Homework # 7

01286120 Elementary Systems Programming

Software Engineering Program

Faculty of Engineering, KMITL

By

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Source code:

https://github.com/cussonspoon/Hw7rust/tree/main

output:

1# Vec::sort value

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsort  1 3 7 8 9 5 4 6 2 5 8 1 3 4
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
      Running `target\debug\vecsort.exe 1 3 7 8 9 5 4 6 2 5 8 1 3 4`
Ascending order: [1, 1, 2, 3, 3, 4, 4, 5, 5, 6, 7, 8, 8, 9]
Descending order: [9, 8, 8, 7, 6, 5, 5, 4, 4, 3, 3, 2, 1, 1]
```

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsort
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
      Running `target\debug\vecsort.exe`
No argument provided
```

2# loop sort value

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsort 1 3 7 8 9 5 4 6 2 5 8 1 3 4
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
      Running `target\debug\loopsort.exe 1 3 7 8 9 5 4 6 2 5 8 1 3 4`
Ascending order: [1, 1, 2, 3, 3, 4, 4, 5, 5, 6, 7, 8, 8, 9]
Descending order: [9, 8, 8, 7, 6, 5, 5, 4, 4, 3, 3, 2, 1, 1]
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsort
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
      Running `target\debug\loopsort.exe`
No argument provided
```
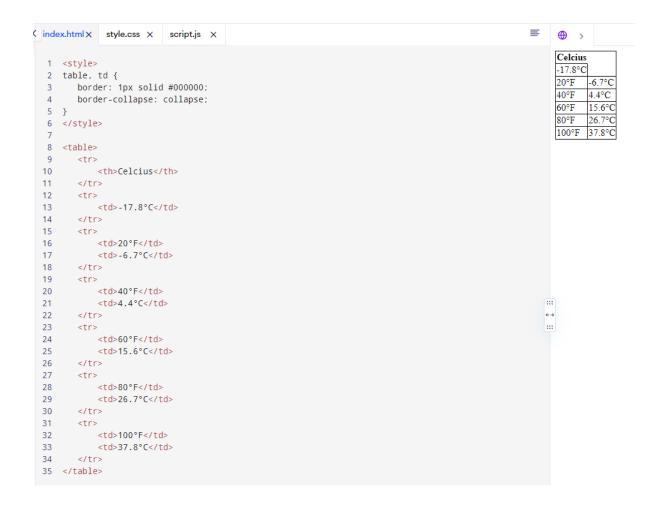
3# Vec::sort point

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsortpoint 1
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\vecsortpoint.exe 1`
No or not enough argument provided
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsortpoint 1 2
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\vecsortpoint.exe 1 2`
Sorted points in ascending order by x and y: [(1, 2)]
Sorted points in descending order by x and y: [(1, 2)]
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsortpoint 1 5 2 7 3
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\vecsortpoint.exe 1 5 2 7 3`
Sorted points in ascending order by x and y: [(1, 5), (2, 7)]
Sorted points in descending order by x and y: [(2, 7), (1, 5)]
```

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin vecsortpoint 1 5 1 3 1 4
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\vecsortpoint.exe 1 5 1 3 1 4`
Sorted points in ascending order by x and y: [(1, 3), (1, 4), (1, 5)]
Sorted points in descending order by x and y: [(1, 5), (1, 4), (1, 3)]
```

4# loop sort point

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsortpoint 1
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\loopsortpoint.exe 1`
No or not enough argument provided
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsortpoint 1 2
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\loopsortpoint.exe 1 2`
Sorted points in ascending order by x and y: [(1, 2)]
Sorted points in descending order by x and y: [(1, 2)]
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsortpoint 1 5 2 7 3
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\loopsortpoint.exe 1 5 2 7 3`
Sorted points in ascending order by x and y: [(1, 5), (2, 7)]
Sorted points in descending order by x and y: [(2, 7), (1, 5)]
```

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin loopsortpoint 1 5 1 3 1 4
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\loopsortpoint.exe 1 5 1 3 1 4`
Sorted points in ascending order by x and y: [(1, 3), (1, 4), (1, 5)]
Sorted points in descending order by x and y: [(1, 5), (1, 4), (1, 3)]
```

5# Temperature table in html

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin temphtml 0 100 20
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\temphtml.exe 0 100 20`
<style>
table, td {
   border: 1px solid #000000;
   border-collapse: collapse;
}
</style>

<table>
   <tr>
       <th>Fahr</th>
       <th>Celcius</th>
   </tr>
   <tr>
       <td>0ºF</td>
       <td>-17.8ºC</td>
   </tr>
   <tr>
       <td>20ºF</td>
       <td>-6.7ºC</td>
   </tr>
   <tr>
       <td>40ºF</td>
       <td>4.4ºC</td>
   </tr>
   <tr>
       <td>60ºF</td>
       <td>15.6ºC</td>
   </tr>
   <tr>
       <td>80ºF</td>
       <td>26.7ºC</td>
   </tr>
   <tr>
       <td>100ºF</td>
       <td>37.8ºC</td>
   </tr>
</table>
```

```
1   <style>
2   table, td {
3       border: 1px solid #000000;
4       border-collapse: collapse;
5   }
6   </style>
7
8   <table>
9       <tr>
10          <th>Celcius</th>
11      </tr>
12      <tr>
13          <td>-17.8°C</td>
14      </tr>
15      <tr>
16          <td>20°F</td>
17          <td>-6.7°C</td>
18      </tr>
19      <tr>
20          <td>40°F</td>
21          <td>4.4°C</td>
22      </tr>
23      <tr>
24          <td>60°F</td>
25          <td>15.6°C</td>
26      </tr>
27      <tr>
28          <td>80°F</td>
29          <td>26.7°C</td>
30      </tr>
31      <tr>
32          <td>100°F</td>
33          <td>37.8°C</td>
34      </tr>
35  </table>
```

Celcius	
-17.8°C	
20°F	-6.7°C
40°F	4.4°C
60°F	15.6°C
80°F	26.7°C
100°F	37.8°C

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin temphtml 100 0 50
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\temphtml.exe 100 0 50`
<style>
table, td {
    border: 1px solid #000000;
    border-collapse: collapse;
}
</style>

<table>
    <tr>
        <th>Fahr</th>
        <th>Celcius</th>
    </tr>
    <tr>
        <td>100°F</td>
        <td>37.8°C</td>
    </tr>
    <tr>
        <td>50°F</td>
        <td>10.0°C</td>
    </tr>
    <tr>
        <td>0°F</td>
        <td>-17.8°C</td>
    </tr>
</table>
```

Fahr	Celcius
100°F	37.8°C
50°F	10.0°C
0°F	-17.8°C

```
 1  <style>
 2  table, td {
 3      border: 1px solid #000000;
 4      border-collapse: collapse;
 5  }
 6  </style>
 7
 8  <table>
 9      <tr>
10          <th>Fahr</th>
11          <th>Celcius</th>
12      </tr>
13      <tr>
14          <td>100°F</td>
15          <td>37.8°C</td>
16      </tr>
17      <tr>
18          <td>50°F</td>
19          <td>10.0°C</td>
20      </tr>
21      <tr>
22          <td>0°F</td>
23          <td>-17.8°C</td>
24      </tr>
25  </table>
```

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin temphtml 100 0 0
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\temphtml.exe 100 0 0`
The interval cannot be 0 (Infinite loop will occur)
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin temphtml 10 20
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\temphtml.exe 10 20`
Not enough information provided
```

6# x-exponential table

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin exponenthtml 20
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\exponenthtml.exe 20`
<style>
table, td {
    border: 1px solid #000000;
    border-collapse: collapse;
}
</style>

<table>
    <tr>
        <th>x</th>
        <th>x^2</th>
        <th>x^3</th>
    </tr>
    <tr>
        <td>20.00</td>
        <td>400.00</td>
        <td>8000.00</td>
    </tr>
</table>
```

```
 1  <style>
 2  table, td {
 3      border: 1px solid #000000;
 4      border-collapse: collapse;
 5  }
 6  </style>
 7
 8  <table>
 9      <tr>
10          <th>x</th>
11          <th>x^2</th>
12          <th>x^3</th>
13      </tr>
14      <tr>
15          <td>20.00</td>
16          <td>400.00</td>
17          <td>8000.00</td>
18      </tr>
19  </table>
```

x	x^2	x^3
20.00	400.00	8000.00

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin exponenthtml -- -10.3
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\exponenthtml.exe -10.3`
<style>
table, td {
    border: 1px solid #000000;
    border-collapse: collapse;
}
</style>

<table>
    <tr>
        <th>x</th>
        <th>x^2</th>
        <th>x^3</th>
    </tr>
    <tr>
        <td>-10.30</td>
        <td>106.09</td>
        <td>-1092.73</td>
    </tr>
</table>
```

```
 1  <style>
 2  table, td {
 3      border: 1px solid #000000;
 4      border-collapse: collapse;
 5  }
 6  </style>
 7
 8  <table>
 9      <tr>
10          <th>x</th>
11          <th>x^2</th>
12          <th>x^3</th>
13      </tr>
14      <tr>
15          <td>-10.30</td>
16          <td>106.09</td>
17          <td>-1092.73</td>
18      </tr>
19  </table>
```

x	x^2	x^3
-10.30	106.09	-1092.73

```
PS D:\Software en work\Rust\Hw\hw7rust> cargo run --bin exponenthtml
    Finished dev [unoptimized + debuginfo] target(s) in 0.02s
     Running `target\debug\exponenthtml.exe`
No value provided
```

#test

```
running 4 tests
test test_vecsortpoint ... ok
test test_vecsort ... ok
test test_loopsort ... ok
test test_loopsortpoint ... ok

test result: ok. 4 passed; 0 failed; 0 ignored; 0 measured; 0 filtered out; finished in 0.01s
```