

*****Program 26.c *****

//split into non-intersecting squares..

#include<stdio.h>

#include<stdlib.h>

int main() {

int d = 2;

int s = d * d;

int a[s][s];

int m[s + 1];

int i, j, k, ni, nj, x;

for (i = 0; i < s; i++) {
for (j = 0; j < s; j++) {
scanf("%d", &a[i][j]);
}
}

for (i = 0; i < s; i = i + d) { //step level - d
for (j = 0; j < s; j = j + d) { //step level - d

for (k = 0; k <= s; k++) { //initiaze the flag array to 0
m[k] = 0;

}
for (ni = i; ni < i + d; ni++) {
for (nj = j; nj < j + d; nj++) {
x = a[ni][nj];
m[x] = 1;
}
}

for (k = 1; k <= s; k++) {
if (m[k] != 1) {
printf("No\n");
printf("Failed at submatrix at %d row and %d col \n", i, j);
exit(1);
}
}

}
}

printf("Yes\n");

}

*****Program 27.c *****

//sorting using selection sort....

#include<stdio.h>

int main() {

int n = 6;

int a[] = {-1, 20, 50, 2, 40, -5};

int i, j, k;

int min, t;

//print after every iteration..

printf("It(0): ");

for (k = 0; k < n; k++) {
printf("%d ", a[k]);

}

printf("\n");

for (i = 0; i < n; i++) {

min = i;

for (j = i+1; j < n; j++) {

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        if (a[min] > a[j]) {
            min = j;
        }
    }
    t = a[i]; //store a[i] into a temp.
    a[i] = a[min]; //copy a[min] to a[i]
    a[min] = t; //copy temp to a[min]

    //print after every iteration..
    printf("It(%d): ", i+1);
    for (k = 0; k < n; k++) {
        printf("%d ", a[k]);
    }
    printf("\n");
}
}
```