201632739 한국 알고리즘 과제

Code:

#include<stdio.h>

#include<stdlib.h>

int index(int crow,int arow,int type)

{

if(type == 1)

{

if((crow-1)<0)

crow = arow-1;

else

crow = crow-1;

}

else if(type==3)

{

if((crow+1)==arow)

crow = 0;

else

crow = crow+1;

}

else;

return crow;

}

void shortestPath(int\*\*arr,int row, int col,int size)

{

int arr2[row][col+1];

int i,j,k,re;

for(i=0;i<row;i++)

{

arr2[i][col] = 10000;

arr2[i][col-1] = arr[i][col-1];

}

for(i=col-1;i>=1;i--)

{

for(j=0;j<row;j++)

{

for(k=1;k<=size;k++)

{

re = arr2[index(j,row,k)][i]+arr[j][i-1];

if(arr2[j][col]>re)

{

arr2[j][col] = re;

}

}

arr2[j][i-1] = arr2[j][col];

}

for(j=0;j<row;j++)

{

arr2[j][col] = 10000;

}

}

int num,max;

max = arr2[0][0];

num = 0;

for(i=1;i<row;i++)

{

if(max>arr2[i][0])

{

max = arr2[i][0];

num = i;

}

}

printf("shortestPath: %d\n",arr2[num][0]);

printf("path: ");

int arr3[col];

int num2;

arr3[0] = num;

for(i=1;i<col;i++)

{

max = index(num,row,1);

for(j=2;j<=size;j++)

{

num2 = index(num,row,j);

if(arr2[max][i]>arr2[num2][i])

max = num2;

}

num = max;

arr3[i] = max;

}

for(i=0;i<col;i++)

printf("%d ",arr[arr3[i]][i]);

printf("\n");

return;

}

int arr[5][6] = {{3,4,1,2,8,6},{6,1,8,2,7,4},{5,9,3,9,9,5},{8,4,1,3,2,6},{3,7,2,8,6,4}};

int test[5][6] = {{3,4,1,2,8,6},{6,1,8,2,7,4},{5,9,3,9,9,5},{8,4,1,3,2,6},{3,7,2,1,2,3}};

int main(void)

{

int row,col;

scanf("%d %d",&row,&col);

int arr[row][col];

int x,y;

for(x=0;x<row;x++)

{

for(y=0;y<col;y++)

{

scanf("%d",&arr[x][y]);

}

}

puts("result:");

int\*\* arr2 = (int\*\*)malloc(sizeof(int\*)\*row);

int i,j;

for(i=0;i<row;i++)

{

arr2[i] = (int\*)malloc(sizeof(int)\*col);

}

for(i=0;i<row;i++)

{

for(j=0;j<col;j++)

{

arr2[i][j] = arr[i][j];

}

}

shortestPath(arr2,row,col,3);

return 0;

}

Result:

모니터이(가) 표시된 사진

자동 생성된 설명

모니터이(가) 표시된 사진

자동 생성된 설명