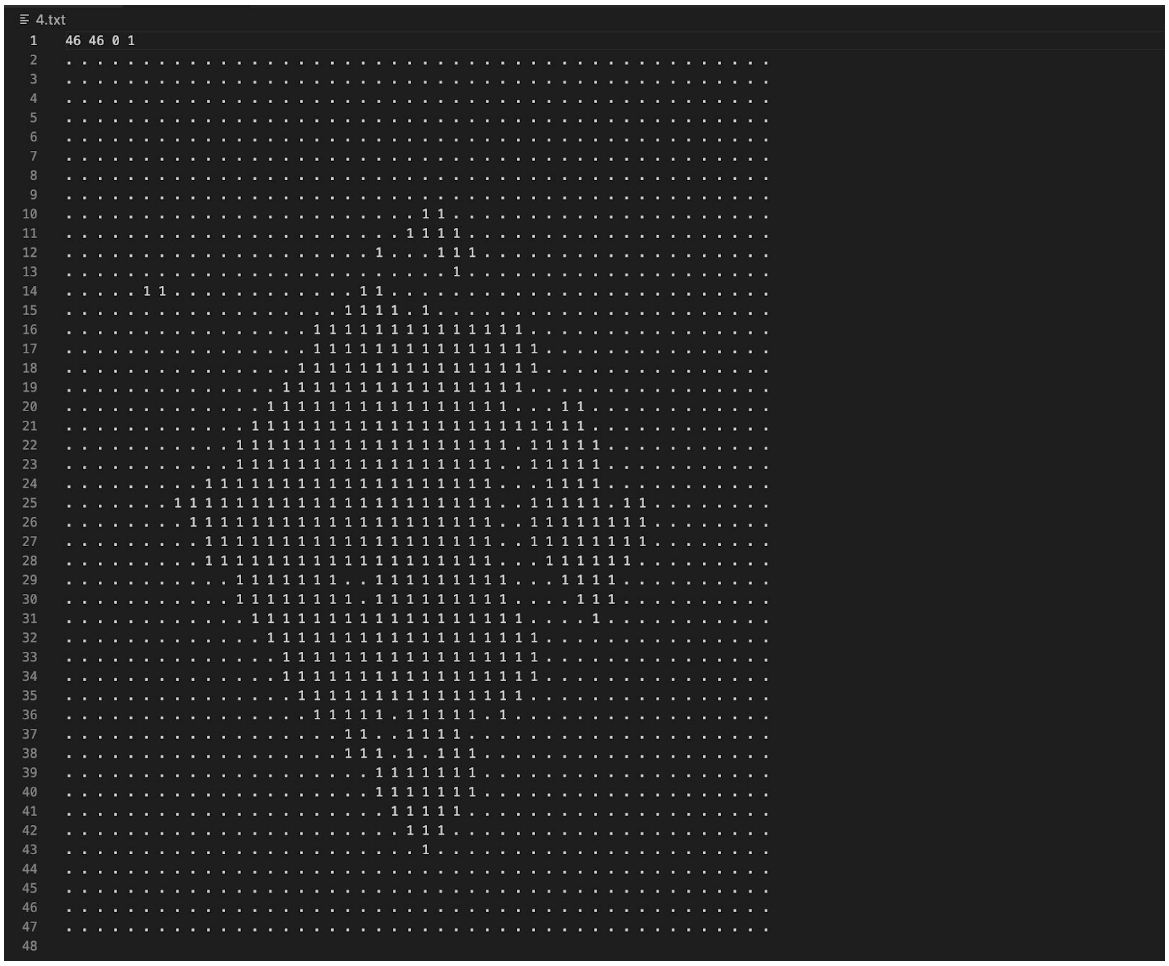
```
46 46 1 54
 1  1  2  3  9  8  8  2  3  4  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  3  2  6  7  8  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 1  1  2  7 14 13 12  6  7  8 13 12  7  3  4  3  2  2  3  4  3  2  8  9 10  3  2 12 13 14  3  2  2  3  8  8  8  7  7  8  7  7  6  3  4  4
 2  2  2  7 14 13 12  6  7 14 24 23 13  3  4  3  2  2  3  4  3  2 14 15 16  3  2 18 19 20  3  2  2  3  8  8  8  7  7  8  7  7  6  3  4  4
 3  9  8 14  8  7  7 10 11 18 24 23 13  3  4  3  2  2  3  4  3  2 20 21 22  3  2 19 20 25  6  6  2  3  8 13 12 12  7  8  7  7  6  3  4  4
 3  9  8  9  4  3  2  6 11 18 18 13  7  3  4  3  2  2  3  4  3  2 18 19 20  3  2 14 19 24 11  6  2  3  4 13 12 12  3  9 14 13  7  3  4  4
 4  9  8  9  4  3  2  6 16 17 12  2  2  3  4  4  3  2  3  4  3  2 12 13 14  3  3  8 18 21 15  6  2  3  4 13 12 18  9 16 14 13  7  3  4  4
 5  3  2  3  4  3  2  2 12 13 12  2  2  3  4  4  3  2  3  4  3  2  6 12 13  7  3  3 13 17 16  7  2  3  9 14 13 14  9 16 14 13  7  3  4  4
 5  3  2  3  4  3  2  2  7  8  7  2  2  3  4  4  3  2  3  4  3  7 11 21 17 12  3  3 13 17 16  7  2  3  9  8  8  8  9 10  3  2  2  3  4  4
 4  3  2  3  4  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  8 15 23 33 31 22  7  6 11 17 12  7  2  3  9  8  8  2  3  4  3  2  2  3  4  4
 2  2  2  3  4  4  3  3  3  4  3  2  2  3  4  3  2  2  3  8 16 24 30 37 39 32 17 11 16 17 12  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 1  1  2  3  8 14 13  8  3  4  3  2  2  3  4  3  2  2  7 18 31 29 27 28 41 42 32 22 17 12  9  4  4  3  4  3  2  2  4  5  4  2  2  3  4  4
 1  1  2  3 14 25 24 14  3  4  3  2  2  3  4  3  2  2  8 18 27 22 16 17 26 33 29 19 13  9  9  4  4  3  4  3  2  2  8  9  8  2  2  3  4  4
 6  9 13 13 24 35 35 24 13 13 12 13 12 13 14 14 15 17 26 33 37 29 23 21 24 29 29 24 18 12 13 12 11  9  9  7  5  4 10 10  8  2  2  4  5  5
 7 12 15 15 19 25 25 18 13 13 12 13 12 13 14 14 20 28 36 38 33 30 28 30 27 27 27 29 28 22 16 10  9  9  9  7  5  4  9  9  7  6  5  7  5  5
 8 12 15 15 14 14 14 13 13 13 12 13 12 13 14 20 31 43 51 52 46 44 41 44 42 41 41 37 37 31 25 15  9  9  9  7  5  4  4 10  8 11  5  7  5  5
 4  5  4  6  5  4  2  2  3  4  3  2  2  3  8 18 33 42 46 46 41 41 41 41 41 41 46 42 42 38 32 17  7  3  9  8  7  2  3  9  8 11  5  6  4  4
 5  3  2  4  5  4  2  2  3  4  3  2  2  7 17 32 42 46 41 41 41 40 41 37 42 43 47 42 42 38 33 22 12  8  9  8  7  2  3  9  8  8  2  3  4  4
 5  3  2  4  6  5  4  3  4  4  3  2  7 17 32 42 48 48 43 41 41 40 42 40 45 44 47 47 43 34 29 28 28 18 14  8  7  2  3  4  3  2  3  4  5  4
 6  4  2  3  5  4  4  3  4  4  3  7 17 32 37 42 43 48 39 38 38 42 44 46 46 44 43 47 43 29 24 29 38 33 18  8  3  3  4  4  3  2  3  4  5  4
 4  8  7  8  5  4  6  4  5  4  8 18 33 44 44 43 44 49 44 40 39 44 48 51 46 44 43 43 39 30 32 34 42 37 26 12  5  3  4  4  4  3  4  4  5  4
 3  8  7  8  4  3  3  3  4  8 18 34 45 50 44 42 42 47 42 40 39 43 46 46 42 43 43 39 34 24 32 34 42 41 34 22 13  7  5  4  4  3  3  4  5  5
 8 16 18 15 10 12 13 13 13 17 28 39 45 45 45 43 45 47 50 50 47 44 44 43 43 43 43 33 28 23 30 34 38 37 30 21 15 13 10  8  4  3  3  4  5  5
 9 10 13  9 10 12 12 17 21 32 37 44 44 39 39 38 45 47 52 54 54 48 44 42 43 45 45 37 28 19 26 35 43 41 35 29 26 23 16 10  3  2  2  4  5  5
 9 11 18 18 24 25 26 31 31 37 39 44 44 38 39 38 44 47 50 54 53 49 44 43 42 44 39 32 28 26 33 38 43 38 33 29 31 32 22 13  3  3  4  4  4  4
 3  2  7 12 17 16 17 26 32 43 44 49 49 38 38 37 48 48 51 46 47 44 46 41 41 44 44 33 25 23 34 42 48 42 38 37 40 40 26 14  3  3  4  4  4  4
 4  3  7 12 17 16 17 21 27 38 40 44 44 42 42 42 44 44 46 44 44 44 49 44 41 42 42 33 24 22 32 41 48 38 35 35 39 36 21 12  3  3  4  4  4  4
 5  3  2  3  4  4  4  8 17 33 38 45 45 45 43 43 46 41 38 30 35 40 49 45 43 44 49 44 29 20 20 34 43 43 39 39 35 28 13  9  4  3  3  3  4  4
 5  3  2  3  4  4  4  3  7 18 29 40 45 49 48 48 44 37 28 27 34 40 44 45 48 44 43 43 34 19 10 20 34 38 43 38 28 13  3  4  4  3  3  3  4  4
 6  4  2  3  4  4  4  3  3  8 18 34 44 50 48 43 43 35 31 27 34 38 39 40 45 44 43 43 38 28 15 15 24 38 43 32 17  7  3  4  4  4  4  4  4  4
 7  7  8  9 10 11 11 11 12 13 18 28 38 43 43 39 41 41 44 45 46 43 37 36 40 38 37 37 37 31 22 17 21 29 33 21 10  3  3  4  3  3  3  5  5  5
 5  6  8  9 10 11 11 11 12 13 12 18 27 38 43 39 41 40 47 49 51 48 42 41 40 43 42 37 37 36 32 21 21 24 24 12  5  3  4  6  5  4  3  5  5  5
 5  7  9  9 10 11 11 11 12 13 12 13 17 28 38 44 46 45 47 49 51 48 46 44 43 43 42 37 37 36 32 21 16 14 14  7  5  3  4  6  5  3  2  4  5  5
 3  3  3  3  5  4  3  2  3  4  3  2  7 17 33 43 47 43 42 43 46 47 46 47 46 47 47 43 40 41 36 24 14  8  9  3  2  2  4 11 11  9  2  3  4  4
 4  3  3  7 14 14 13  6  7  4  3  2  2  7 18 31 40 43 43 41 40 41 42 43 42 43 43 43 39 36 28 18  8  3  4  3  2  2  3  9  8  8  2  3  4  4
 3  2  2  7 14 14 13  6  7  4  3  2  2  3  8 17 30 38 44 38 31 29 34 35 36 33 33 29 30 27 23 12  7  3  4  3  2  2  3  9  8  8  2  3  4  4
 4  3  2  7 13 13 12  6  7  4  4  4  3  3  4  7 16 29 41 34 28 23 32 32 35 33 29 25 23 20 10  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 5  3  2  3  9  8  7  2  3  4  4  4  3  3  4  3  7 17 33 33 33 27 31 25 30 30 32 23 19 14  8  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 5  3  2  3  9  8  8  3  4  4  4  4  3  3  4  3  2  7 17 27 37 39 39 33 36 40 37 27 13  9  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 6  4  2  3  9  8  8  3  4  4  3  2  2  3  4  3  2  2  7 17 32 41 39 33 35 36 31 16  8  4  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
 4  3  2  7  8  7  3  3  4  4  3  3  3  4  4  3  2  2  3  8 18 33 39 44 39 32 17  7  3  4  3  2  2  3  9  8  8  2  3  9  8  8  2  3  4  4
 3  2  2 12 13 12  2  2  3  9 14 16  9  5  4  3  2  2  3  4  8 22 33 39 30 17  7  2  3  4  3  2  2  3  9  8  8  2  3  9  8  8  2  3  4  4
 1  1  2 12 17 22 12  7  3  9 14 16  9  5  4  3  2  2  3  4  3 12 26 32 23  8  2  2  3  4  3  2  2  9 16 15  8  2  3  9  8  8  2  3  4  4
 2  2  2  7 13 18 12  7  3  9 14 14  8  5  5  4  2  2  3  4  3  7 21 22 19  3  2  2  3  4  3  2  8 15 16 10  2  6  7  8  3  2  5  6  7  4
 3  2  2  3  8 14 13  8  7  8  7  2  2  4  5  4  2  2  3  4  3  2 17 18 19  3  2  2  3  4  3  2  8 15 16 10  2  6  7  8  3  2  5  6  7  4
 3  2  2  3  4  4  3  3  7  8  7  2  2  4  5  4  2  2  3  4  3  2 12 13 14  3  2  2  3  4  3  2  8  9 10  3  2  6  7  8  3  2  5  6  7  4
 4  2  2  3  4  4  3  3  7  8  7  2  2  3  4  3  2  2  3  4  3  2  7  8  9  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  3  2  2  3  4  4
```

AvgThrImg



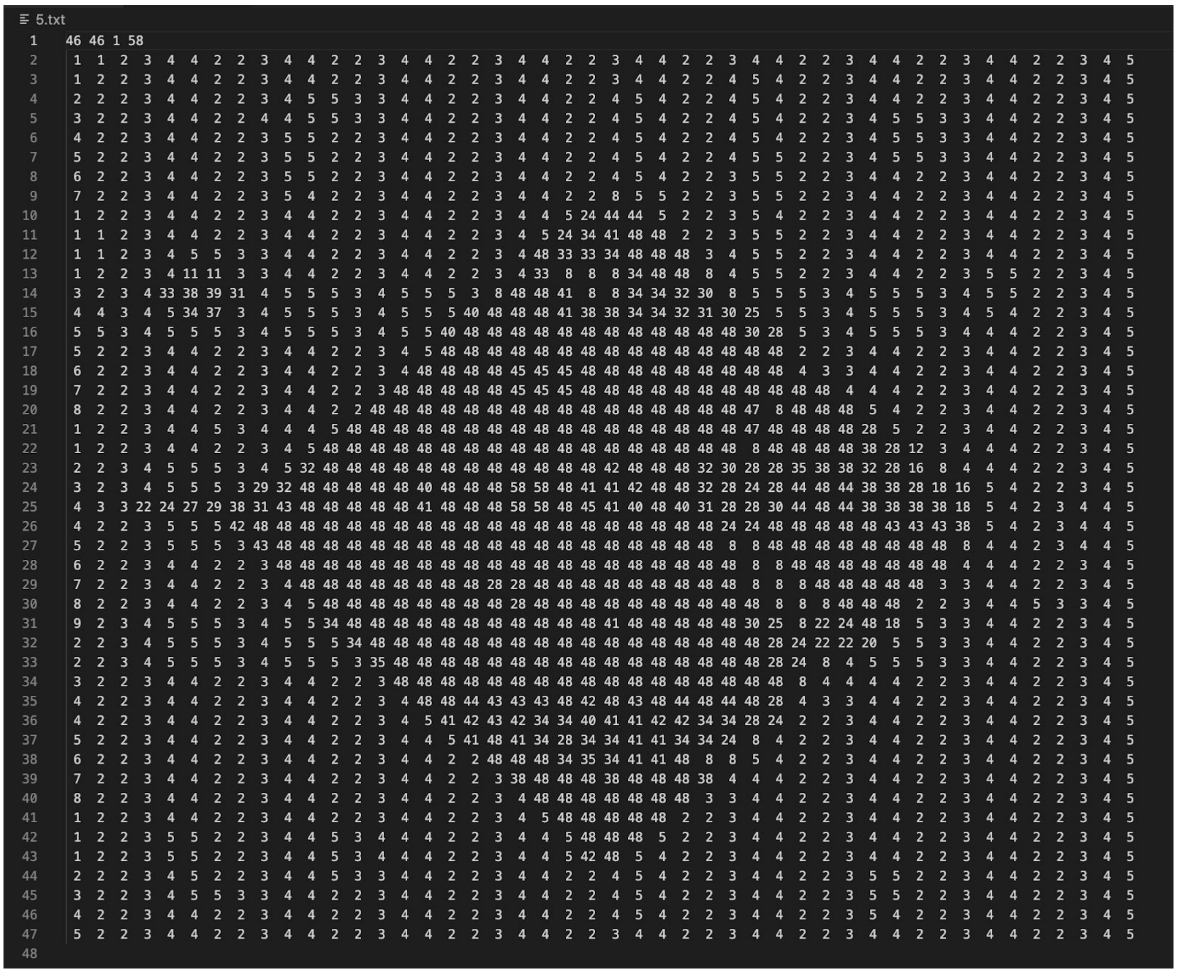
```
46 46 0 1
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 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 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 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 1 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 1 1 1 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 1 1 1 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 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 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 1 1 1 0 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 0 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 0 1 1 1 1 1 0 1 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 1 0 0 1 1 1 1 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 1 1 0 1 0 1 1 1 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 1 1 1 1 1 1 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 1 1 1 1 1 1 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 1 1 1 1 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 1 1 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 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 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

```

AvgPrettyPrint



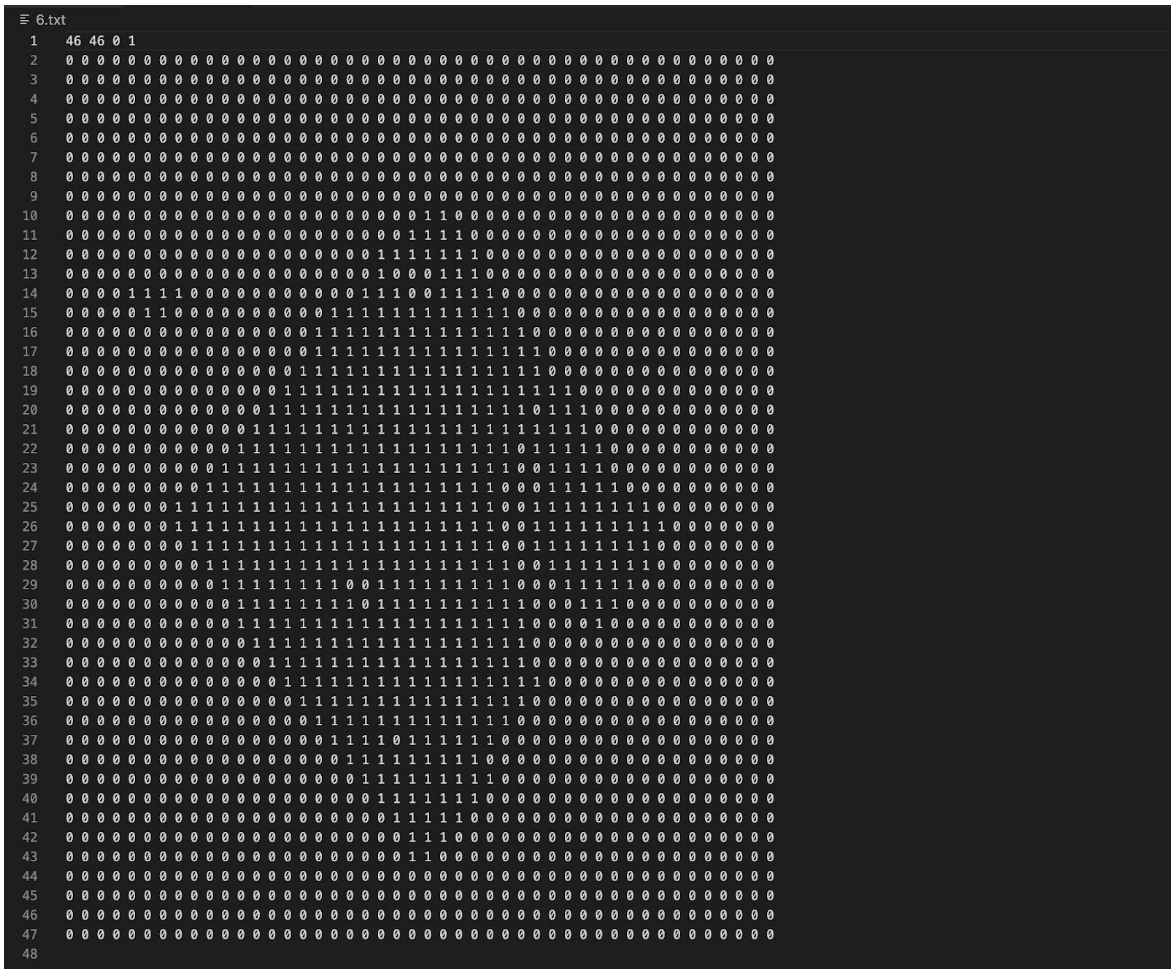
```
46 46 0 1
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 . . . 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . .
. . . . . 1 1 . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . 1 1 1 1 . 1 . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 . . . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 1 1 . . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 . . . . . . . . . . .
. . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 . . . . . . . . . . .
. . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 . 1 1 . . . . . . . .
. . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 1 . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 . 1 1 1 1 1 1 1 1 1 . . . . 1 1 1 . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . 1 . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 . 1 1 1 1 1 . 1 . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . 1 1 . . 1 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . 1 1 1 . 1 . 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .

```

MedianOutImg



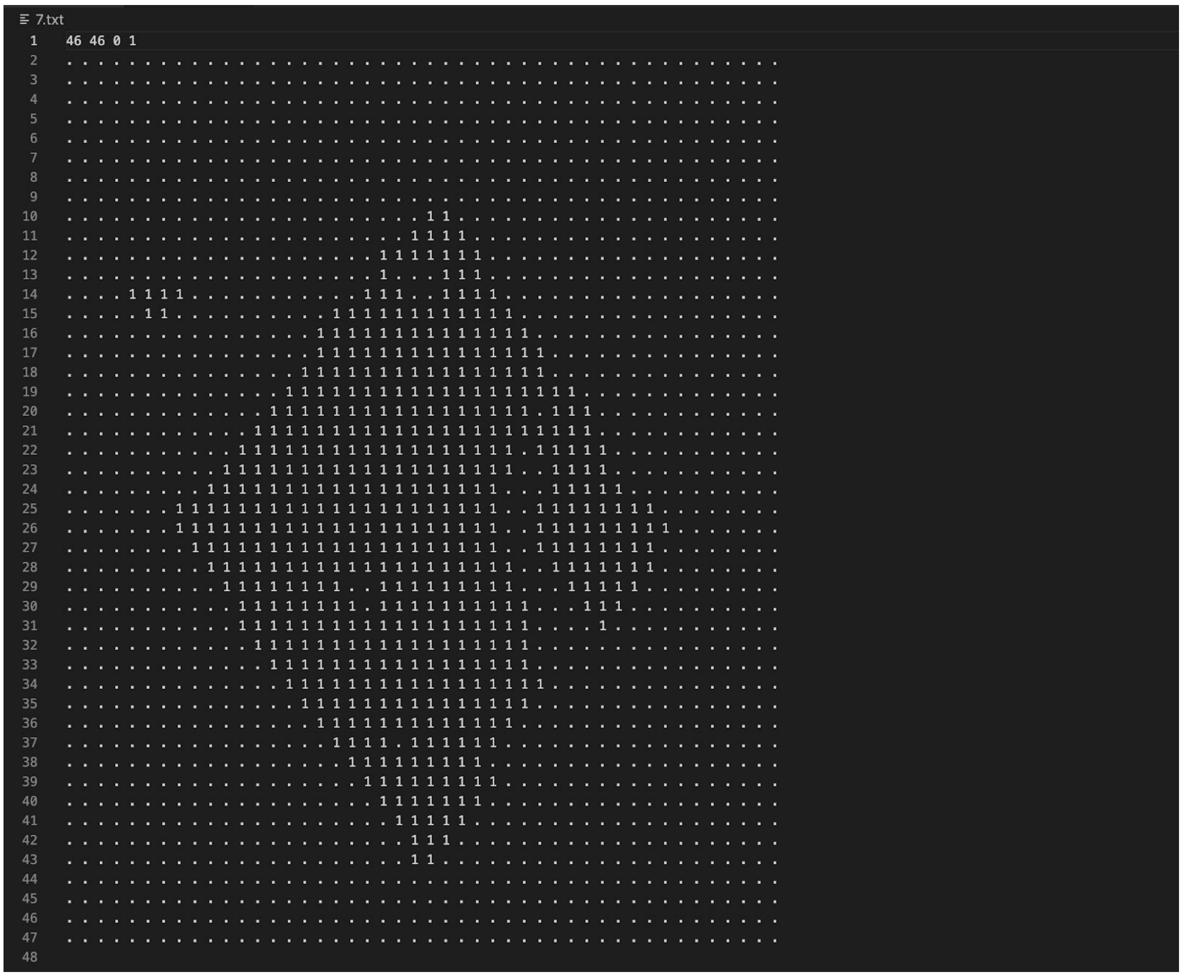
```
46 46 1 58
 1  1  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 2  2  2  3  4  4  2  2  3  4  5  5  3  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  4  5  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 3  2  2  3  4  4  2  2  4  4  5  5  3  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  4  5  4  2  2  3  4  5  5  3  3  4  4  2  2  3  4  5
 4  2  2  3  4  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  4  5  4  2  2  3  4  5  5  3  3  4  4  2  2  3  4  5
 5  2  2  3  4  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  4  5  5  2  2  3  4  5  5  3  3  4  4  2  2  3  4  5
 6  2  2  3  4  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 7  2  2  3  4  4  2  2  3  5  4  2  2  3  4  4  2  2  3  4  4  2  2  8  5  5  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  5 24 44 44  5  2  2  3  5  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  1  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5 24 34 41 48 48  2  2  3  5  5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  1  2  3  4  5  5  3  3  4  4  2  2  3  4  4  2  2  3  4 48 33 33 34 48 48 48  3  4  5  5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4 11 11  3  3  4  4  2  2  3  4  4  2  2  3  4 33  8  8  8 34 48 48  8  4  5  5  2  2  3  4  4  2  2  3  5  5  2  2  3  4  5
 3  2  3  4 33 38 39 31  4  5  5  5  3  4  5  5  5  3  8 48 48 41  8  8 34 34 32 30  8  5  5  5  3  4  5  5  5  3  4  5  5  2  2  3  4  5
 4  4  3  4  5 34 37  3  4  5  5  5  3  4  5  5  5 40 48 48 48 41 38 38 34 34 32 31 30 25  5  5  3  4  5  5  5  3  4  5  4  2  2  3  4  5
 5  5  3  4  5  5  5  3  4  5  5  5  3  4  5  5 40 48 48 48 48 48 48 48 48 48 48 48 48 30 28  5  3  4  5  5  5  3  4  4  4  2  2  3  4  5
 5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 6  2  2  3  4  4  2  2  3  4  4  2  2  3  4 48 48 48 48 45 45 45 48 48 48 48 48 48 48 48 48  4  3  3  4  4  2  2  3  4  4  2  2  3  4  5
 7  2  2  3  4  4  2  2  3  4  4  2  2  3 48 48 48 48 48 45 45 45 48 48 48 48 48 48 48 48 48 48 48  4  4  4  2  2  3  4  4  2  2  3  4  5
 8  2  2  3  4  4  2  2  3  4  4  2  2 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 47  8 48 48 48  5  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4  4  5  3  4  4  4  5 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 47 48 48 48 48 28  5  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4  4  2  2  3  4  5 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  8 48 48 48 48 38 28 12  3  4  4  4  2  2  3  4  5
 2  2  3  4  5  5  5  3  4  5 32 48 48 48 48 48 48 48 48 48 48 48 48 42 48 48 48 32 30 28 28 35 38 38 32 28 16  8  4  4  4  2  2  3  4  5
 3  2  3  4  5  5  5  3 29 32 48 48 48 48 48 40 48 48 48 58 58 48 41 41 42 48 48 32 28 24 28 44 48 44 38 38 28 18 16  5  4  2  2  3  4  5
 4  3  3 22 24 27 29 38 31 43 48 48 48 48 48 41 48 48 48 58 58 48 45 41 40 48 40 31 28 28 30 44 48 44 38 38 38 38 18  5  4  2  3  4  4  5
 4  2  2  3  5  5  5 42 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 24 24 48 48 48 48 48 43 43 43 38  5  4  2  3  4  4  5
 5  2  2  3  5  5  5  3 43 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  8  8 48 48 48 48 48 48 48 48  8  4  4  2  3  4  4  5
 6  2  2  3  4  4  2  2  3 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  8  8 48 48 48 48 48 48 48  4  4  4  2  2  3  4  5
 7  2  2  3  4  4  2  2  3  4 48 48 48 48 48 48 48 48 28 28 48 48 48 48 48 48 48 48 48  8  8  8 48 48 48 48 48  3  3  4  4  2  2  3  4  5
 8  2  2  3  4  4  2  2  3  4  5 48 48 48 48 48 48 48 48 28 48 48 48 48 48 48 48 48 48 48  8  8  8 48 48 48  2  2  3  4  4  5  3  3  4  5
 9  2  3  4  5  5  5  3  4  5  5 34 48 48 48 48 48 48 48 48 48 48 48 41 48 48 48 48 48 30 25  8 22 24 48 18  5  3  3  4  4  2  2  3  4  5
 2  2  3  4  5  5  5  3  4  5  5  5 34 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 28 24 22 22 20  5  5  3  3  4  4  2  2  3  4  5
 2  2  3  4  5  5  5  3  4  5  5  5  3 35 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 28 24  8  4  5  5  5  3  3  4  4  2  2  3  4  5
 3  2  2  3  4  4  2  2  3  4  4  2  2  3 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48 48  8  4  4  4  4  2  2  3  4  4  2  2  3  4  5
 4  2  2  3  4  4  2  2  3  4  4  2  2  3  4 48 48 44 43 43 43 48 42 48 43 48 44 48 44 48 28  4  3  3  4  4  2  2  3  4  4  2  2  3  4  5
 4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5 41 42 43 42 34 34 40 41 41 42 42 34 34 28 24  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  5 41 48 41 34 28 34 34 41 41 34 34 24  8  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 6  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2 48 48 48 34 35 34 41 41 48  8  8  5  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 7  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3 38 48 48 48 38 48 48 48 38  4  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 8  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4 48 48 48 48 48 48 48  3  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5 48 48 48 48 48  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  5  5  2  2  3  4  4  5  3  4  4  4  2  2  3  4  4  5 48 48 48  5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 1  2  2  3  5  5  2  2  3  4  4  5  3  4  4  4  2  2  3  4  4  5 42 48  5  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5
 2  2  2  3  4  5  2  2  3  4  4  5  3  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  3  4  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  5
 3  2  2  3  4  5  5  3  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  3  4  4  2  2  3  5  5  2  2  3  4  4  2  2  3  4  5
 4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  4  5  4  2  2  3  4  4  2  2  3  5  4  2  2  3  4  4  2  2  3  4  5
 5  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  4  2  2  3  4  5

```

MedianThrImg



```
46 46 0 1
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 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 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 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 1 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 1 1 1 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 1 1 1 1 1 1 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 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 1 1 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 0 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 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 1 1 1 1 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 1 1 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 1 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 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 0 0 0 0

```

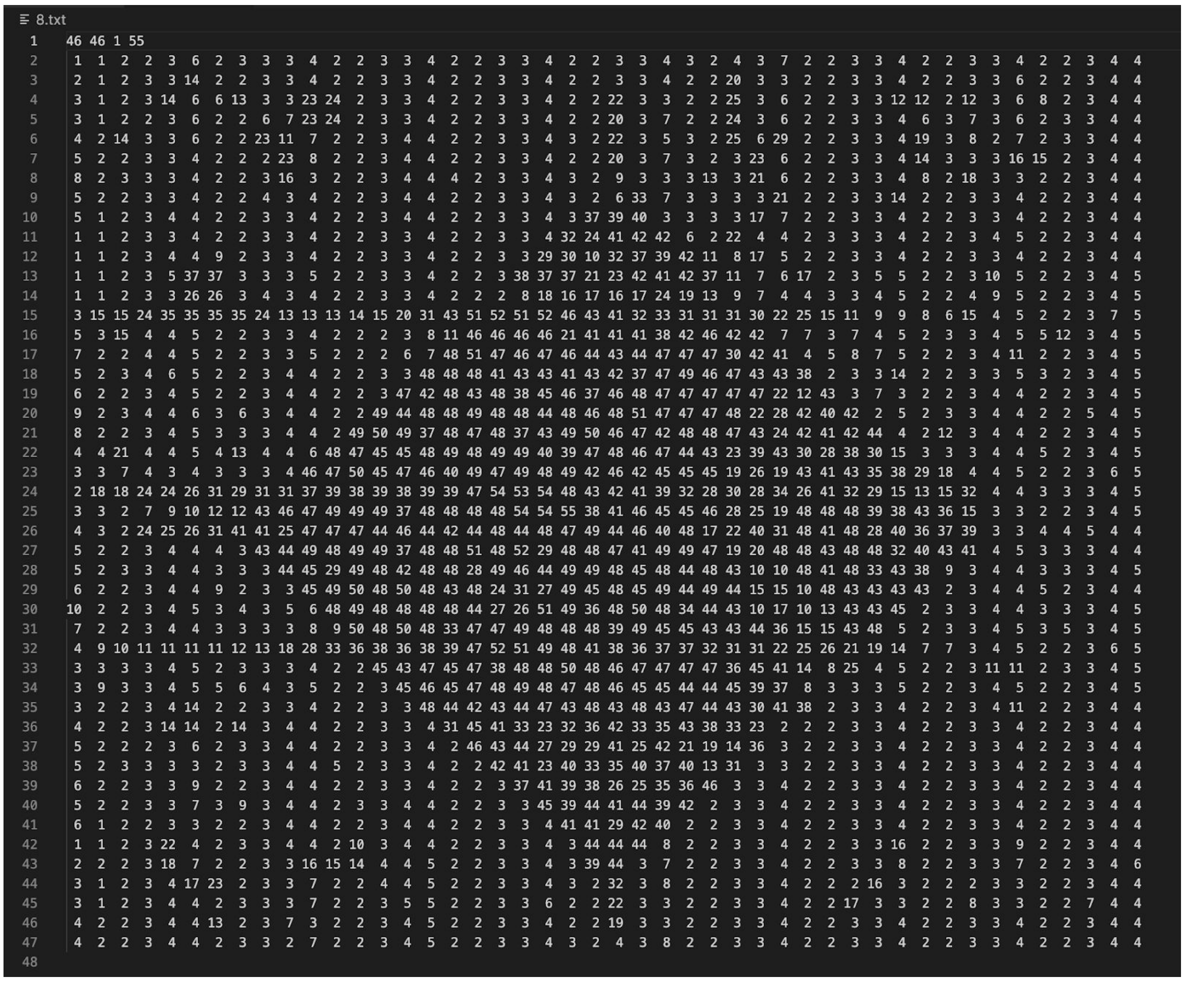
MedianPrettyPrint



7.txt

```
46 46 0 1
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 . . . 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . 1 1 1 1 . . . . . . . . . . . 1 1 1 . . 1 1 1 1 . . . . . . . . . . . . . . . . . .
. . . . . 1 1 . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 . . . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 1 1 . . . . . . . . . . .
. . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 . . . . . . . . . . .
. . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 . . . . . . . . . .
. . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 1 . . . . . . .
. . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . . . . . 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 . 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . 1 . . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . 1 1 1 1 . 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

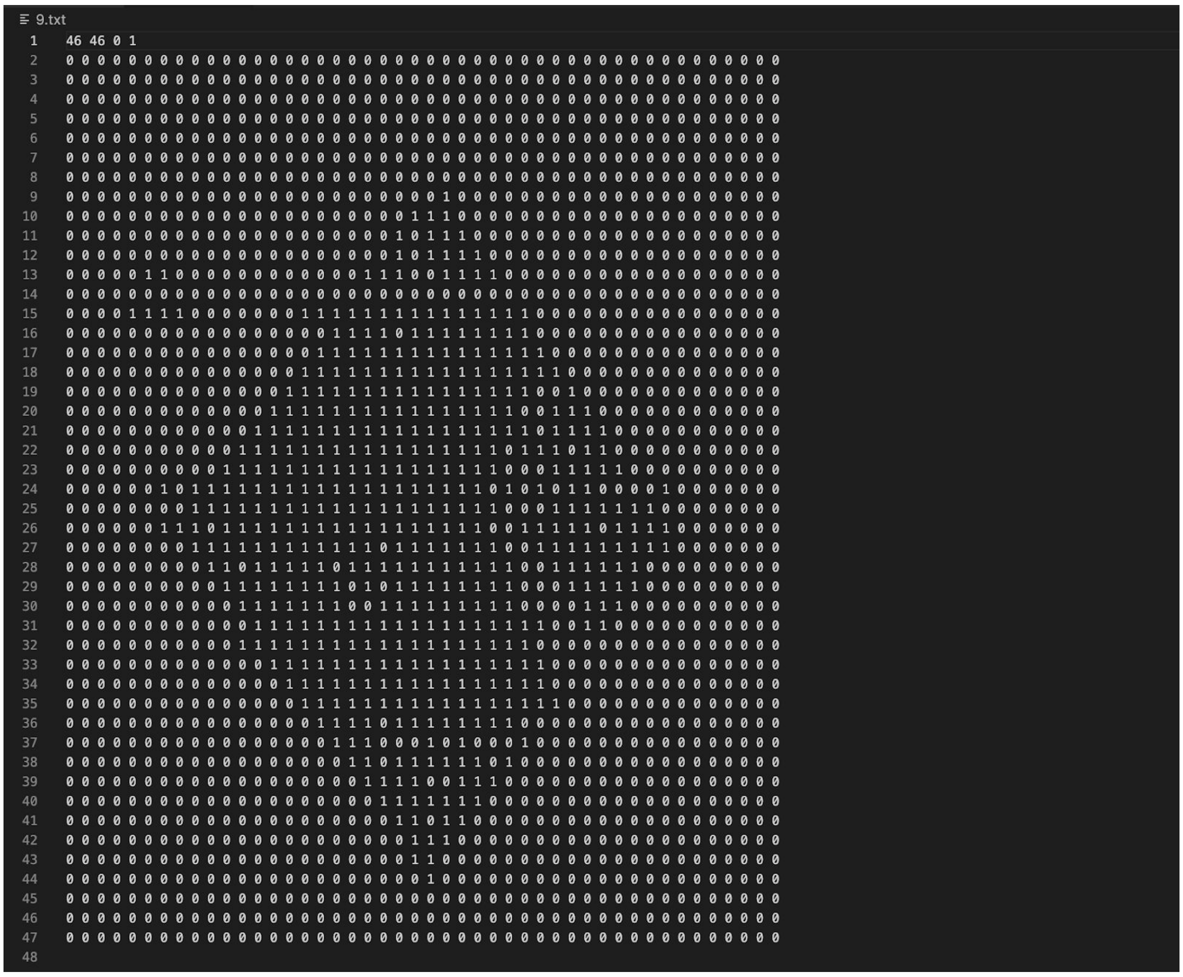
CPOutImg



8.txt

```
46 46 1 55
 1  1  2  2  3  6  2  3  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  3  2  4  3  7  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 2  1  2  3  3 14  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2 20  3  3  2  2  3  3  4  2  2  3  3  6  2  2  3  4  4
 3  1  2  3 14  6  6 13  3  3 23 24  2  3  3  4  2  2  3  3  4  2  2 22  3  3  2  2 25  3  6  2  2  3  3 12 12  2 12  3  6  8  2  3  4  4
 3  1  2  2  3  6  2  2  6  7 23 24  2  3  3  4  2  2  3  3  4  2  2 20  3  7  2  2 24  3  6  2  2  3  3  4  6  3  7  3  6  2  3  3  4  4
 4  2 14  3  3  6  2  2 23 11  7  2  2  3  4  4  2  2  3  3  4  3  2 22  3  5  3  2 25  6 29  2  2  3  3  4 19  3  8  2  7  2  3  3  4  4
 5  2  2  3  3  4  2  2  2 23  8  2  2  3  4  4  2  2  3  3  4  2  2 20  3  7  3  2  3 23  6  2  2  3  3  4 14  3  3  3 16 15  2  3  4  4
 8  2  3  3  3  4  2  2  3 16  3  2  2  3  4  4  4  2  3  3  4  3  2  9  3  3  3 13  3 21  6  2  2  3  3  4  8  2 18  3  3  2  2  3  4  4
 5  2  2  3  3  4  2  2  4  3  4  2  2  3  4  4  2  2  3  3  4  3  2  6 33  7  3  3  3  3 21  2  2  3  3 14  2  2  3  3  4  2  2  3  4  4
 5  1  2  3  4  4  2  2  3  3  4  2  2  3  4  4  2  2  3  3  4  3 37 39 40  3  3  3  3 17  7  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 1  1  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4 32 24 41 42 42  6  2 22  4  4  2  3  3  3  4  2  2  3  4  5  2  2  3  4  4
 1  1  2  3  4  4  9  2  3  3  4  2  2  3  3  4  2  2  3  3 29 30 10 32 37 39 42 11  8 17  5  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 1  1  2  3  5 37 37  3  3  3  5  2  2  3  3  4  2  2  3 38 37 37 21 23 42 41 42 37 11  7  6 17  2  3  5  5  2  2  3 10  5  2  2  3  4  5
 1  1  2  3  3 26 26  3  4  3  4  2  2  3  3  4  2  2  2  8 18 16 17 16 17 24 19 13  9  7  4  4  3  3  4  5  2  2  4  9  5  2  2  3  4  5
 3 15 15 24 35 35 35 35 24 13 13 13 14 15 20 31 43 51 52 51 52 46 43 41 32 33 31 31 31 30 22 25 15 11  9  9  8  6 15  4  5  2  2  3  7  5
 5  3 15  4  4  5  2  2  3  3  4  2  2  2  3  8 11 46 46 46 46 21 41 41 41 38 42 46 42 42  7  7  3  7  4  5  2  3  3  4  5  5 12  3  4  5
 7  2  2  4  4  5  2  2  3  3  5  2  2  2  6  7 48 51 47 46 47 46 44 43 44 47 47 47 30 42 41  4  5  8  7  5  2  2  3  4 11  2  2  3  4  5
 5  2  3  4  6  5  2  2  3  4  4  2  2  3  3 48 48 48 41 43 43 41 43 42 37 47 49 46 47 43 43 38  2  3  3 14  2  2  3  3  5  3  2  3  4  5
 6  2  2  3  4  5  2  2  3  4  4  2  2  3 47 42 48 43 48 38 45 46 37 46 48 47 47 47 47 47 22 12 43  3  7  3  2  2  3  4  4  2  2  3  4  5
 9  2  3  4  4  6  3  6  3  4  4  2  2 49 44 48 48 49 48 48 44 48 46 48 51 47 47 47 48 22 28 42 40 42  2  5  2  3  3  4  4  2  2  5  4  5
 8  2  2  3  4  5  3  3  3  4  4  2 49 50 49 37 48 47 48 37 43 49 50 46 47 42 48 48 47 43 24 42 41 42 44  4  2 12  3  4  4  2  2  3  4  5
 4  4 21  4  4  5  4 13  4  4  6 48 47 45 45 48 49 48 49 49 40 39 47 48 46 47 44 43 23 39 43 30 28 38 30 15  3  3  3  4  4  5  2  3  4  5
 3  3  7  4  3  4  3  3  3  4 46 47 50 45 47 46 40 49 47 49 48 49 42 46 42 45 45 45 19 26 19 43 41 43 35 38 29 18  4  4  5  2  2  3  6  5
 2 18 18 24 24 26 31 29 31 31 37 39 38 39 38 39 39 47 54 53 54 48 43 42 41 39 32 28 30 28 34 26 41 32 29 15 13 15 32  4  4  3  3  3  4  5
 3  3  2  7  9 10 12 12 43 46 47 49 49 49 37 48 48 48 48 54 54 55 38 41 46 45 45 46 28 25 19 48 48 48 39 38 43 36 15  3  3  2  2  3  4  5
 4  3  2 24 25 26 31 41 41 25 47 47 47 44 46 44 42 44 48 44 48 47 49 44 46 40 48 17 22 40 31 48 41 48 28 40 36 37 39  3  3  4  4  5  4  4
 5  2  2  3  4  4  4  3 43 44 49 48 49 49 37 48 48 51 48 52 29 48 48 47 41 49 49 47 19 20 48 48 43 48 48 32 40 43 41  4  5  3  3  3  4  4
 5  2  3  3  4  4  3  3  3 44 45 29 49 48 42 48 48 28 49 46 44 49 49 48 45 48 44 48 43 10 10 48 41 48 33 43 38  9  3  4  4  3  3  3  4  5
 6  2  2  3  4  4  9  2  3  3 45 49 50 48 50 48 43 48 24 31 27 49 45 48 45 49 44 49 44 15 15 10 48 43 43 43 43  2  3  4  4  5  2  3  4  4
10  2  2  3  4  5  3  4  3  5  6 48 49 48 48 48 48 44 27 26 51 49 36 48 50 48 34 44 43 10 17 10 13 43 43 45  2  3  3  4  4  3  3  3  4  5
 7  2  2  3  4  4  3  3  3  3  8  9 50 48 50 48 33 47 47 49 48 48 48 39 49 45 45 43 43 44 36 15 15 43 48  5  2  3  3  4  5  3  5  3  4  5
 4  9 10 11 11 11 11 12 13 18 28 33 36 38 36 38 39 47 52 51 49 48 41 38 36 37 37 32 31 31 22 25 26 21 19 14  7  7  3  4  5  2  2  3  6  5
 3  3  3  3  4  5  2  3  3  3  4  2  2 45 43 47 45 47 38 48 48 50 48 46 47 47 47 47 36 45 41 14  8 25  4  5  2  2  3 11 11  2  3  3  4  5
 3  9  3  3  4  5  5  6  4  3  5  2  2  3 45 46 45 47 48 49 48 47 48 46 45 45 44 44 45 39 37  8  3  3  3  5  2  2  3  4  5  2  2  3  4  5
 3  2  2  3  4 14  2  2  3  3  4  2  2  3  3 48 44 42 43 44 47 43 48 43 48 43 47 44 43 30 41 38  2  3  3  4  2  2  3  4 11  2  2  3  4  4
 4  2  2  3 14 14  2 14  3  4  4  2  2  3  3  4 31 45 41 33 23 32 36 42 33 35 43 38 33 23  2  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 5  2  2  2  3  6  2  3  3  4  4  2  2  3  3  4  2 46 43 44 27 29 29 41 25 42 21 19 14 36  3  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 5  2  3  3  3  3  2  3  3  4  4  5  2  3  3  4  2  2 42 41 23 40 33 35 40 37 40 13 31  3  3  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 6  2  2  3  3  9  2  2  3  4  4  2  2  3  3  4  2  2  3 37 41 39 38 26 25 35 36 46  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 5  2  2  3  3  7  3  9  3  4  4  2  3  3  4  4  2  2  3  3 45 39 44 41 44 39 42  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 6  1  2  2  3  3  2  2  3  4  4  2  2  3  4  4  2  2  3  3  4 41 41 29 42 40  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 1  1  2  3 22  4  2  3  3  4  4  2 10  3  4  4  2  2  3  3  4  3 44 44 44  8  2  2  3  3  4  2  2  3  3 16  2  2  3  3  9  2  2  3  4  4
 2  2  2  3 18  7  2  2  3  3 16 15 14  4  4  5  2  2  3  3  4  3 39 44  3  7  2  2  3  3  4  2  2  3  3  8  2  2  3  3  7  2  2  3  4  6
 3  1  2  3  4 17 23  2  3  3  7  2  2  4  4  5  2  2  3  3  4  3  2 32  3  8  2  2  3  3  4  2  2  2 16  3  2  2  2  3  3  2  2  3  4  4
 3  1  2  3  4  4  2  3  3  3  7  2  2  3  5  5  2  2  3  3  6  2  2 22  3  3  2  2  3  3  4  2  2 17  3  3  2  2  8  3  3  2  2  7  4  4
 4  2  2  3  4  4 13  2  3  7  3  2  2  3  4  5  2  2  3  3  4  2  2 19  3  3  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
 4  2  2  3  4  4  2  3  3  2  7  2  2  3  4  5  2  2  3  3  4  3  2  4  3  8  2  2  3  3  4  2  2  3  3  4  2  2  3  3  4  2  2  3  4  4
```

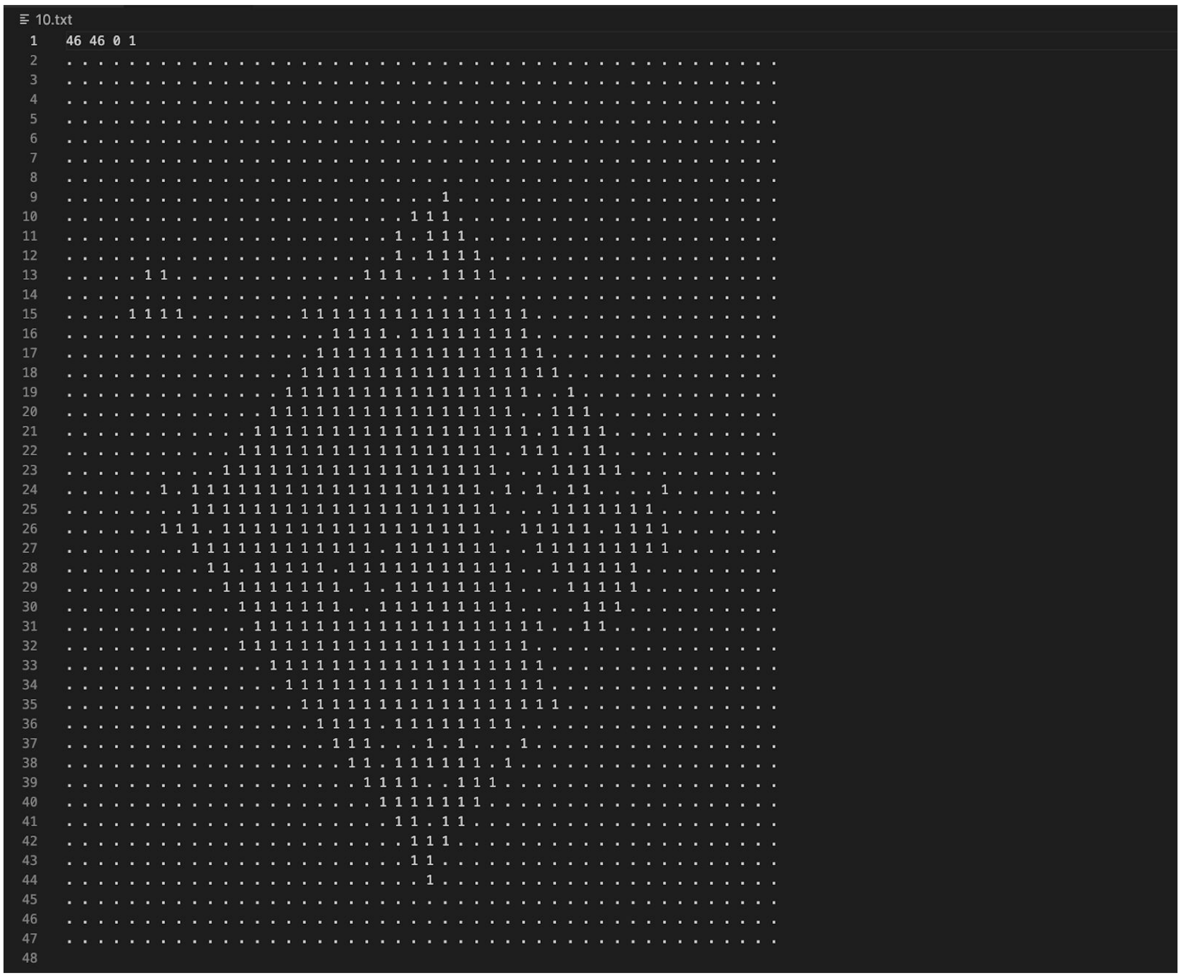
CPThrImg



9.txt

```
46 46 0 1
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 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 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 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 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 1 1 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 1 1 1 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 1 1 1 1 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 1 0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 0 0 1 1 1 1 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 1 1 1 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 0 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 0 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 1 0 1 0 1 1 0 0 0 0 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 1 1 0 0 0 0 0 0 0 0
0 0 0 0 0 0 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 0 1 1 1 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 0 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 1 1 0 1 1 1 1 1 0 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 0 1 0 1 1 1 1 1 1 1 1 0 0 0 1 1 1 1 1 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 0 0 1 1 1 1 1 1 1 1 1 0 0 0 0 1 1 1 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 0 0 1 1 0 0 0 0 0 0 0 0 0 0 0
0 0 0 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 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 1 1 1 0 1 1 1 1 1 1 1 1 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 1 1 0 0 0 1 0 1 0 0 0 1 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 1 0 1 1 1 1 1 1 0 1 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 1 1 1 0 0 1 1 1 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 1 1 1 1 1 1 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 1 0 1 1 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 1 1 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 1 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 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 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
```

CPPrettyPrint



10.txt

```
46 46 0 1
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . 1 . 1 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . 1 . 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . 1 1 . . . . . . . . . . . . 1 1 1 . . 1 1 1 1 . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . 1 1 1 1 . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . 1 1 1 1 . 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 . . . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 . . . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 1 . . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 . 1 1 . . . . . . . . . . .
. . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 . . . . . . . . . .
. . . . . . 1 . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . 1 . 1 . 1 1 . . . . 1 . . . . . . .
. . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 1 1 . . . . . . . .
. . . . . . 1 1 1 . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 . 1 1 1 1 . . . . . . .
. . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 . 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 1 . . . . . . .
. . . . . . . . . 1 1 . 1 1 1 1 1 . 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 . . . . . . . . .
. . . . . . . . . . 1 1 1 1 1 1 1 1 . 1 . 1 1 1 1 1 1 1 1 . . . 1 1 1 1 1 . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 . . 1 1 1 1 1 1 1 1 1 . . . . 1 1 1 . . . . . . . . . .
. . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . 1 1 . . . . . . . . . . .
. . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . 1 1 1 1 . 1 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . 1 1 1 . . . 1 . 1 . . . 1 . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . 1 1 . 1 1 1 1 1 1 . 1 . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . 1 1 1 1 . . 1 1 1 . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . 1 1 1 1 1 1 1 . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . 1 1 . 1 1 . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 1 . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . 1 1 . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . 1 . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
. . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . .
```

This is the end of the report.