Mushay S Bhoradows (BH(8050))

ADS Lab-3 Write-up (Disjoint Sets) Jelands (int n) & class Islands f parent [n]; tor (i=0; i < n; i ++) int parent [100] as pacent Cil = i; int count; count = 0; } public int findparent (int x) { if (parent [x] == x) return x; else

return parent [x] = findparent(parentles) public void makeunion (intx, inty) {

int xroot = findparent (x); int groot = find parent (y); if (xroot != groot) } parent [xrod] = grood; count -- ; 3

public void countset (int n) { count = w; public int retarn count () { return count;

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Aleshay S Bharodwog IBM18CS011 noof islands (vector < vector <iut >> matrix) { t_Ni int count - 0; int a = matrix. size (); int b = matrix[0]. size(); for (int 1=0; ica; i++) } for Cint j = 0; j(b; j++) } if (matrix [i][j] ! = 0) counter; E Z Islands il = new Islands (a*b); il. setuted (count); for (int 1=0; 1<0; i++){ for Cint j=0 ; j< b ; j++> { if (matrix [i][j]!=0) { if (1>0 88 matrix [j-1][j]!=0) } il. makeanion (b * i+j, b * (i-1)+j);} if (i < m-1 8.8 matrix [ifI][] 1:0)

il. makeanion (b*i+j,b*(i+i)+j); if (j>0 88 matrix[i][j-1]!=0)

il . makeunion (* + + + j , * * i + (j - 1)); (0 =) [1 + i] [i] xirtam 98 1-0 > i) il. makeauion (britj, bxi+Cj+1));

(\$1>0 &8 j>0 88 matrix [i-1][j-1][:0) il - wake union (bx i+j, bx (i-1)+(j-1)). if (; > 0 88 j< 10-1 88 matria [i-1][j+1]!=0)

il. make union (k* i+j, b*(i-1)+(j+1))

Aleshay S Bharadway

if (i<a-1 88 j>0 88 matrix[i+1][j-1][:0)

i. maveunion (b*i+j, b*(i+1)+(j-1)),

if (i<a-1 88 j<b-1 88 matrix[i+1][j+1][:0)

ii. make union (b*i+j, b*(i+1)*(j+1));

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refurnil.count;

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