Q WAP to use divide and conque method to recursively implement and to find the maximum and minimum in a given list of n elements.

Program:

```c
#include <stdio.h>
int max, min;
int a[100];
void maxmin (int i, int j) {
    int max1, min1, mid;
    if (i==j) {
        max = min = a[i];
    }
    else {
        if (i== j-1) {
            if (a[i] < a[j]) {
                max = a[j];
                min = a[i];
            }
            else {
                max=a[i];
                min=a[j];
            }
        }
```

```c
    else {
        mid = (i+j)/2;
        max min (i, mid);
        max1 = max;
        min1 = min;
        max min (mid+1, j);
        if (max < max1)
            max = max1;
        if (min > min1)
            min = min1;
        }
    }
}

int main () {
    int i, n;
    printf ("Enter size of array:");
    scanf ("%d", &n);
    printf (" Enter elements:\n");
    for (i=1; i<=n; i++)
        scanf ("%d", &a[i]);
```

```c
        max = a[0];
        min = a[0];

maxmin (1, n)

printf("Minimum element in the array: %d\n",
                                        min);
printf("maximum element in the array: %d\n",
                                        max);

        return 0;
}
```

INPUT/OUTPUT :-

Enter size of array : 10
Enter elements:
   22   13   -5   -8   15   60   17 31 7 14

Minimum elements in the array: -8
Maximum element. in the array: 60.