**Selection Sort**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | 64 | 25 | 12 | 21 | 11 | - Unsorted List |
| Step 1: | 11 | 25 | 12 | 21 | 64 |  |
| Step 2: | 11 | 12 | 25 | 21 | 64 |  |  |
| Step 3: | 11 | 12 | 21 | 25 | 64 |  |
| Step 4: | 11 | 12 | 21 | 25 | 64 |  |
| Final: | 11 | 12 | 21 | 25 | 64 |  |
|  |  |  |  |  |  |  |

#include <stdio.h>  
  
int main()  
{  
 int i, j, m, ind, n=5, arr[5] = {64, 25, 12, 21, 11};  
 for (i = 0; i < n; i++)  
 {  
 ind = i;  
 m = arr[i];  
 for (j = i; j < n; j++)  
 {  
 if (arr[j] < m)

*//setting this to arr[j]>m will sort in descending order* m = arr[j];  
 ind = j;  
 }  
 arr[ind] = arr[i];  
 arr[i] = m;  
 printf("%d ", arr[i]);  
 }  
}

C

The complexity of this code is n2 (two loops executing n times).