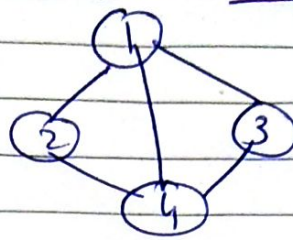


★ Pseudo code for $(n-2)$ Contractions of Edges

Date _____
Page _____

→ I/P: $K = \begin{bmatrix} 0 & 1 & 1 & 1 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 1 & 1 & 1 & 0 \end{bmatrix}$



→ O/P: Cut value After $(n-2)$ Iterations

Steps → ① Enter Edge (u, v) [OR Select Randomly]

② for $i = 1$ to $(n-1)$
 { for $j = i+1$ to n
 {

$cnt = 0;$

 if $(i == u \text{ and } j == v)$

$K[i][j] = K[j][i] = 0;$

 else if $(i == u \text{ or } i == v)$

 {

 if $K[u][j] > 0$

$cnt += K[u][j];$

 if $K[v][j] > 0$

$cnt += K[v][j];$

$K_1[u][j] = K_1[v][j] = cnt;$

 }

 else if $(j == u \text{ or } j == v)$

 {

 if $K[u][i] > 0$

$cnt += K[u][i];$

 if $K[v][i] > 0$

$cnt += K[v][i];$

$K_1[i][u] = K_1[i][v] = cnt;$

 } else $\{ K_1[i][i] = K[i][i] \}$

③ for $i = 1$ to n * Copy upper Triangular
 for $j = 1$ to n Values to Lower
 if $(i \geq j)$ Triangular values
 and complete G_1 |
 $G_1[i][j] = G_1[j][i];$
 3 3 3
 3 3 3

④ $G_2 =$ Remove v^{th} Row, v^{th} colⁿ from G_1
 and this new graph is (say)
 G_2

⑤ $G = G_2$ (Copy G_2 to G)

⑥ $n = n - 1$

⑦ if $(n > 2)$
 goto step (1)

⑧ Cut Value = $G[1][2]$

Note: Repeat above $100n(n-1)$
 times ~~for~~ and find
 Min. of all cut values
 obtained. This Min. value
 is the size of the Min cut.
 With 99.99% prob., this
 answer is correct.