

```

1 A_pos = malloc((m+1) * sizeof(int));
2 A_crd = malloc(A_crd_size * sizeof(int));
3
4 row = malloc(row_size * sizeof(bool));
5 memset(row, 0, row_size * sizeof(bool));
6 rowlist = malloc(row_size);
7
8 A_pos[0] = 0;
9 for (int i = 0; i < m; i++) {
10     rowlist_size = 0;
11     for (int pB = B_pos[i]; pB < B_pos[i+1]; pB++) {
12         int k = B_crd[pB];
13         for (int pC = C_pos[k]; pC < C_pos[k+1]; pC++) {
14             int j = C_crd[pC];
15             if (!row[j]) {
16                 rowlist[rowlist_size++] = j;
17                 row[j] = true;
18             }
19         }
20     }
21
22     // Sort row indices
23     sort(rowlist, rowlist_size);
24
25     // Make sure A_crd is large enough
26     if (A_crd_size < (A_pos[i] + rowlist_size)) {
27         A_crd_size = (A_pos[i] + rowlist_size) * 2;
28         A_crd = realloc(A_crd, A_crd_size * sizeof(int));
29     }
30
31     // Copy row workspace indices to A_crd
32     for (int prow = 0; prow < rowlist_size; prow++) {
33         int j = rowlist[prow];
34         A_crd[A_pos[i] + prow] = j;
35         row[j] = false;
36     }
37     A_pos[i+1] = A_pos[i] + rowlist_size;
38 }
39 A = malloc(A_pos[m] * sizeof(float));

```