```cpp
#include <iostream>

using namespace std;

void muestra (int *v, int n){

    for (int i=0; i<n; i++){
        cout << v[i] << ",";
    }
    cout << endl;
}

void Cambiar ( int i, int j, int *v ) {

    int x;

    x = v[i];
    v[i] = v[j];
    v[j] = x;

}

int encuentrapivote ( int i, int j, int *v ) {

    int primera_clave, k;

    primera_clave = v[i];
    k = i+1;

    while (( v[k] == primera_clave ) && ( k <= j )) {
        k++;
    }

    if ( k <= j ) {

        if ( v[k] <= primera_clave ) {
            return i;
        } else {
            return k;
        }

    } else {
        return -1;
    }

}

int reordena ( int i, int j, int pivote, int *v ) {

    int inf, sup;

    inf = i;
    sup = j;

    do {

        Cambiar ( inf, sup, v );
        while ( v[inf] < pivote ) {
            inf++;
        }
        while ( v[sup] >= pivote ) {
            sup--;
        }

    } while ( inf <= sup );

```

```cpp
67        return inf;

68

69  }

70

71  int Mediana(int *T, int i, int j, int k){    // k=posicion intermedia

72

73      int pivote;

74

75      if (i==j)

76            return T[i];

77      else{

78          pivote = encuentrapivote(i,j,T);

79

80          if (pivote==-1)

81              return T[i];

82

83          pivote= reordena(i,j, T[pivote],T);

84

85          if (k<pivote)

86              return Mediana(T, i, pivote-1, k);

87          else

88              return Mediana(T, pivote, j, k);

89      }

90  }

91

92  int main(){

93

94      int v[]={20,3,5,1,7,9,8};

95      int min, max;

96

97      cout << "Elemento Mediana: " << Mediana(v,0,6,3) << endl;

98      muestra(v,7);

99

100 return 0;

101 }
```