```
//Class: CSE 330
// Term: Spring 2014
// Instructor: George M. Georgiou
// Name: Seth Lemanek
// Lab 8
// Title: bubble sort test
#include<vector>
#include<iostream>
#include<algorithm>
using namespace std;
//selection sort
int main()
cout << "Please print a number to test:\n";</pre>
int n;
cin >> n;
vector<int> v (n);
fill(v.begin(),v.begin()+n-1, 1);
//bubble sort
for (int i = n-1; i > 0; i--)
    for (int j = 0; j < i; j++)
        if (v[j] > v[j+1])
            swap(v[j], v[j+1]);
return 0;
//Class: CSE 330
// Term: Spring 2014
// Instructor: George M. Georgiou
// Name: Seth Lemanek
// Lab 8
// Title: insertion sort test
#include<vector>
#include<iostream>
#include<algorithm>
using namespace std;
int main()
```

```
{
cout << "Please print a number to test:\n";</pre>
int n;
cin >> ni
vector<int> v (n);
fill(v.begin(),v.begin()+n-1, 1);
int j;
int elem;
//insertion sort
for (int i = 1; i < n; i++)
    for (elem = v[i], j = i-1; j >= 0 and elem < v[j]
]; j--)
        v[j+1] = v[j];
    v[j+1] = elem;
return 0;
//type script
Script started on Mon 02 Jun 2014 11:05:33 AM PDT
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08##[?1034h[004470530@jb358-17 lab08]$ tim
e./ssort
bash: time./ssort: No such file or directory
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ cd cse##[K#
\#[K\#\#[K\#\#[K\#\#[K\#\#[Ktiem \#\#[K\#\#[K\#\#[Km,e\#\#[K\#\#[Ke .
/ssort
Please print a number to test:
1000
        0m4.647s
real
        0m0.025s
user
sys 0m0.005s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssot
##[Krt
Please print a number to test:
2000
        0m15.563s
real
user
        0m0.045s
```

```
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
Please print a number to test:
3000
real
        0m3.811s
user
        0m0.060s
sys 0m0.005s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t##########[Ktime ./ssort
Please print a number to test:
4000
real
        0m3.761s
        0m0.079s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ timw##[Ke .
/ssort
Please print a number to test:
5000
        0m10.069s
real
        0m0.113s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t
Please print a number to test:
6000
real
        0m3.820s
        0m0.143s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t##########|Ktime ./ssort
Please print a number to test:
7000
```

```
real
        0m5.838s
        0m0.181s
user
sys 0m0.005s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ../sso
rt
bash: ../ssort: No such file or directory
        0m0.003s
real
        0m0.000s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t
Please print a number to test:
8000
        0m5.044s
real
user
        0m0.230s
sys 0m0.003s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
Please print a number to test:
9000
        0m3.032s
real
        0m0.282s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
Please print a number to test:
10000
        0m4.613s
real
        0m0.343s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t
```

```
Please print a number to test:
1000
        0m3.311s
real
user
        0m0.006s
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
2000
        0m2.765s
real
        0m0.022s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
bash: ./bosrt: No such file or directory
real
        0m0.001s
        0m0.000s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
3000
        0m4.599s
real
user
        0m0.040s
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
t##[K##[K##[K##[Ksort
Please print a number to test:
4000
        0m2.685s
real
        0m0.062s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
```

```
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t
Please print a number to test:
5000
        0m6.437s
real
        0m0.085s
user
sys 0m0.001s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
t.
bash: ./bosrt: No such file or directory
real
        0m0.Script started on Mon 02 Jun 2014 11:05
:33 AM PDT
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08##[?1034h[004470530@jb358-17 lab08]$ tim
e./ssort
bash: time./ssort: No such file or directory
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ cd cse##[K#
\#[K\#\#[K\#\#[K\#\#[K\#\#[Ktiem \#\#[K\#\#[K\#\#[Km,e\#\#[K\#\#[Ke .
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        0m0.045s
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e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t.
Please print a number to test:
```

```
3000
```

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0m3.811s
real
        0m0.060s
user
sys 0m0.005s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
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        0m3.761s
user
        0m0.079s
sys 0m0.002s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ timw##[Ke .
/ssort
Please print a number to test:
5000
real
        0m10.069s
        0m0.113s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
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Please print a number to test:
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        0m3.820s
real
user
        0m0.143s
sys 0m0.001s
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        0m5.838s
real
        0m0.181s
user
sys 0m0.005s
#]0;004470530@jb358-17:/students/csci/004470530/cs
```

```
e330/lab08#[004470530@jb358-17 lab08]$ time ../sso
rt
bash: ../ssort: No such file or directory
real
        0m0.003s
        0m0.000s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
t.
Please print a number to test:
8000
       0m5.044s
real
        0m0.230s
user
sys 0m0.003s
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e330/lab08#[004470530@jb358-17 lab08]$ time ./ssor
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Please print a number to test:
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real
        0m3.032s
        0m0.282s
user
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        0m0.343s
user
sys 0m0.002s
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Please print a number to test:
1000
real
        0m3.311s
        0m0.006s
user
```

```
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
2000
real
        0m2.765s
user
        0m0.022s
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
t.
bash: ./bosrt: No such file or directory
        0m0.001s
real
        0m0.000s
user
sys 0m0.000s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
3000
real
        0m4.599s
        0m0.040s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
t##[K##[K##[Ksort
Please print a number to test:
4000
        0m2.685s
real
user
        0m0.062s
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
5000
```

```
0m6.437s
real
        0m0.085s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bosr
t.
bash: ./bosrt: No such file or directory
real
        0m0.001s
        0m0.000s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t.
Please print a number to test:
6000
        0m4.661s
real
        0m0.116s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t
Please print a number to test:
7000
        0m3.751s
real
        0m0.158s
user
sys 0m0.001s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t
Please print a number to test:
8000\# #
        0m4.521s
real
        0m0.210s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ 9000##[K##[
K##[K##[Ktime ./bsort
Please print a number to test:
```

```
9000
        0m4.266s
real
        0m0.260s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
10000
        0m4.450s
real
        0m0.322s
user
sys 0m0.000s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ist#
#[Kort
Please print a number to test:
1000
real
        0m3.803s
        0m0.001s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./s##[
Kisort
Please print a number to test:
2000
        0m5.546s
real
user
        0m0.001s
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t.
Please print a number to test:
3000
        0m3.153s
real
        0m0.000s
```

#]0;004470530@jb358-17:/students/csci/004470530/cs

user

sys 0m0.002s

```
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t.
Please print a number to test:
4000
        0m2.553s
real
        0m0.001s
user
sys 0m0.001s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t.
Please print a number to test:
5000
        0m3.320s
real
user
        0m0.001s
sys 0m0.001s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
6000
real
        0m5.847s
        0m0.002s
user
sys 0m0.001s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
7000
        0m1.769s
real
        0m0.001s
user
sys 0m0.000s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
8000
        0m2.881s
real
```

```
user
        0m0.002s
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
9000
real
        0m2.432s
        0m0.001s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t.
Please print a number to test:
10000
        0m2.601s
real
        0m0.002s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cse
330/lab08#[004470530@jb358-17 lab08]$ exit
exit
Script done on Mon 02 Jun 2014 11:35:27 AM PDT001s
        0m0.000s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
6000
        0m4.661s
real
user
        0m0.116s
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
7000
```

```
0m3.751s
real
user
        0m0.158s
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
t.
Please print a number to test:
8000\# #
        0m4.521s
real
        0m0.210s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ 9000##[K##[
K##[K##[Ktime ./bsort
Please print a number to test:
9000
        0m4.266s
real
user
        0m0.260s
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./bsor
Please print a number to test:
10000
        0m4.450s
real
        0m0.322s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./ist#
#[Kort
Please print a number to test:
1000
        0m3.803s
real
        0m0.001s
user
sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./s##[
Kisort
```

```
Please print a number to test:
2000
        0m5.546s
real
user
        0m0.001s
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
3000
        0m3.153s
real
        0m0.000s
user
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
4000
        0m2.553s
real
        0m0.001s
user
sys 0m0.001s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t
Please print a number to test:
5000
real
        0m3.320s
        0m0.001s
user
sys 0m0.001s
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e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
t
Please print a number to test:
6000
        0m5.847s
real
user
        0m0.002s
sys 0m0.001s
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        0m1.769s
real
        0m0.001s
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sys 0m0.000s
#]0;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
Please print a number to test:
8000
        0m2.881s
real
        0m0.002s
user
sys 0m0.000s
#10;004470530@jb358-17:/students/csci/004470530/cs
e330/lab08#[004470530@jb358-17 lab08]$ time ./isor
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real
        0m2.432s
        0m0.001s
user
sys 0m0.001s
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Please print a number to test:
10000
        0m2.601s
real
user
        0m0.002s
sys 0m0.002s
#]0;004470530@jb358-17:/students/csci/004470530/cse
330/lab08#[004470530@jb358-17 lab08]$ exit
exit
Script done on Mon 02 Jun 2014 11:35:27 AM PDT
```