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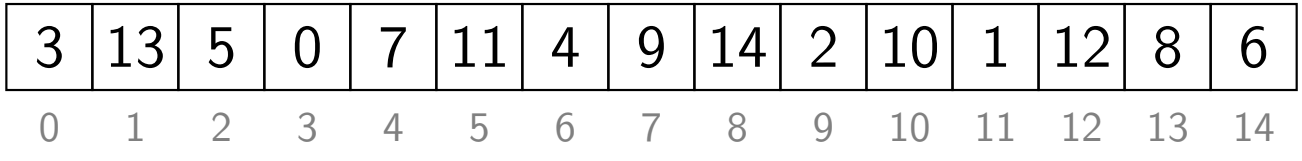
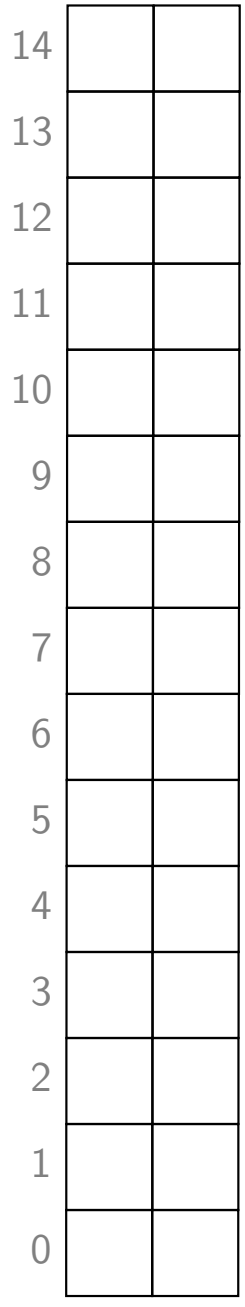
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
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```
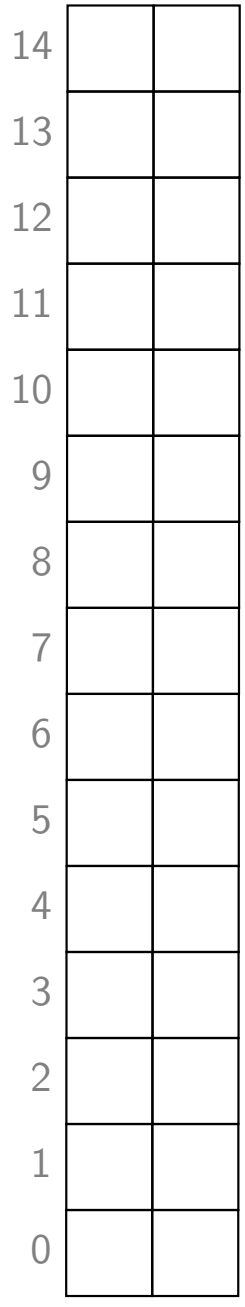

3	13	5	0	7	11	4	9	14	2	10	1	12	8	6
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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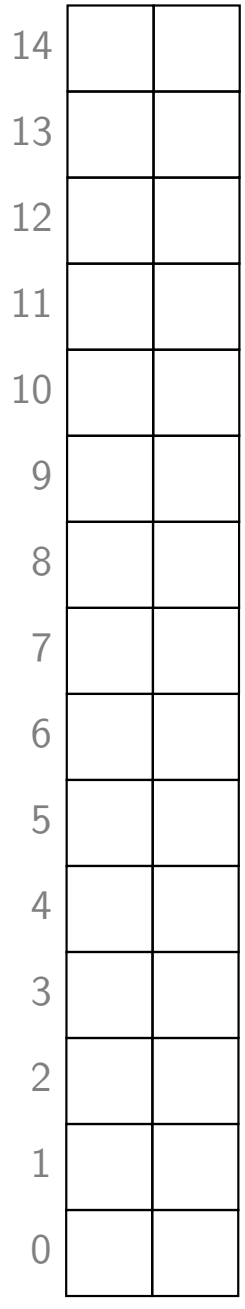
3	13	5	0	7	11	4	9	14	2	10	1	12	8	6
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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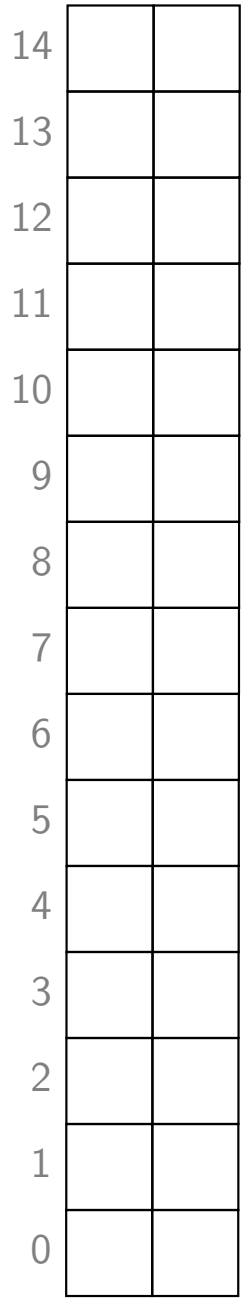

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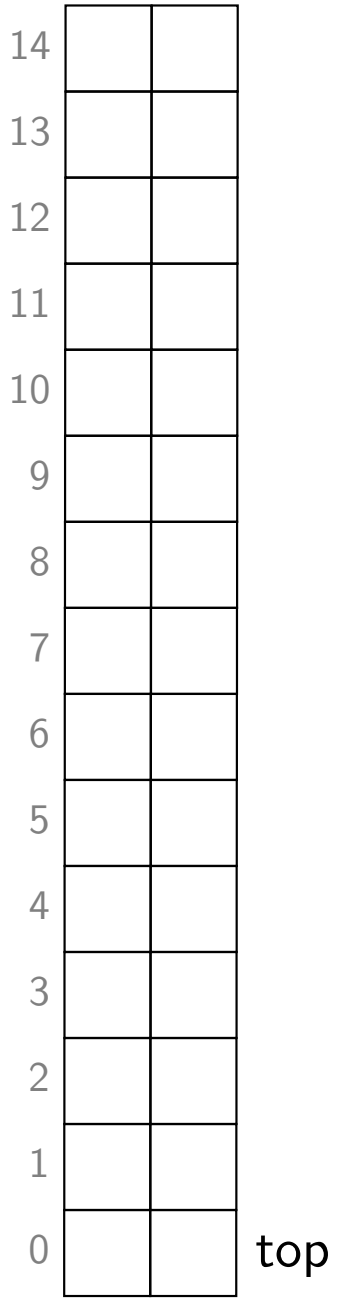

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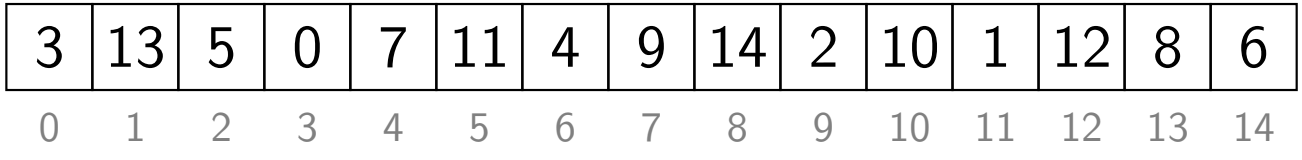

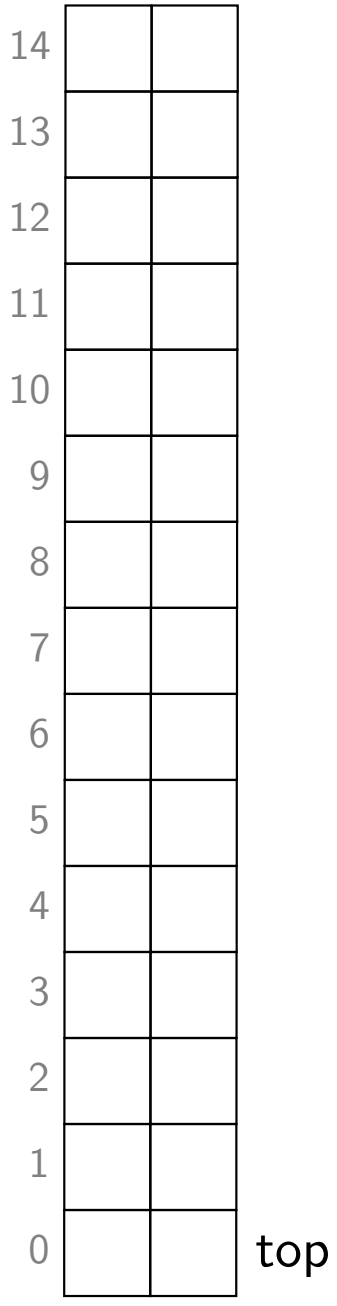

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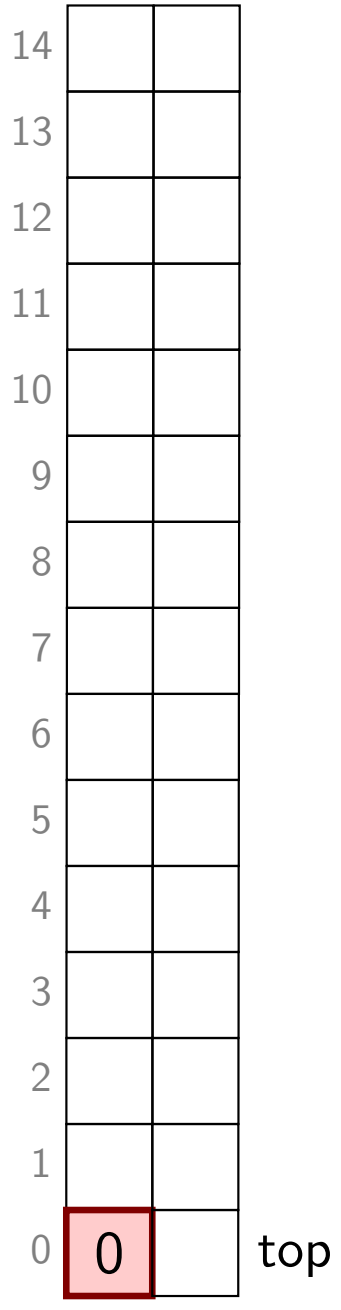
3	13	5	0	7	11	4	9	14	2	10	1	12	8	6
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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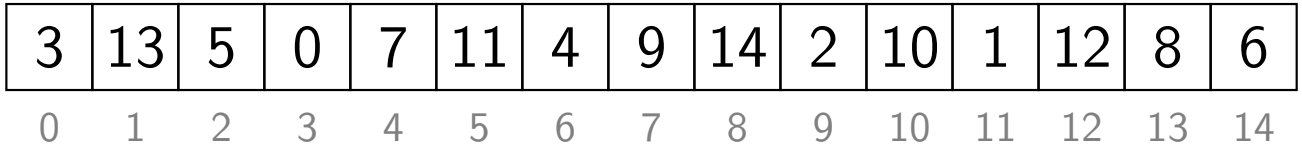

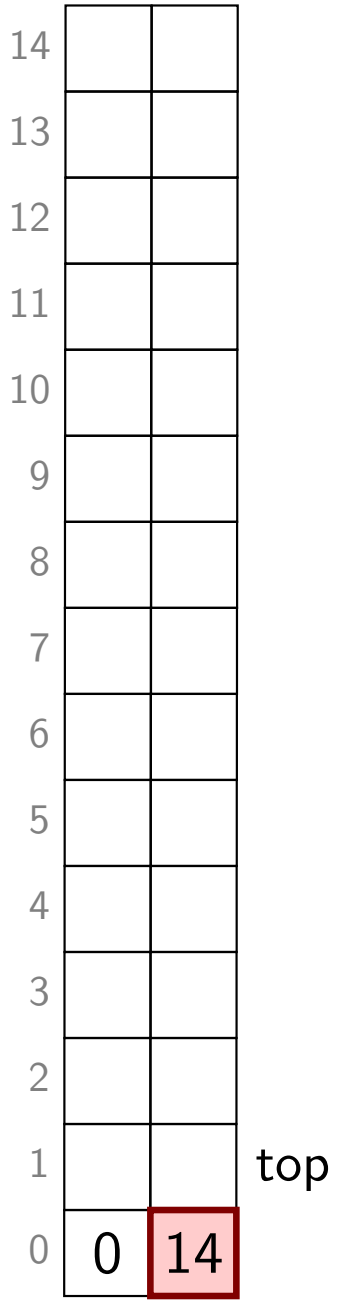

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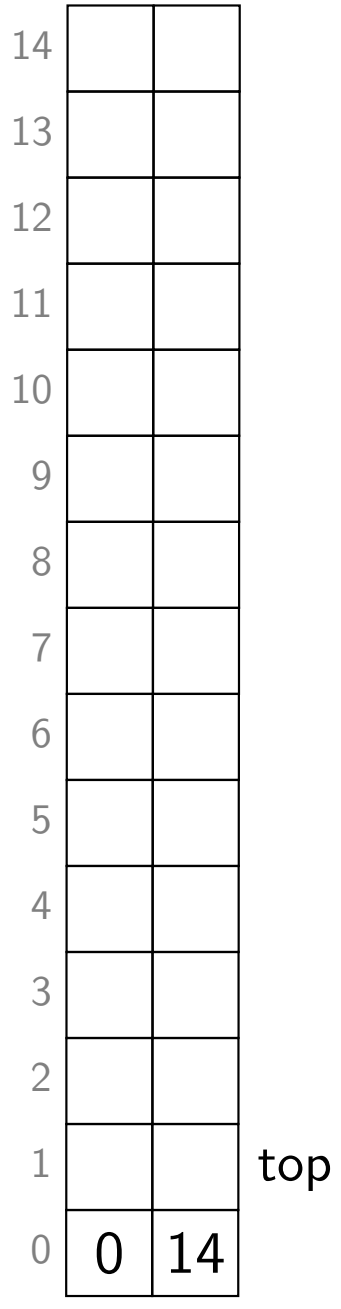

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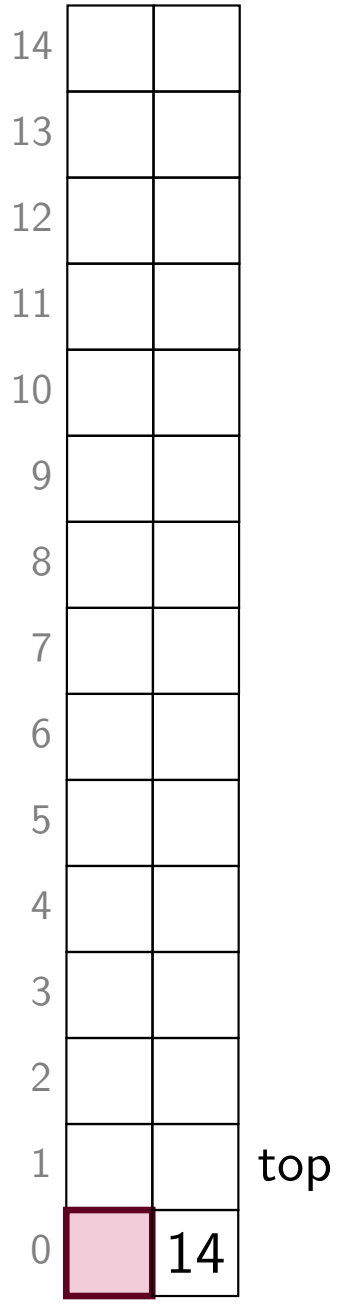

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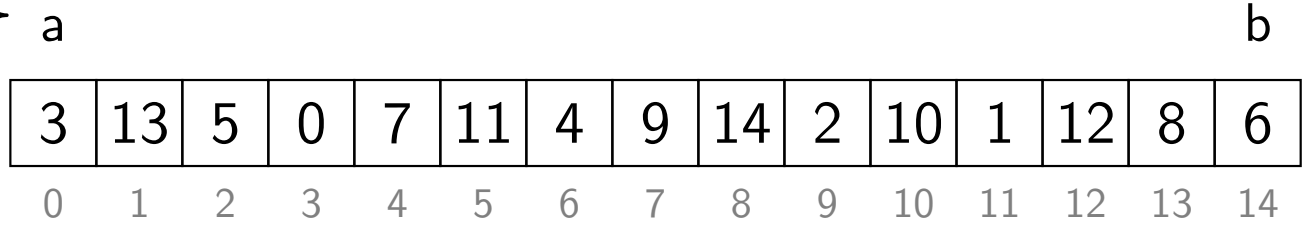

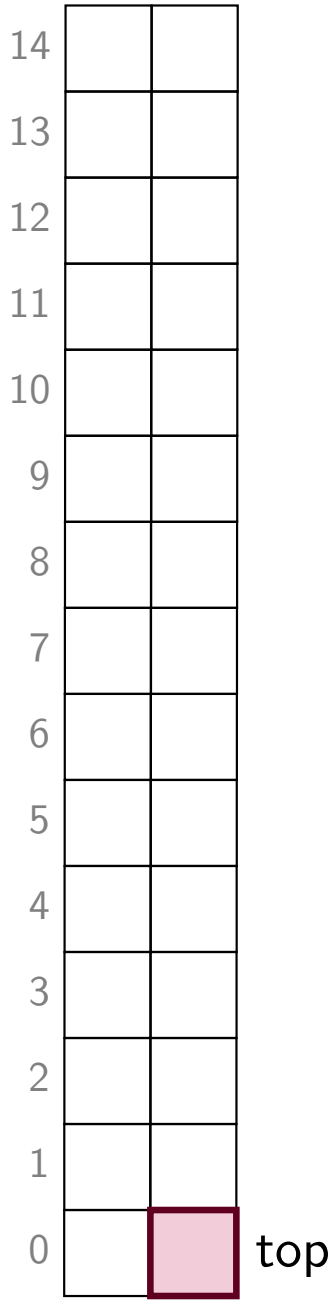

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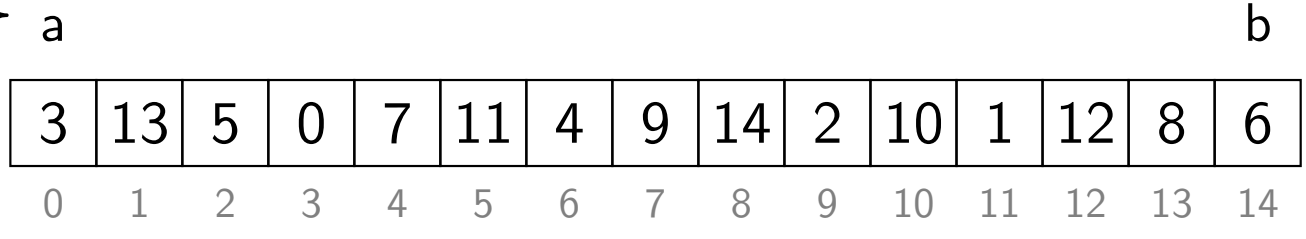

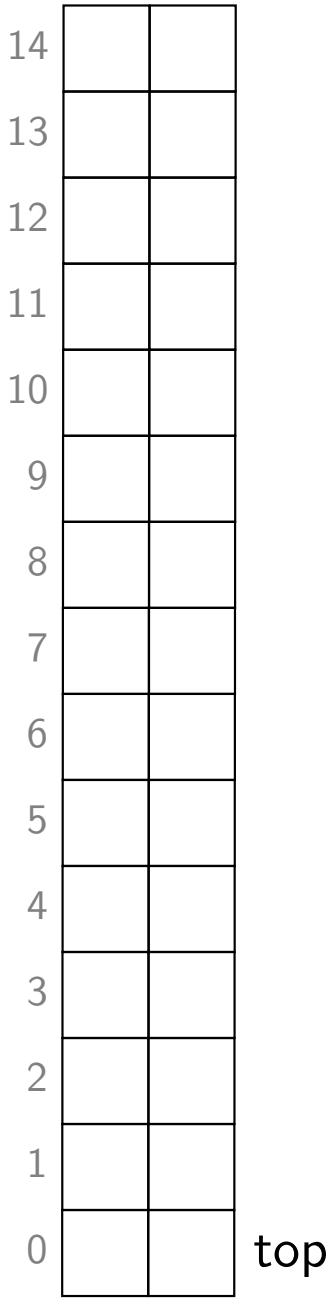

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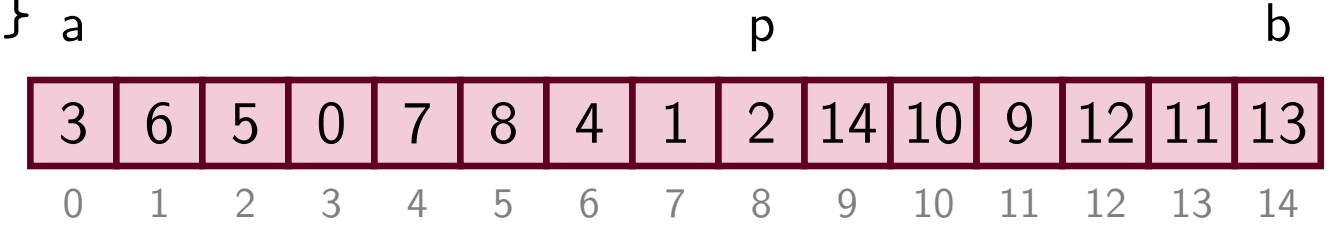

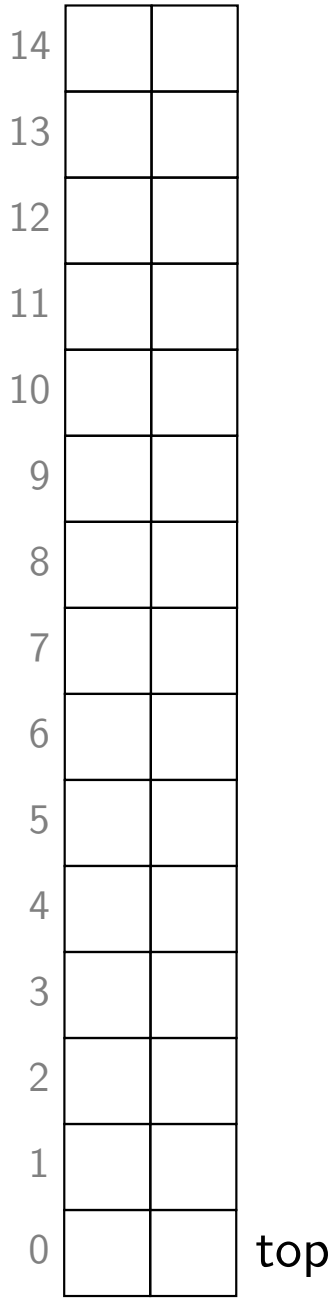

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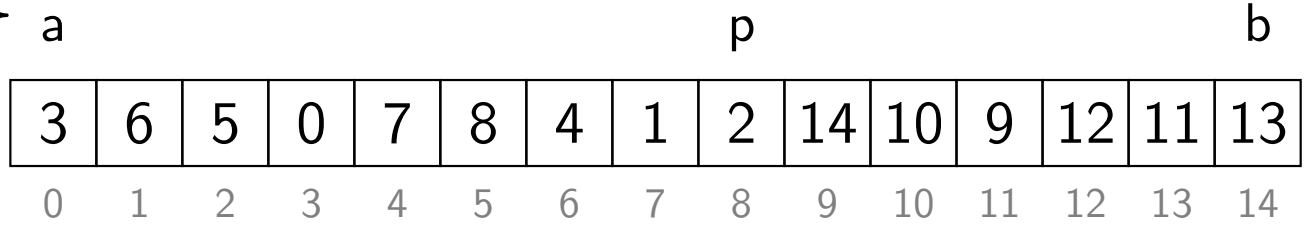

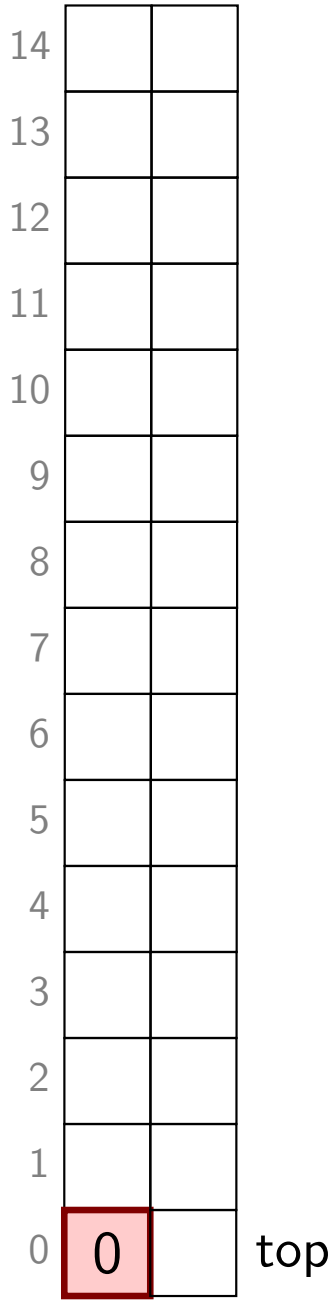

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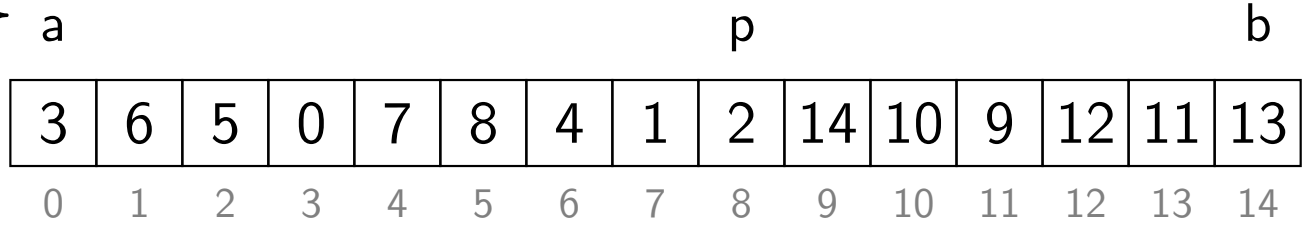

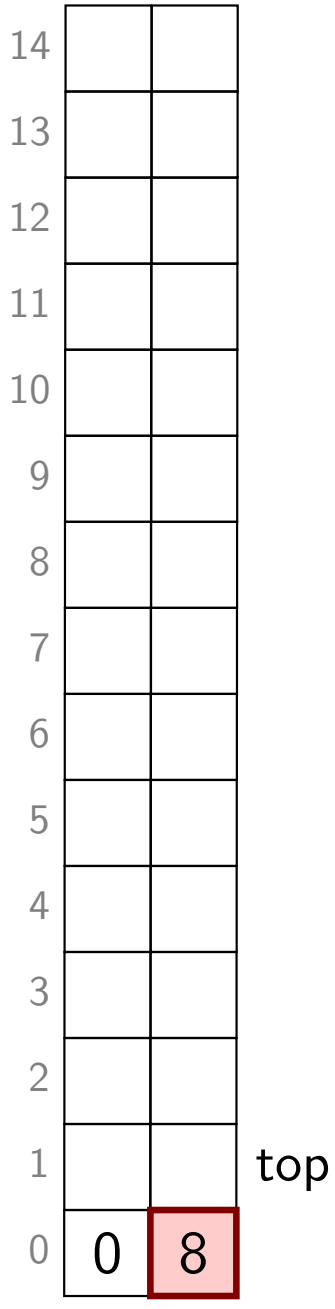

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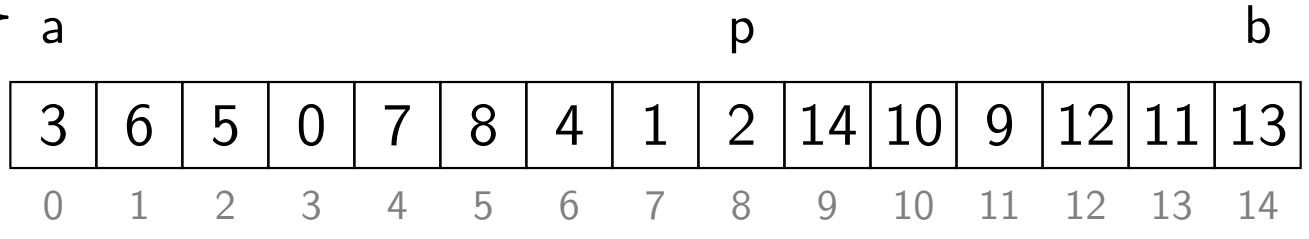

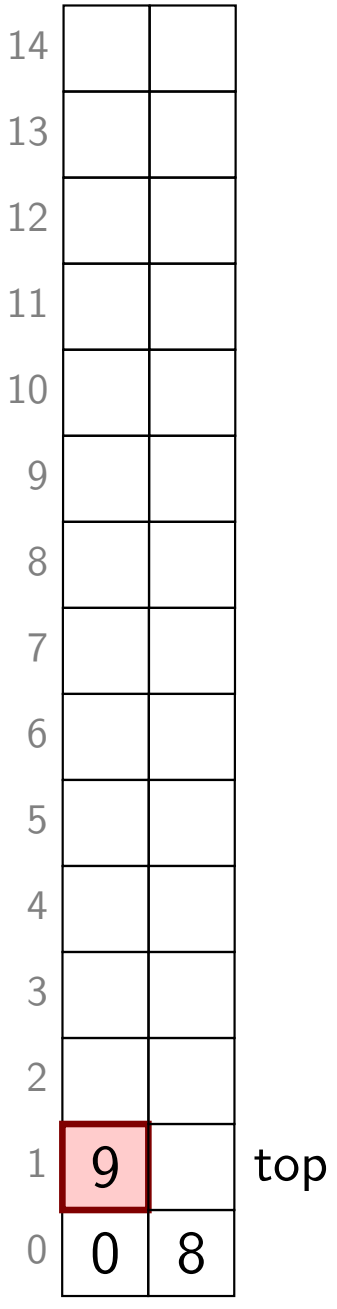

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      stackPush(&last, b);
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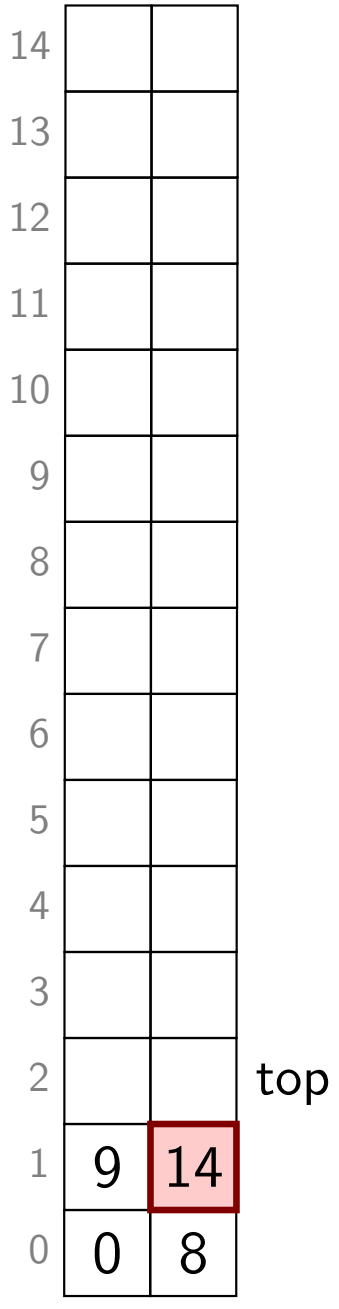
```

a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
3	6	5	0	7	8	4	1	2	14	10	9	12	11	13



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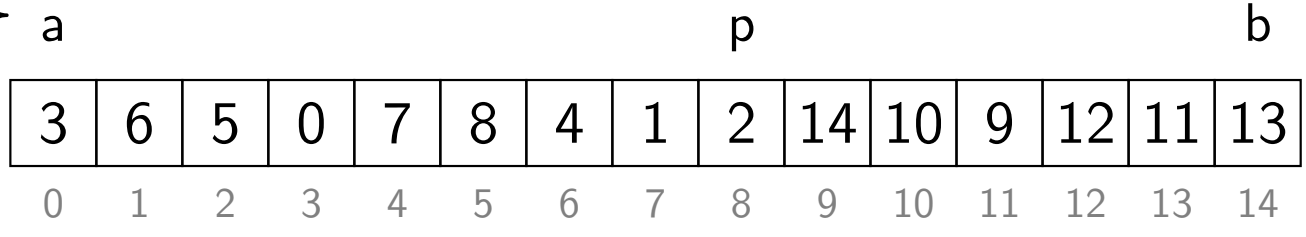

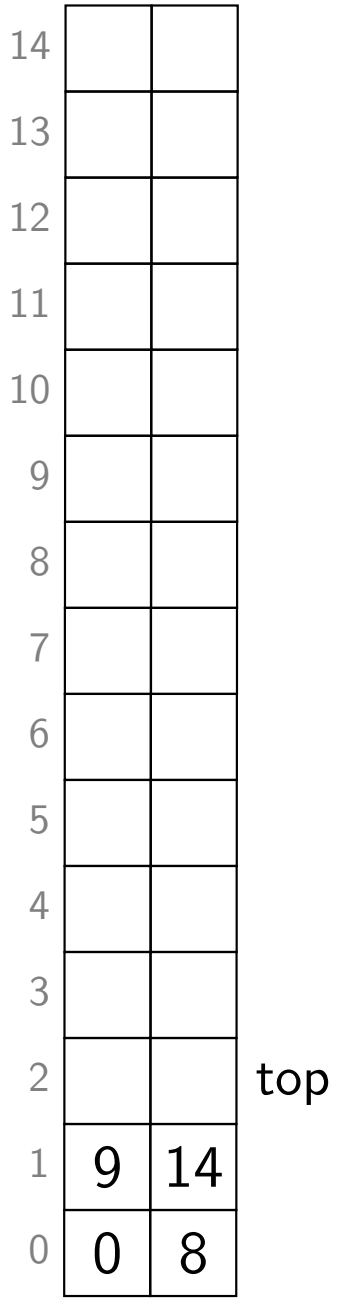

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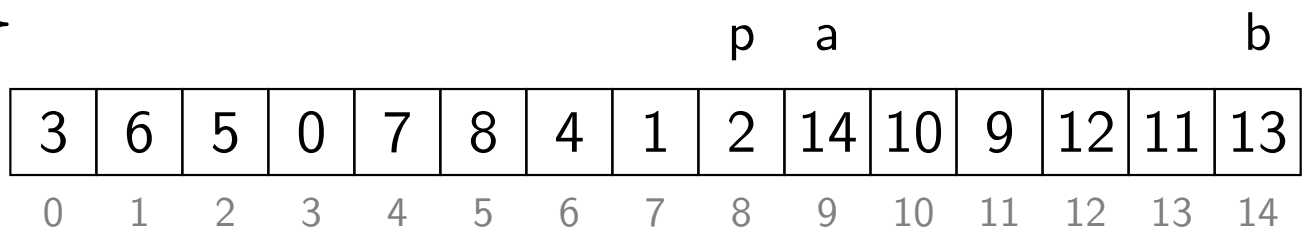

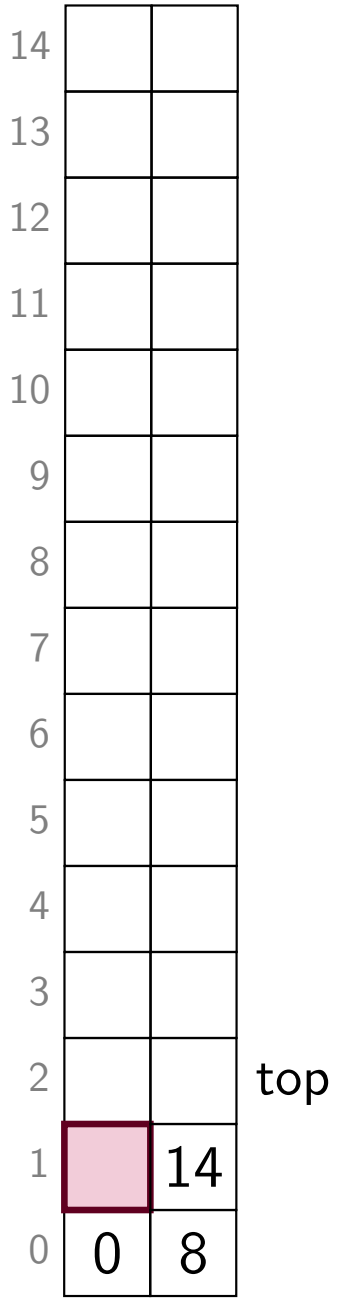

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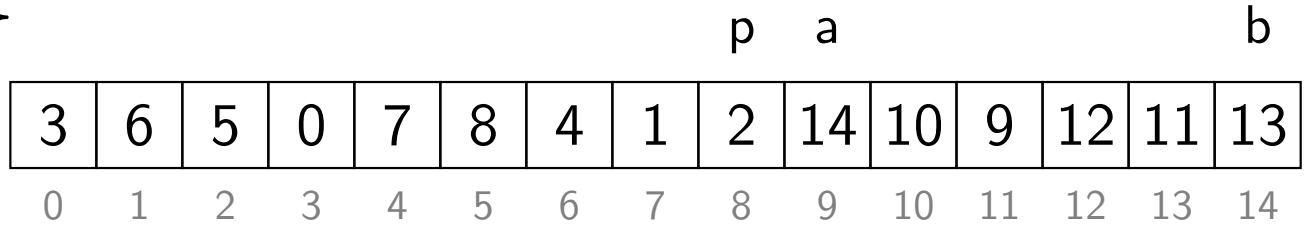

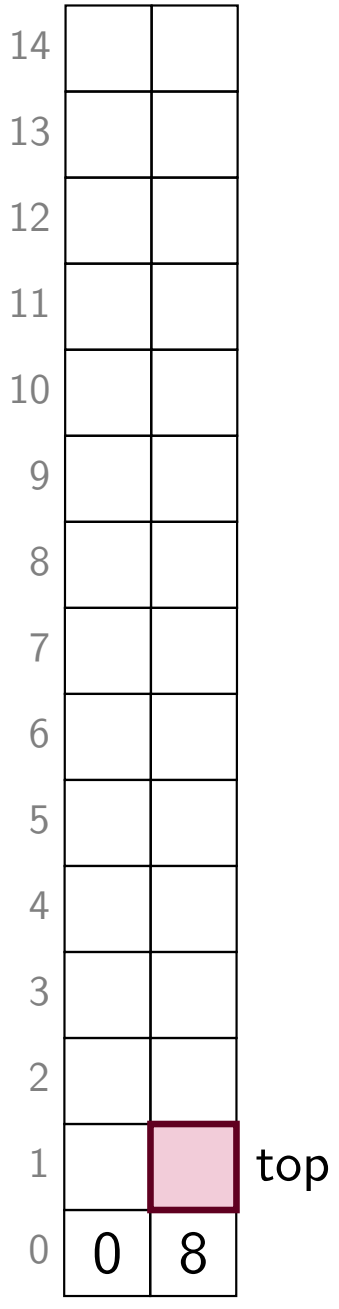

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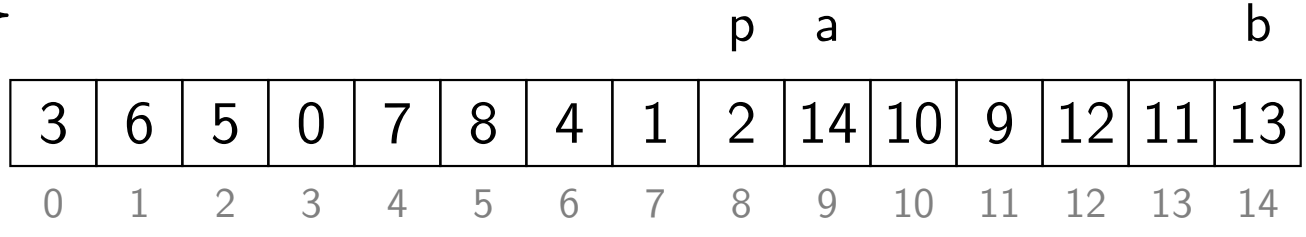

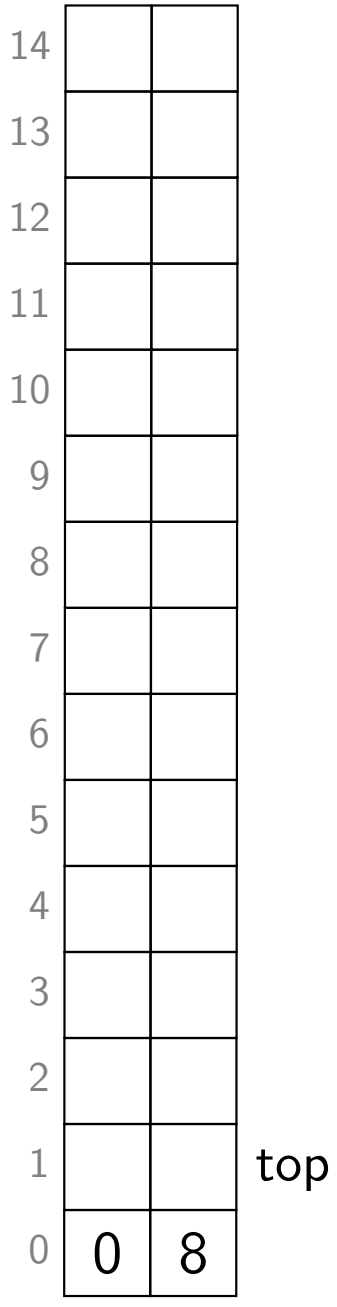

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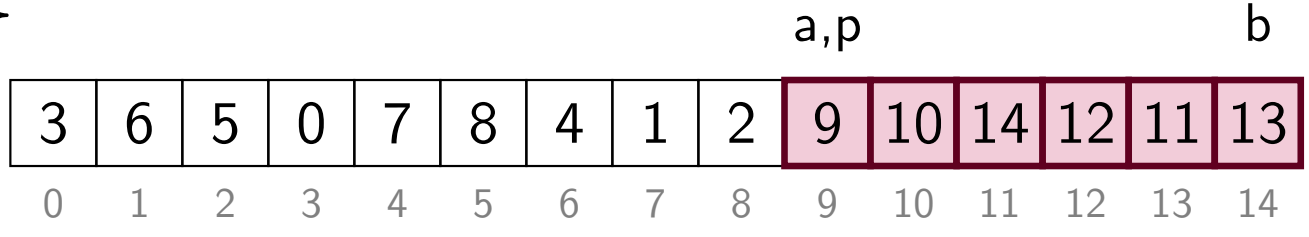

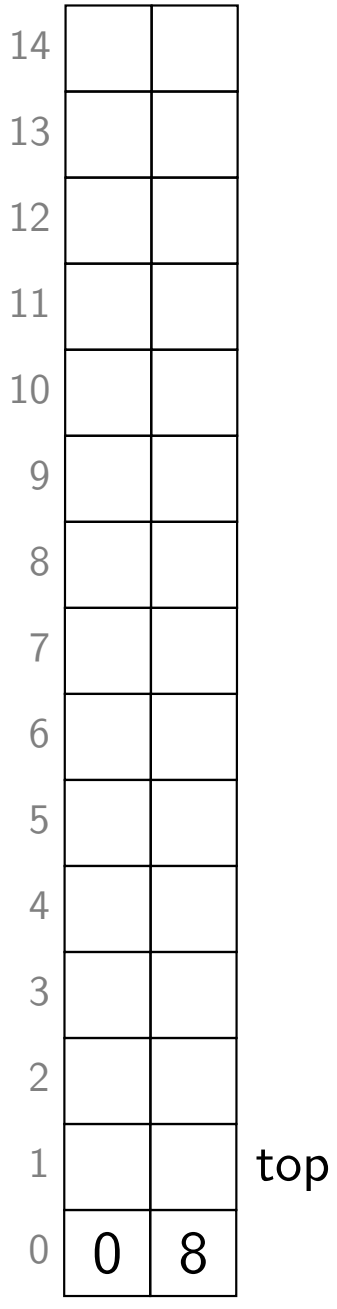

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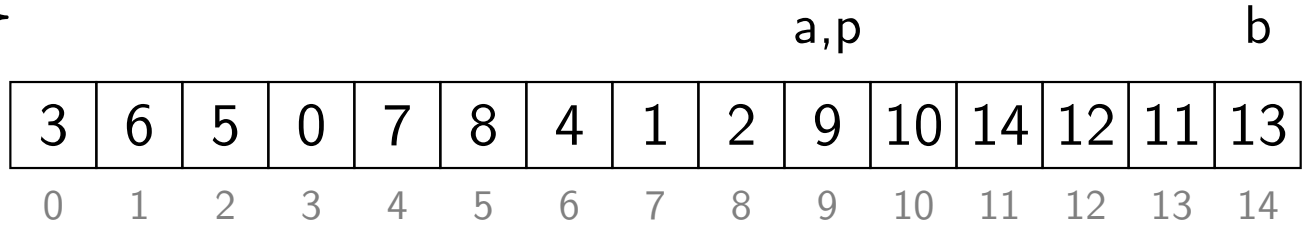

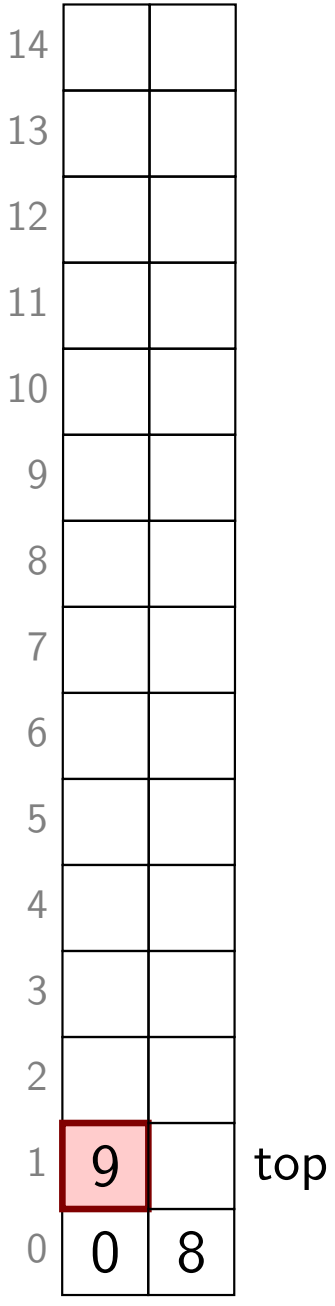

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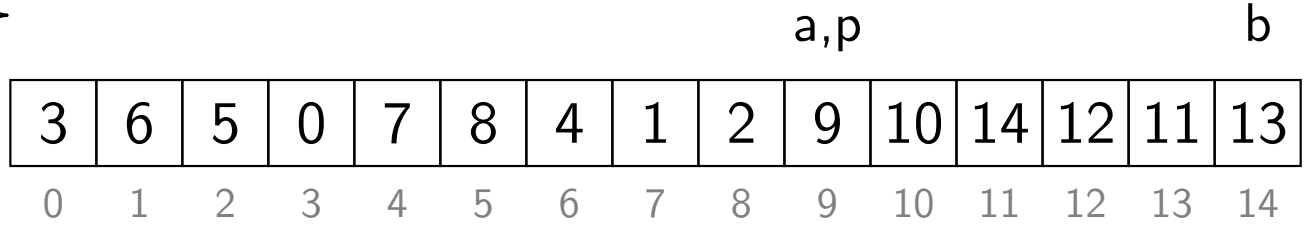

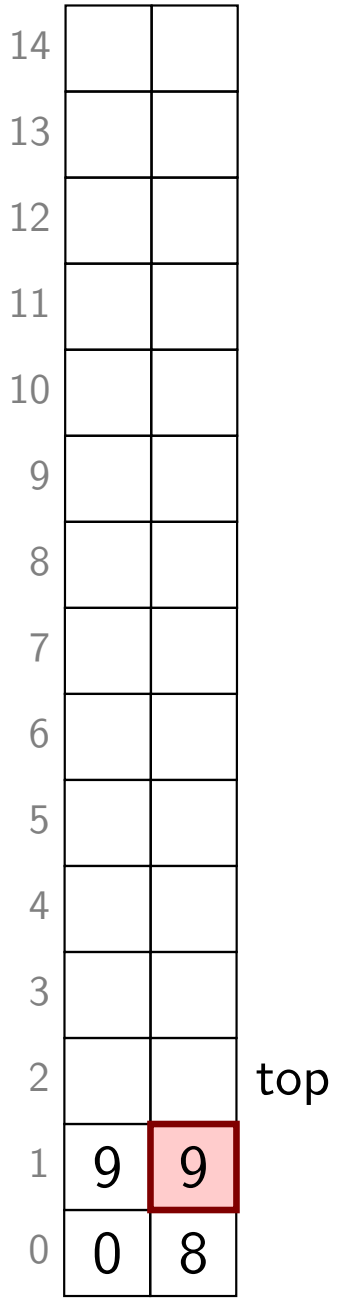

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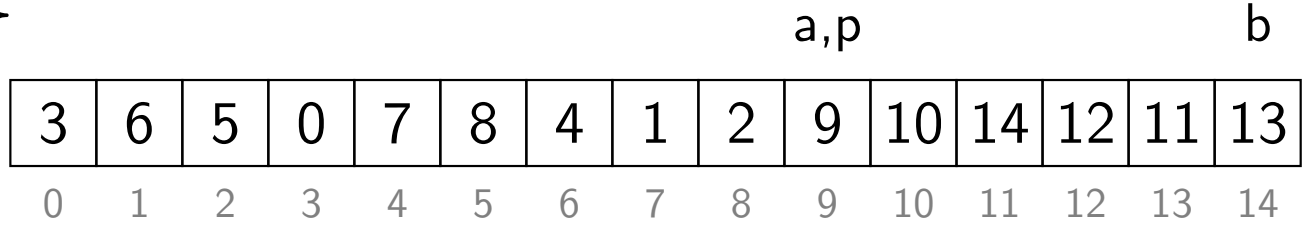

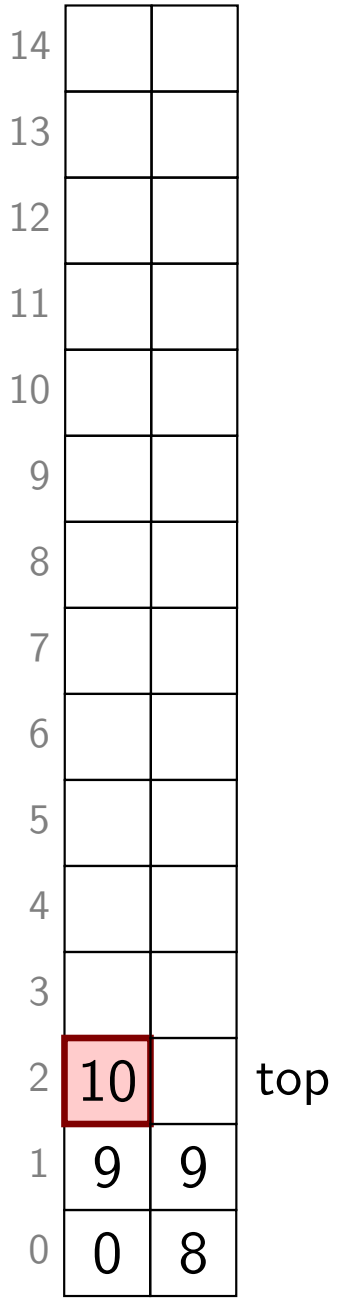

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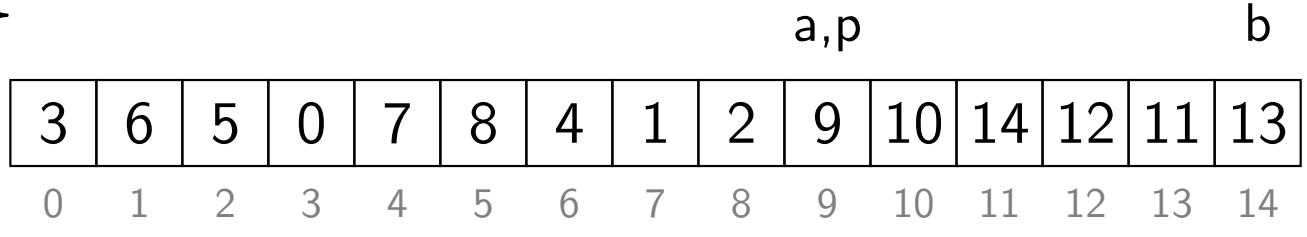

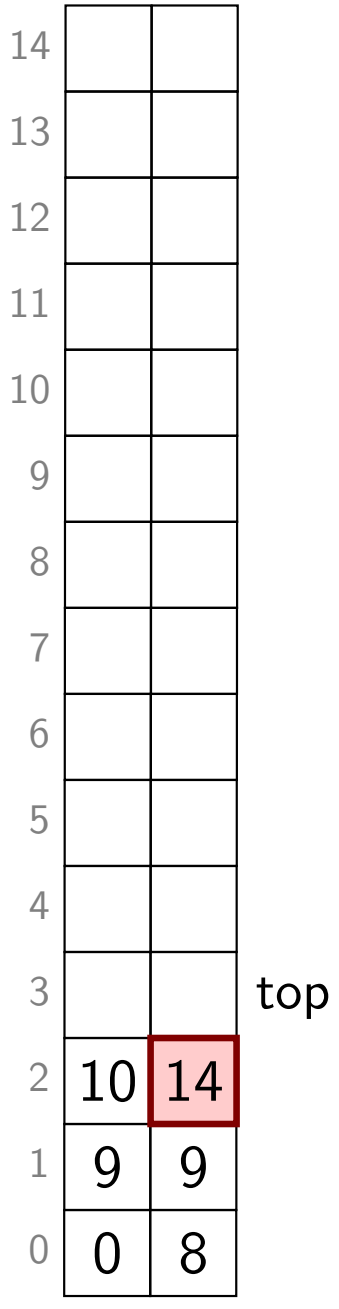

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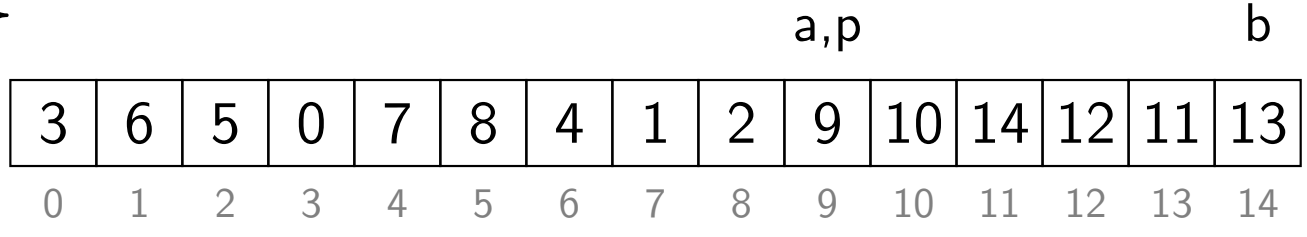

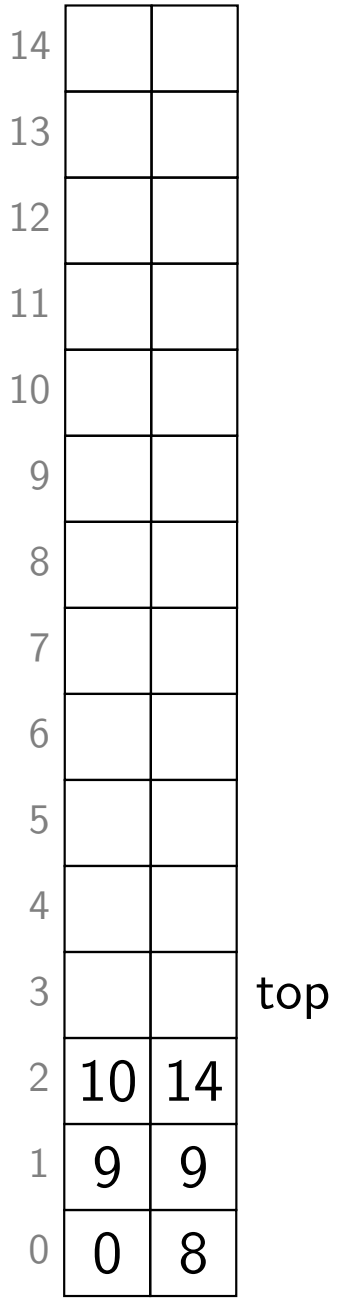

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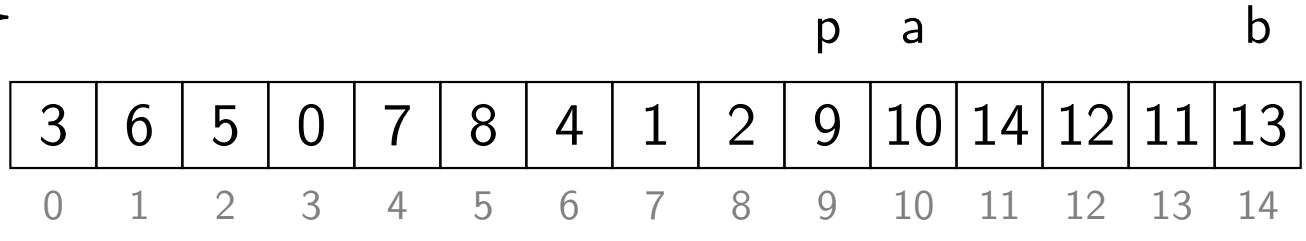

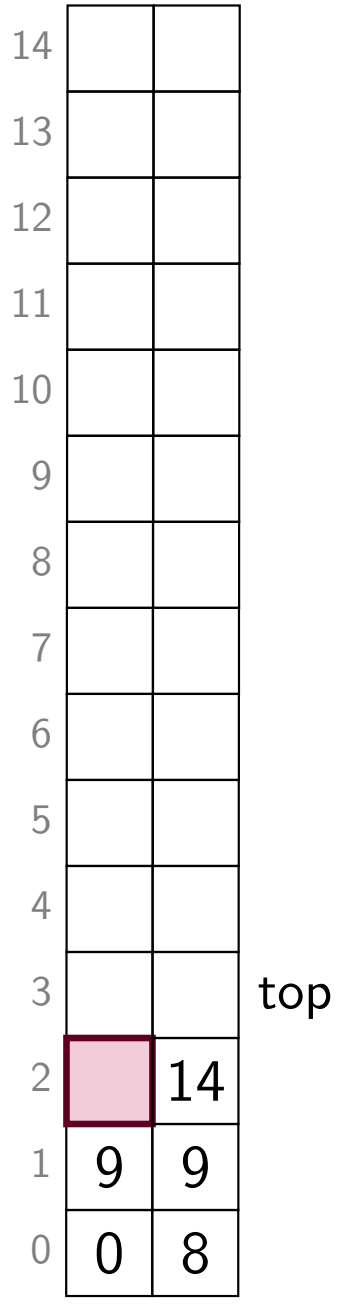

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```
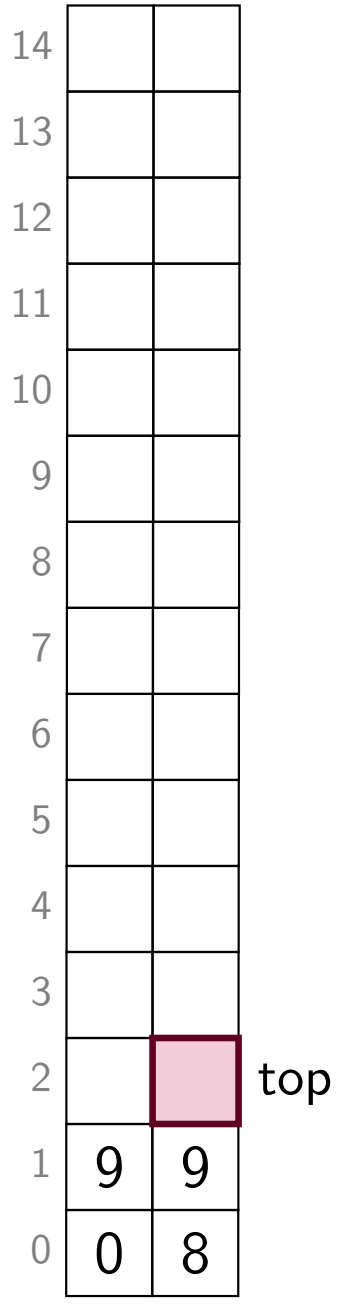

	p	a												b
3	6	5	0	7	8	4	1	2	9	10	14	12	11	13
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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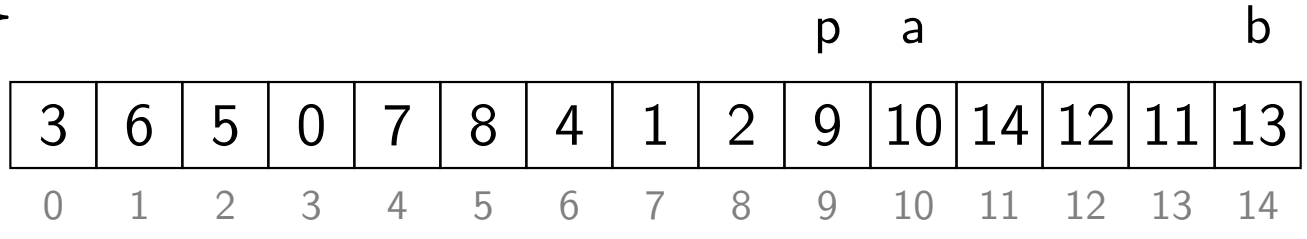

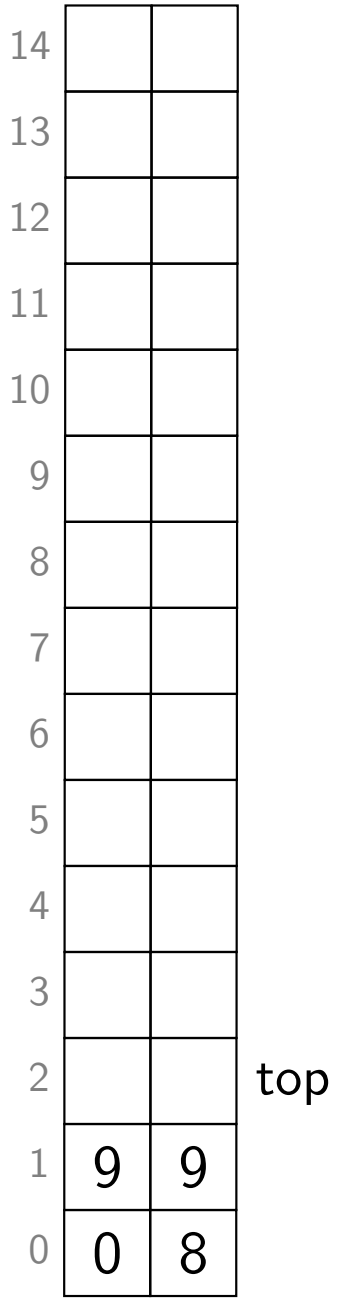

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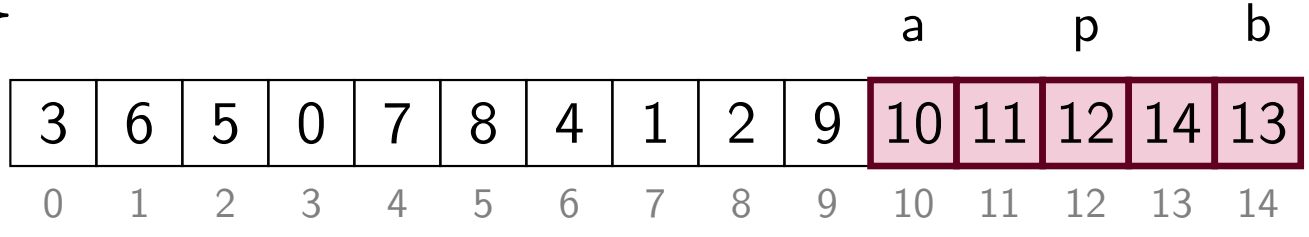

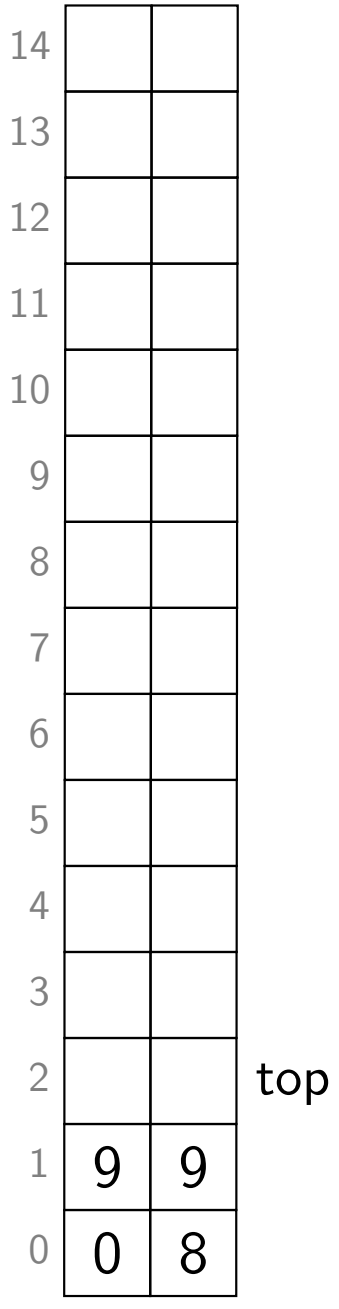

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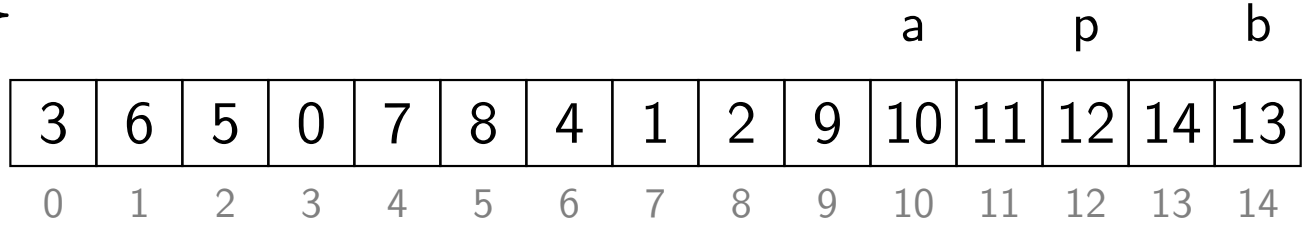

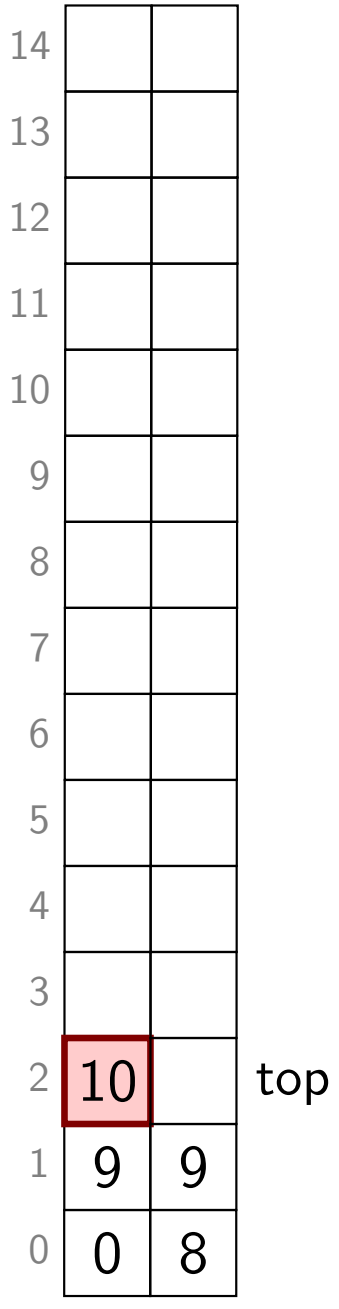

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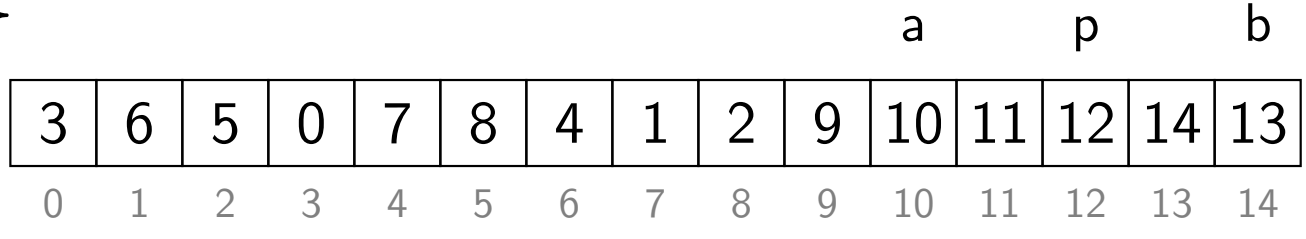

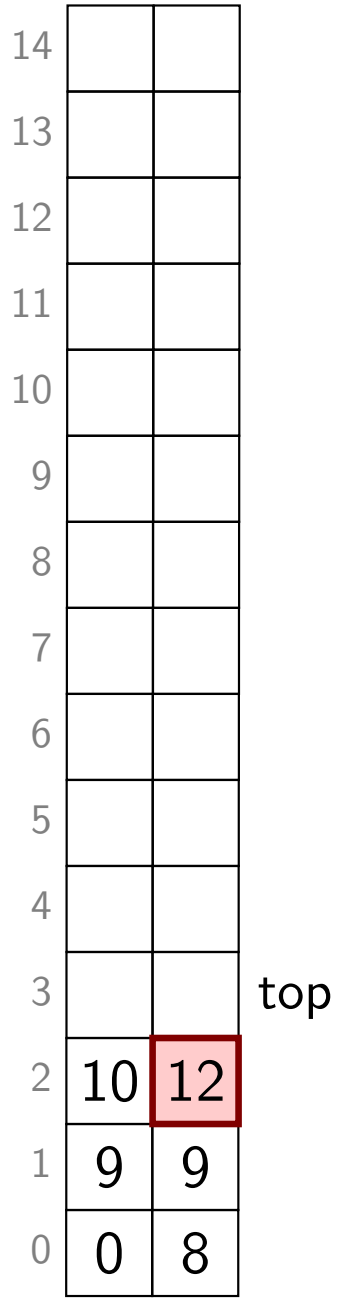

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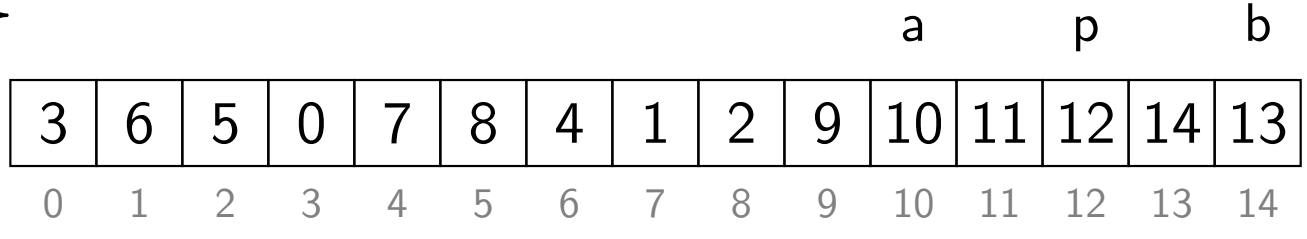
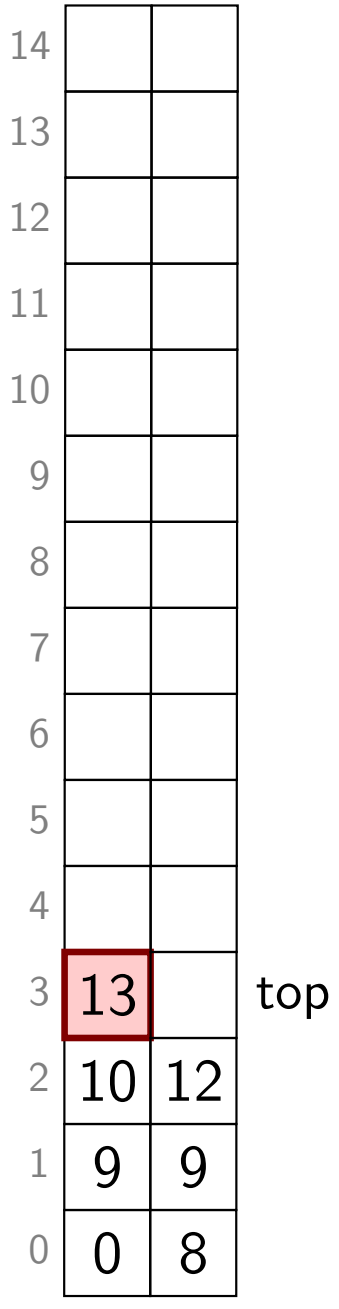
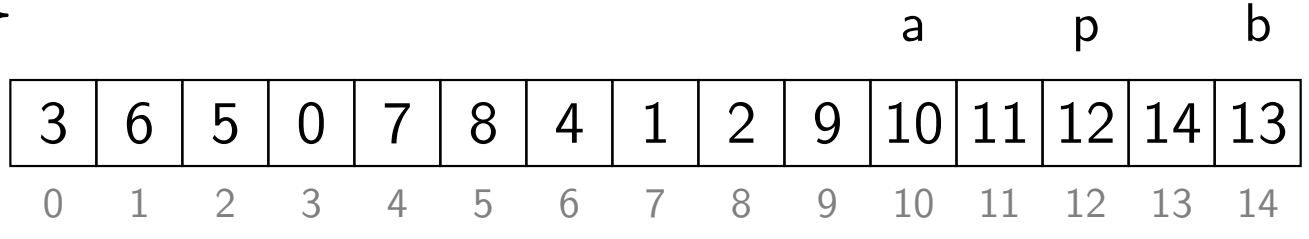
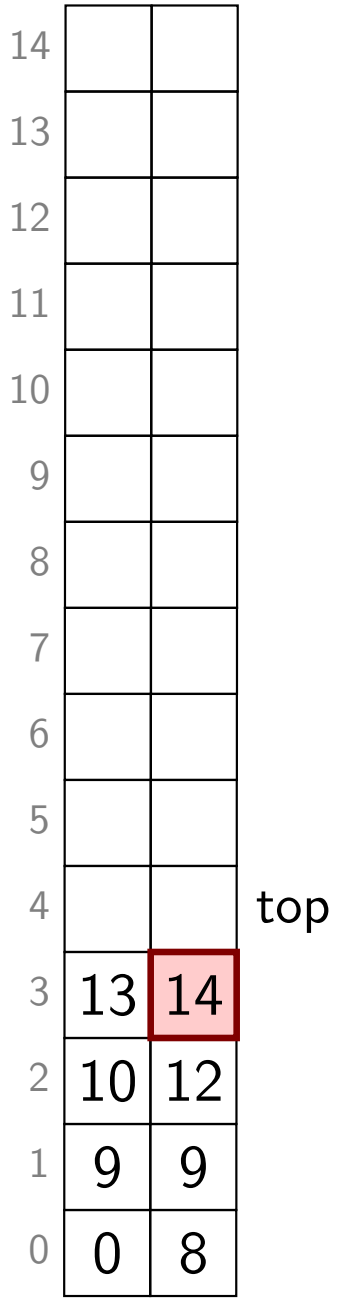




```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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  uint p, a, b;
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  stackPush(&first, 0);
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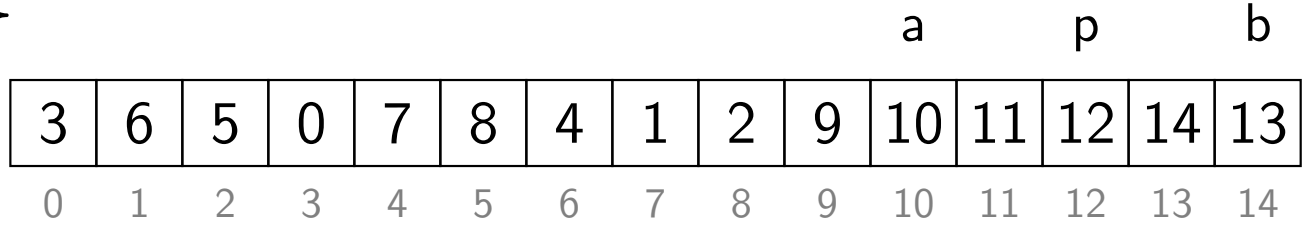
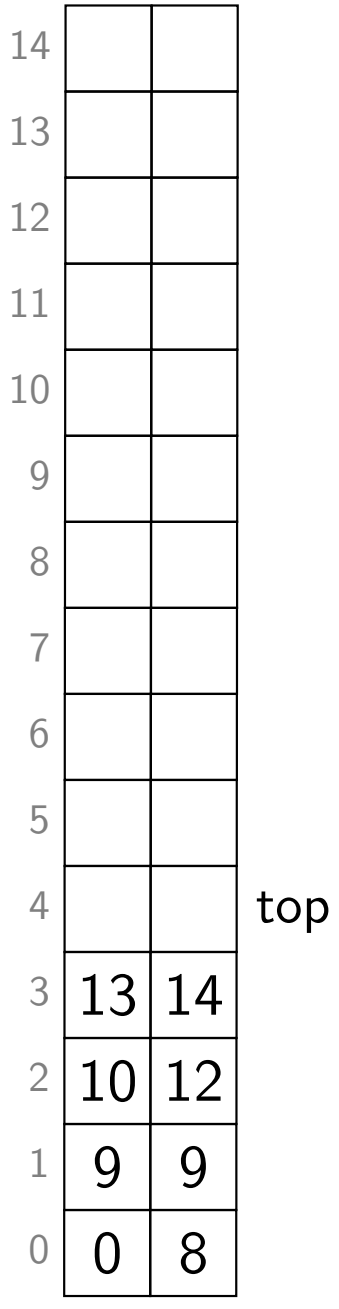
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

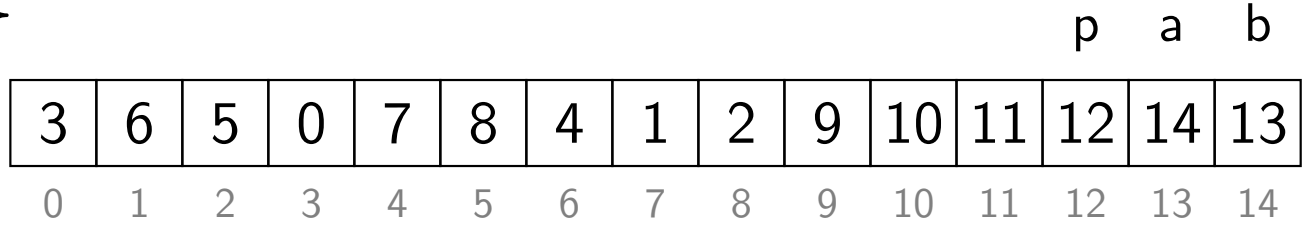
	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3	6	5	0	7	8	4	1	2	9	10	11	12	14	13

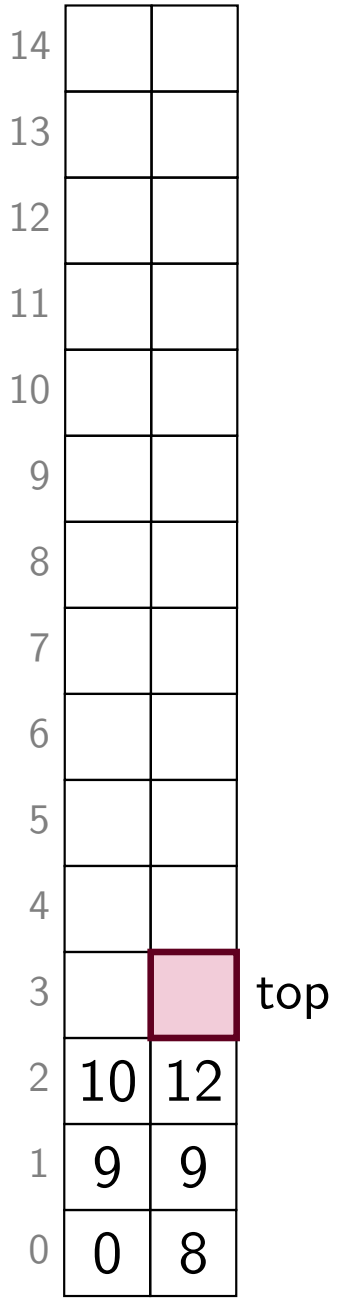
p a b

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		14
2	10	12
1	9	9
0	0	8

top

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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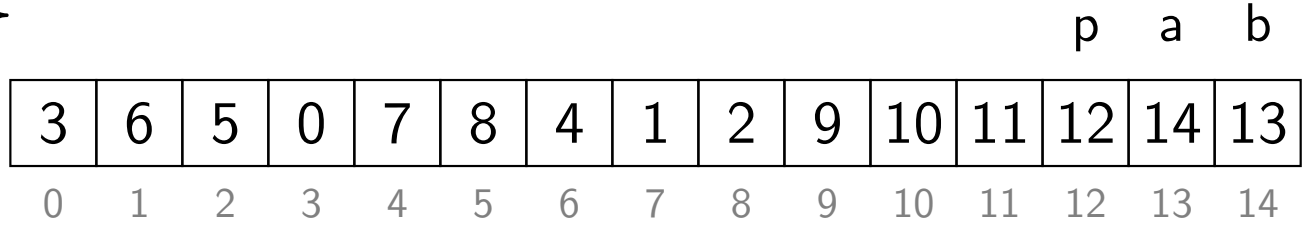
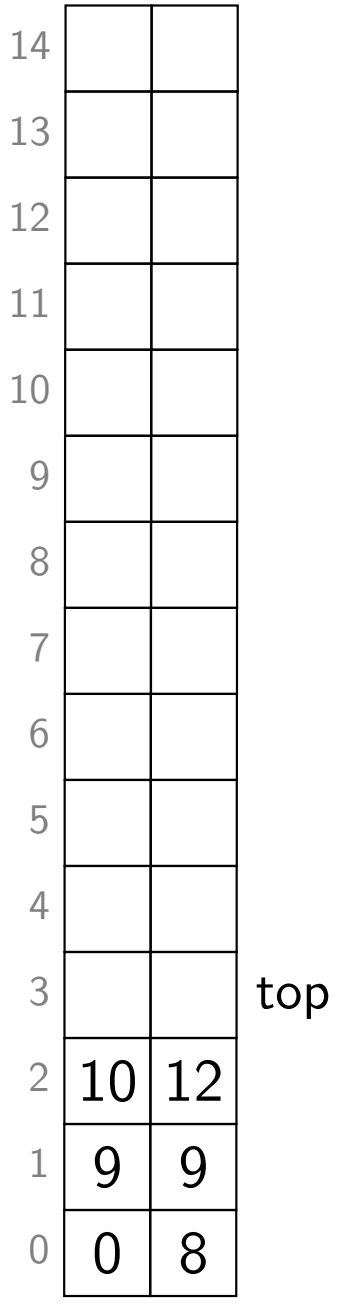
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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  uint p, a, b;
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  stackPush(&first, 0);
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    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

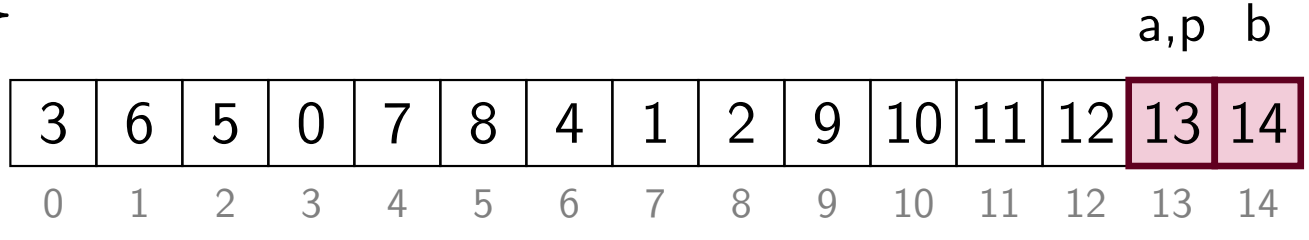

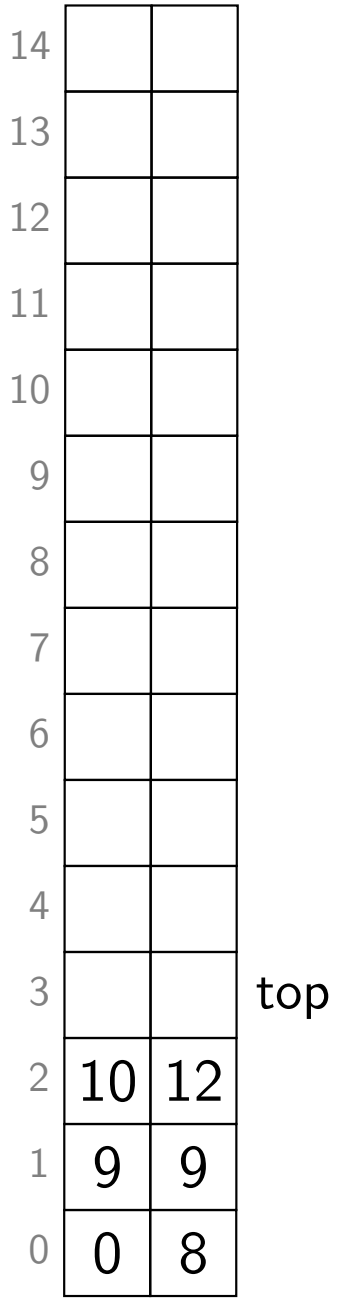

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  uint p, a, b;
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  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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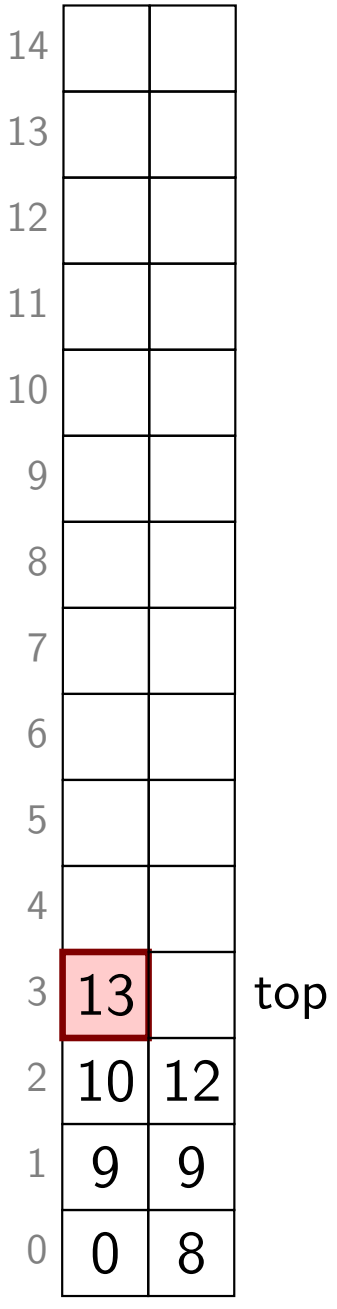
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
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    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			top
3	13	13	
2	10	12	
1	9	9	
0	0	8	

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4	14	top
3	13	13
2	10	12
1	9	9
0	0	8

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
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  stackPush(&first, 0);
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    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4	14	14
3	13	13
2	10	12
1	9	9
0	0	8

top

```
void sort (Tab t) {
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  Stack first = stackNew(t.len);
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  stackPush(&last, t.len-1);
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    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

top

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4	14	14
3	13	13
2	10	12
1	9	9
0	0	8

```
void sort (Tab t) {
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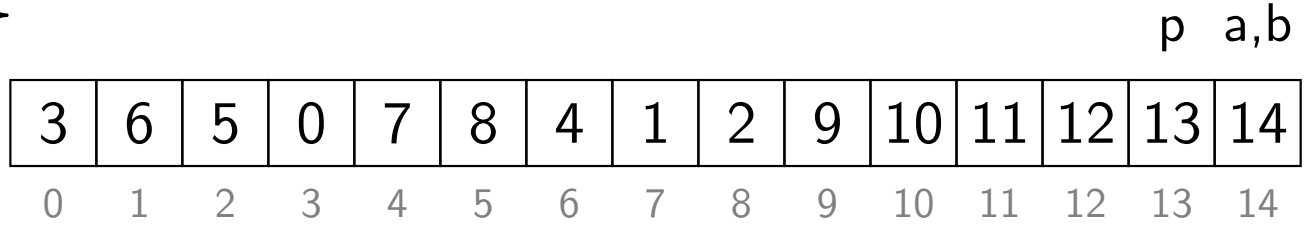
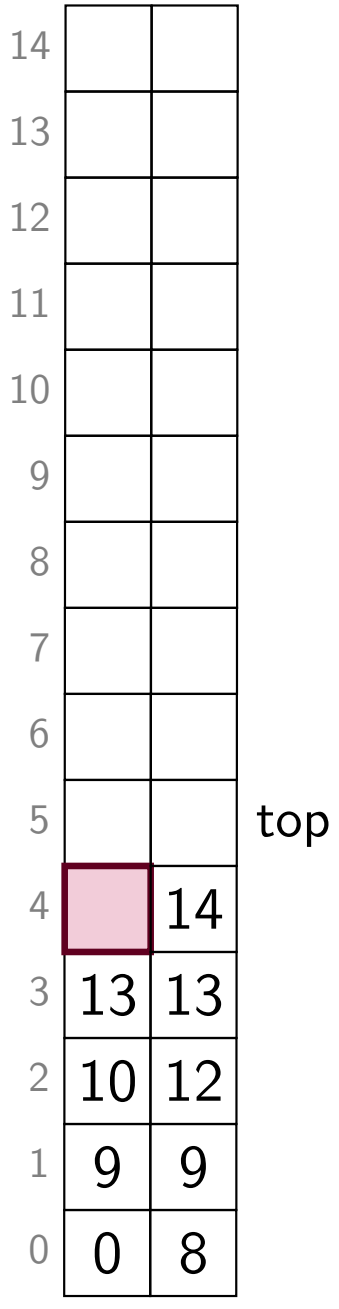
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3	6	5	0	7	8	4	1	2	9	10	11	12	13	14

p a,b

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		top
3	13	13
2	10	12
1	9	9
0	0	8

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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
	3	6	5	0	7	8	4	1	2	9	10	11	12	13	14

p a,b

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4			top
3	13	13
2	10	12
1	9	9
0	0	8

```
void sort (Tab t) {
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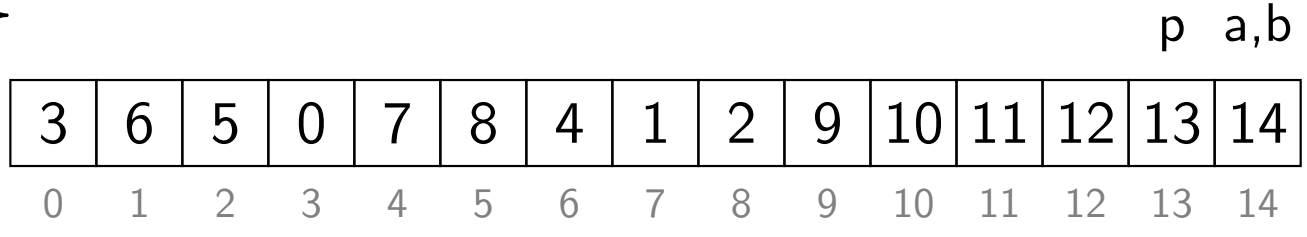
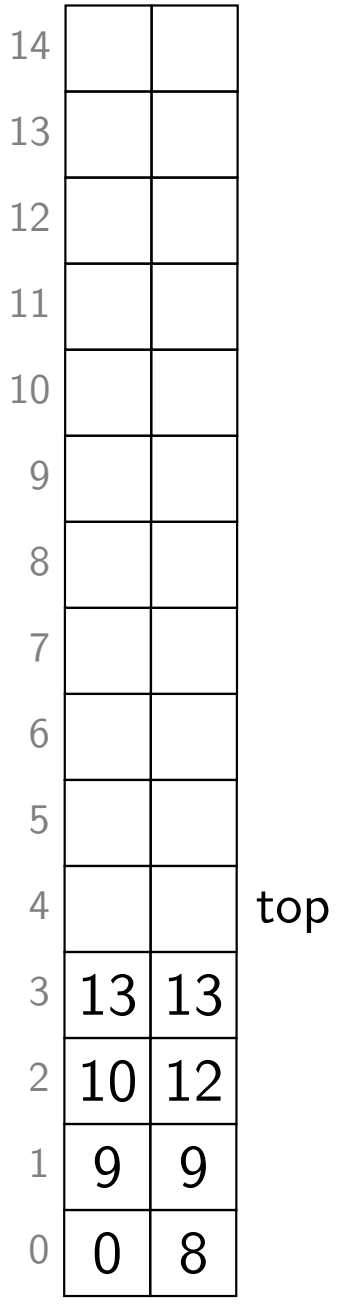
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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    }
  }
}
```
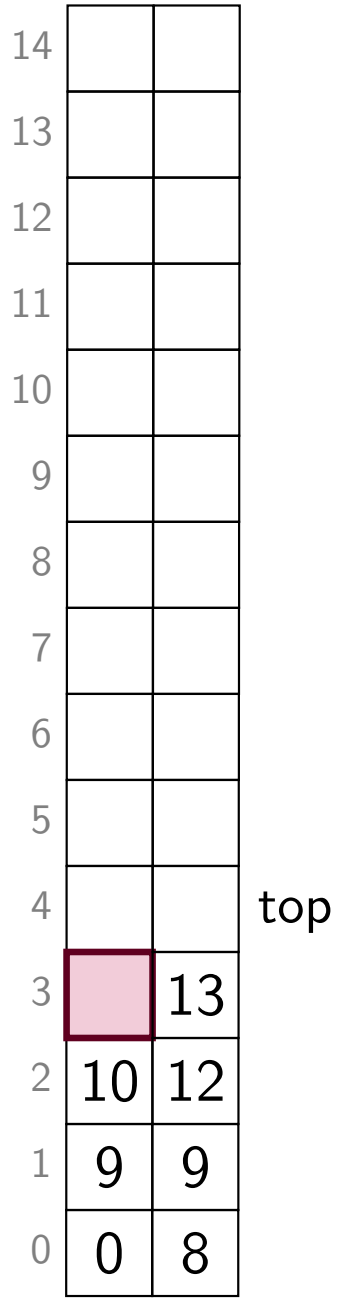

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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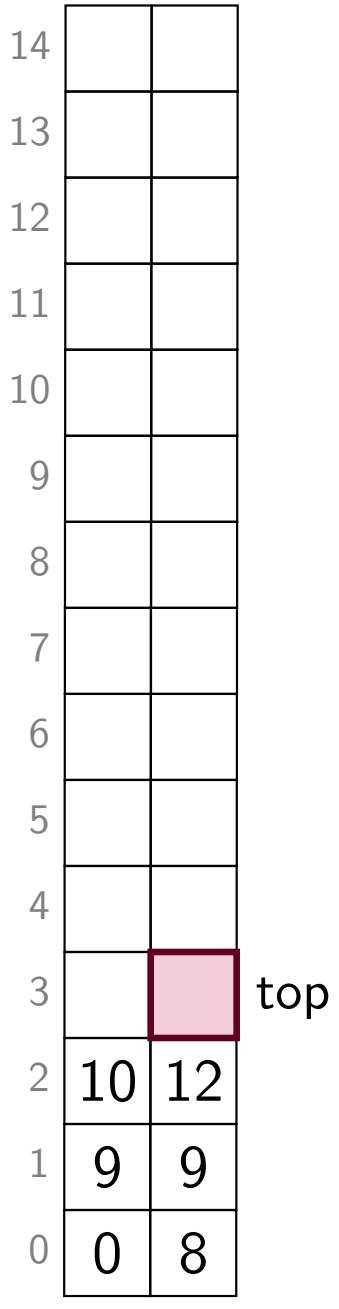
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3			top
2	10	12
1	9	9
0	0	8

```
void sort (Tab t) {
  uint p, a, b;
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  Stack last = stackNew(t.len);
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3			top
2	10	12	
1	9	9	
0	0	8	

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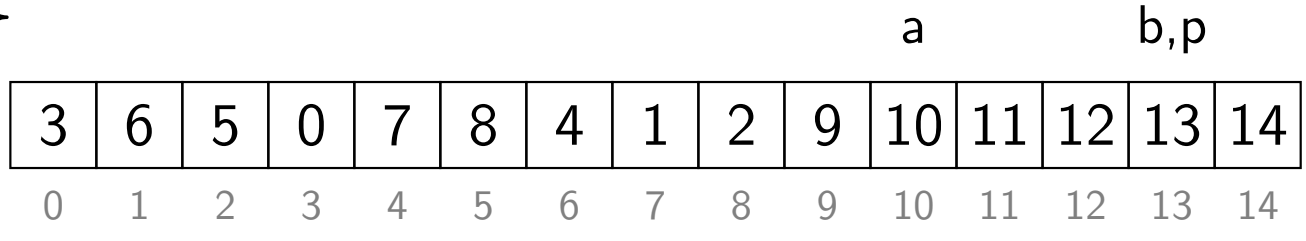
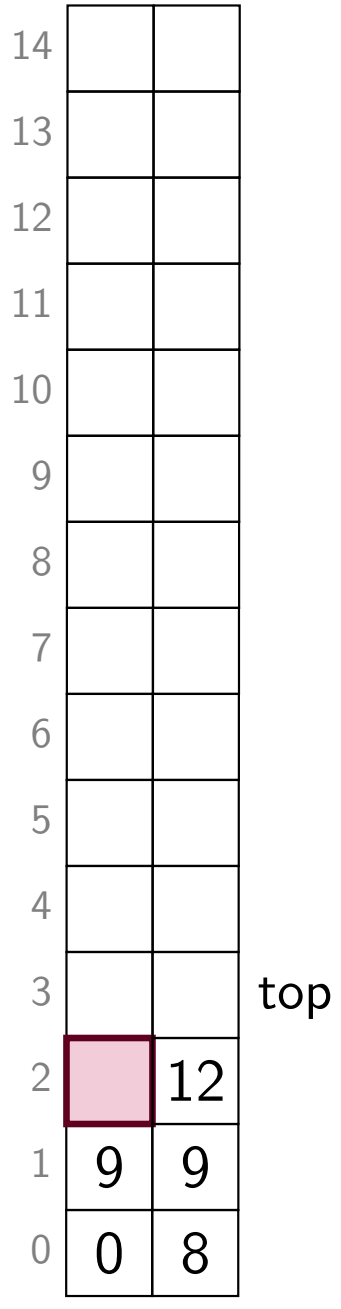
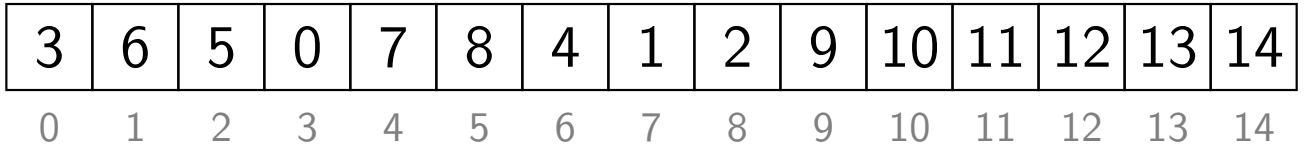
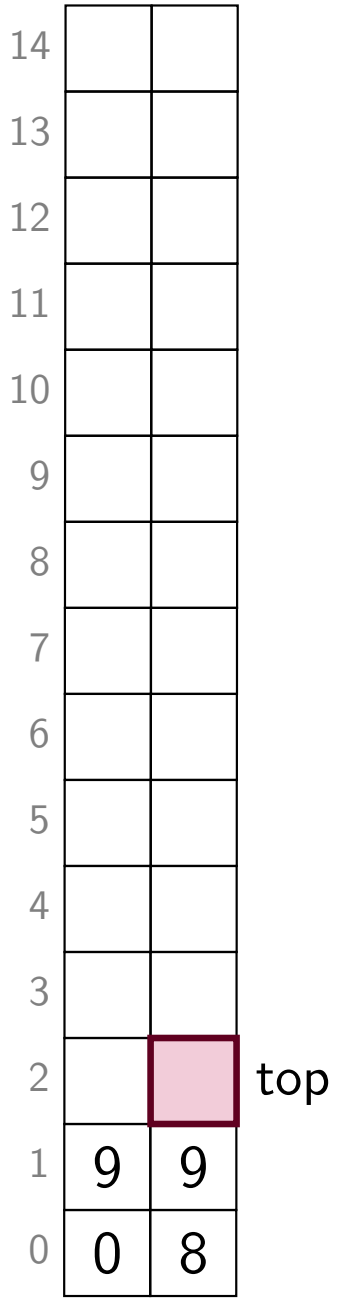
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
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  }
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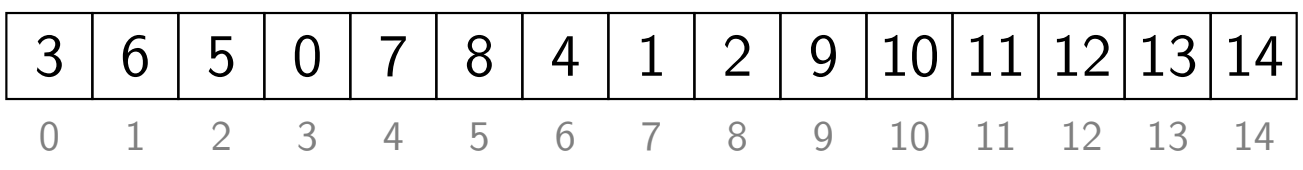

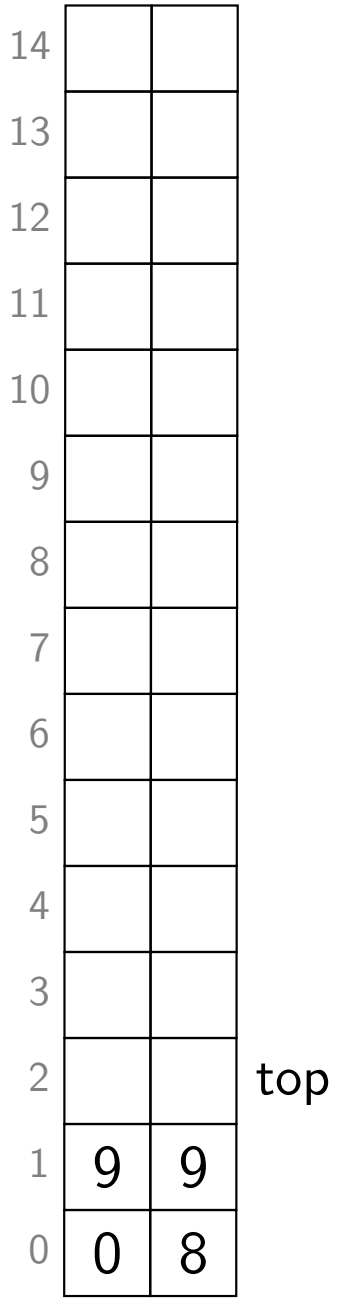

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    b = stackPop(&last);
    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

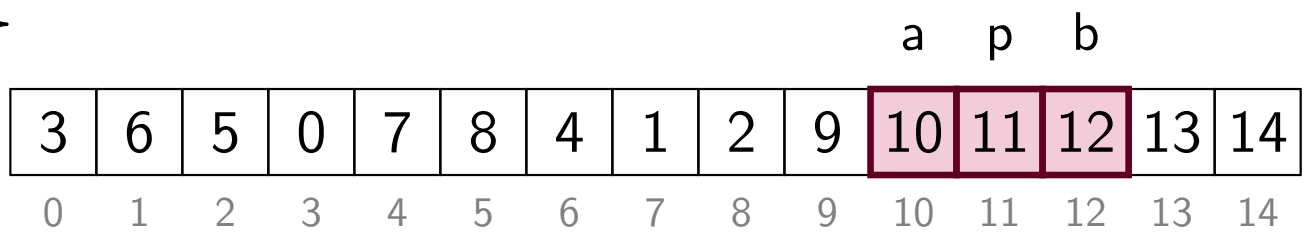

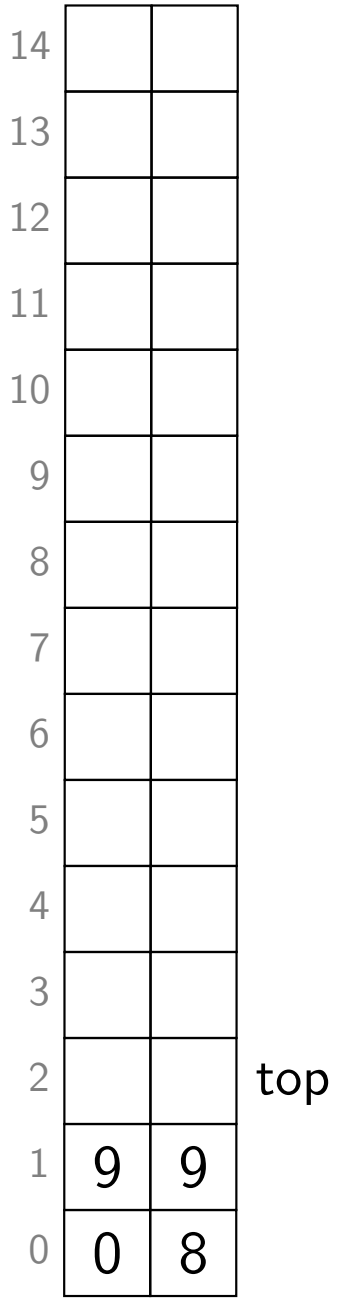

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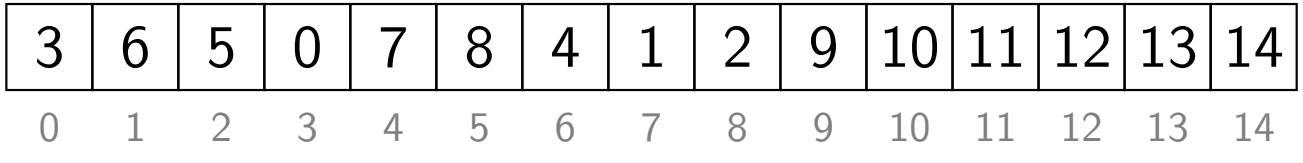
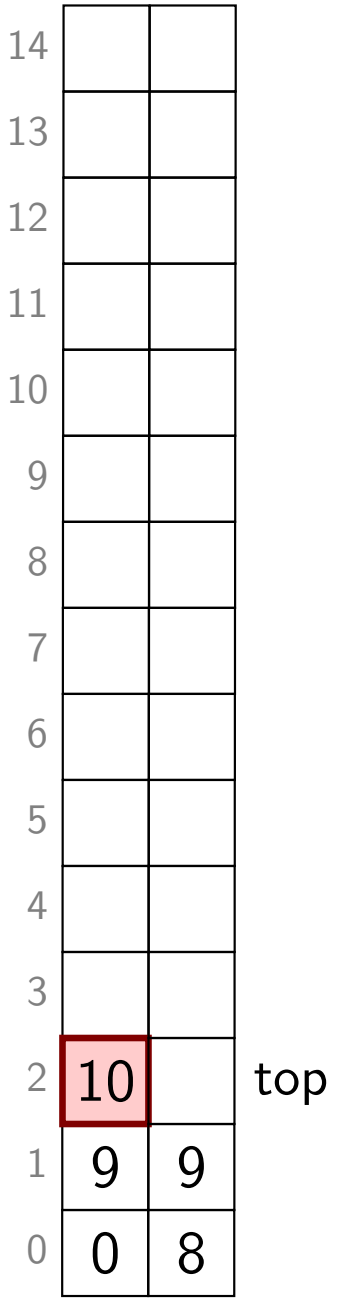
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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  uint p, a, b;
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  Stack last = stackNew(t.len);
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    b = stackPop(&last);
    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
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}
```

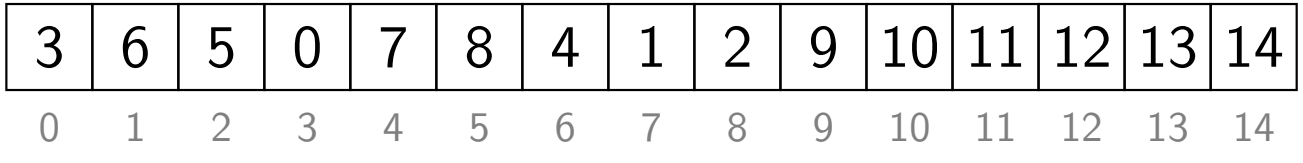

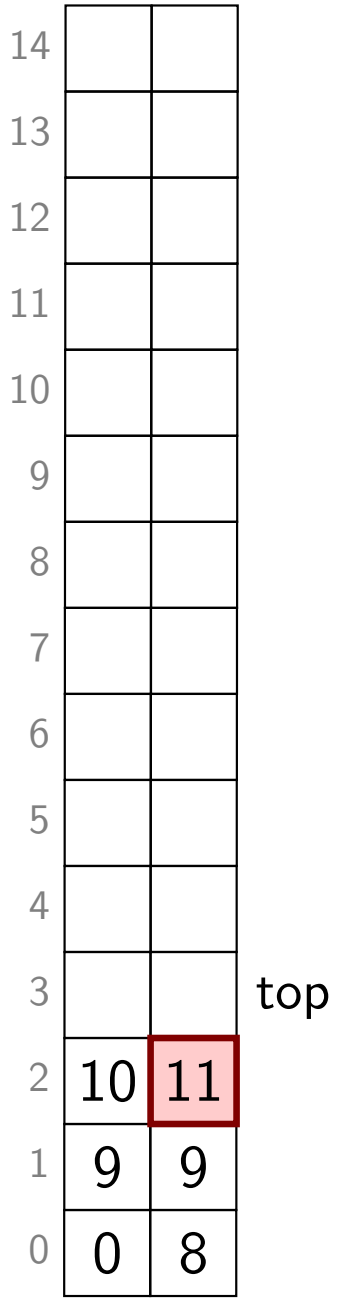

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  uint p, a, b;
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  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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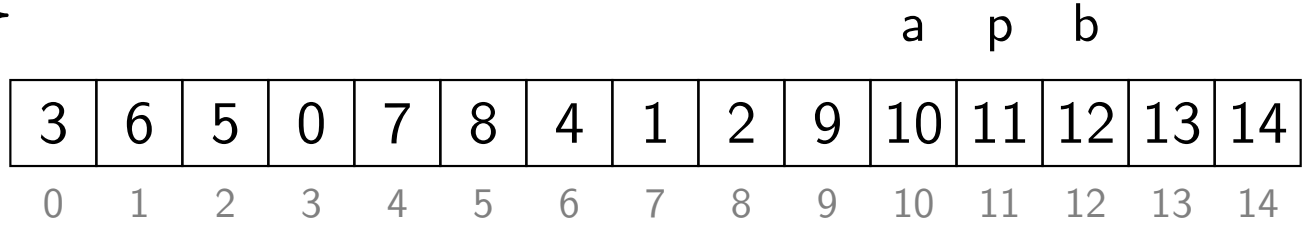
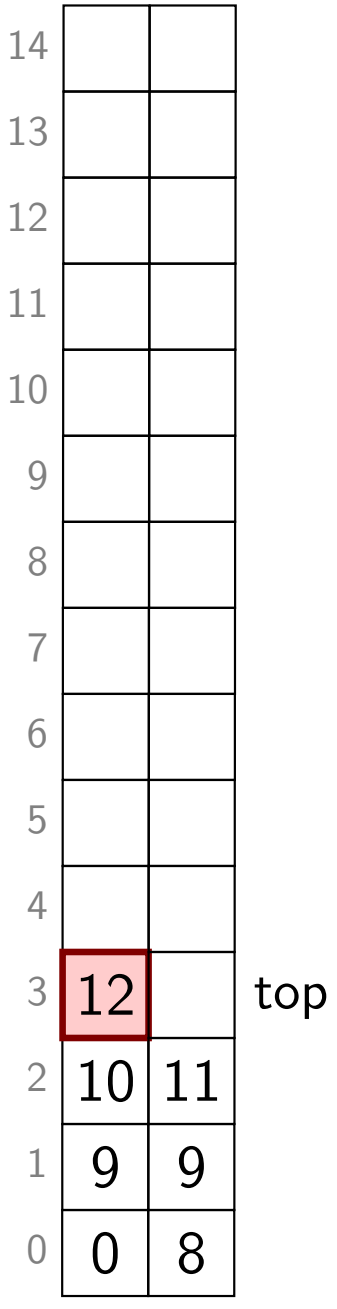
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3	12	12
2	10	11
1	9	9
0	0	8

top

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

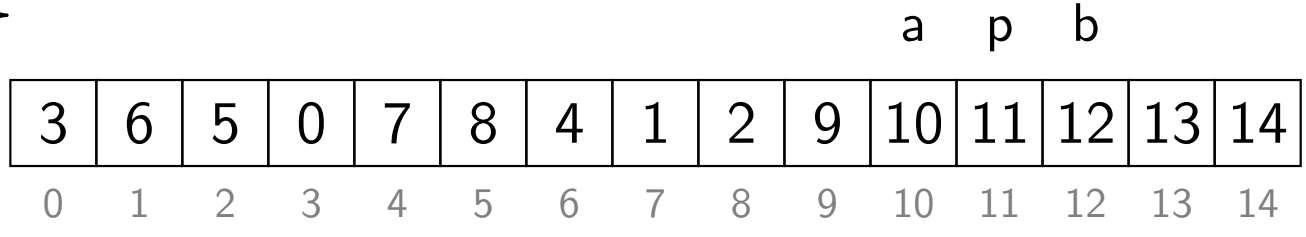

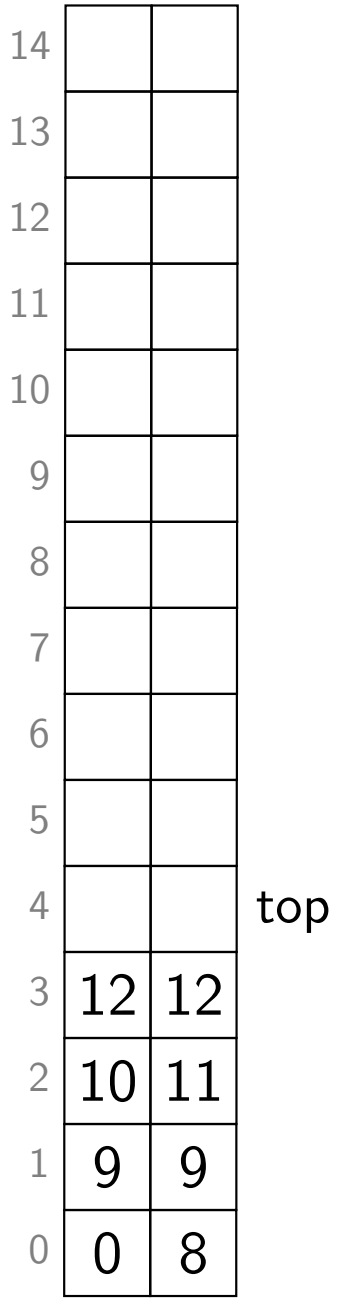

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    if (a < b) {
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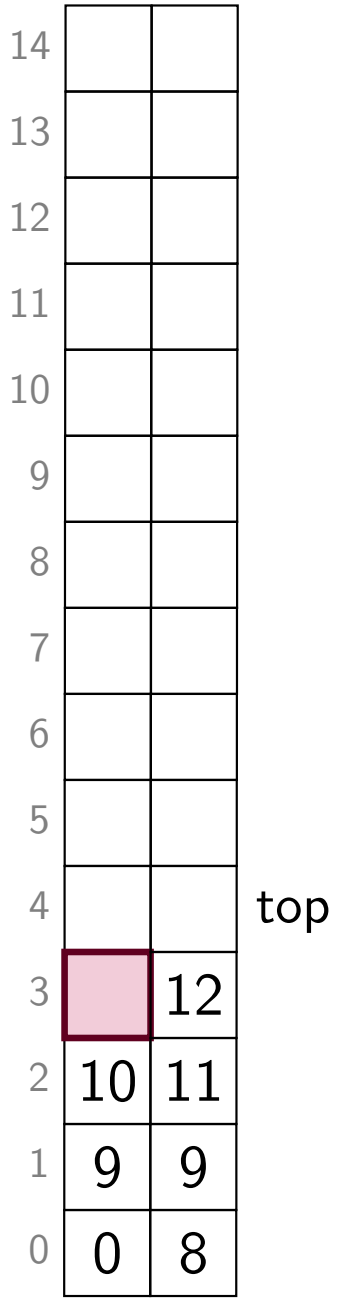
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
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      stackPush(&last, b);
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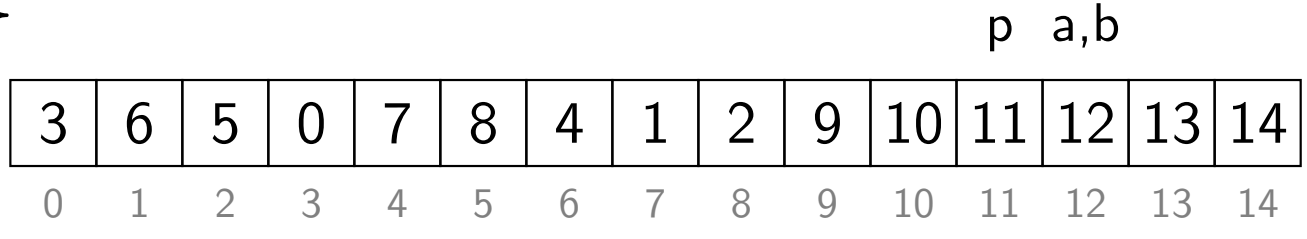

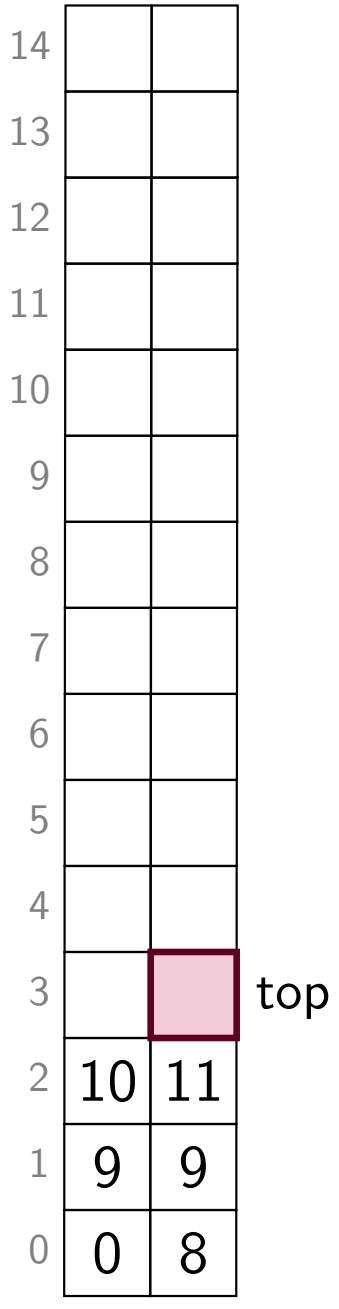

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      stackPush(&last, b);
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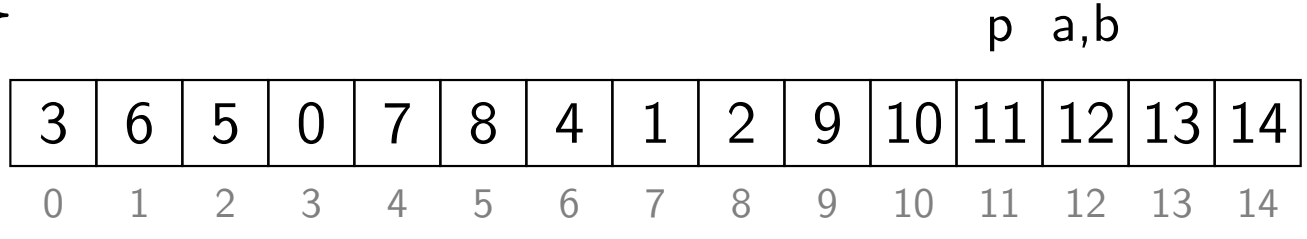

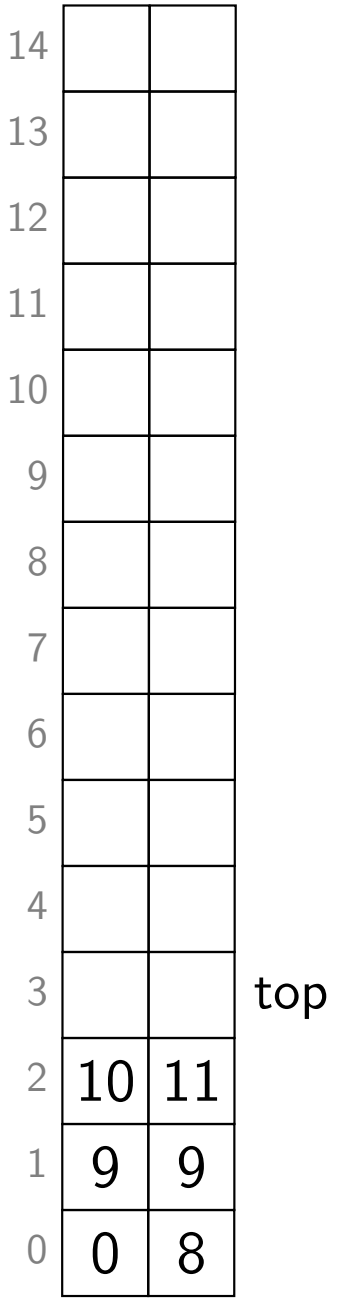

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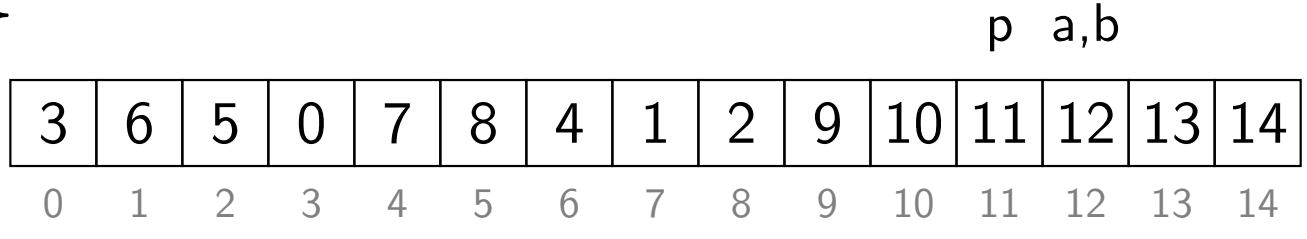

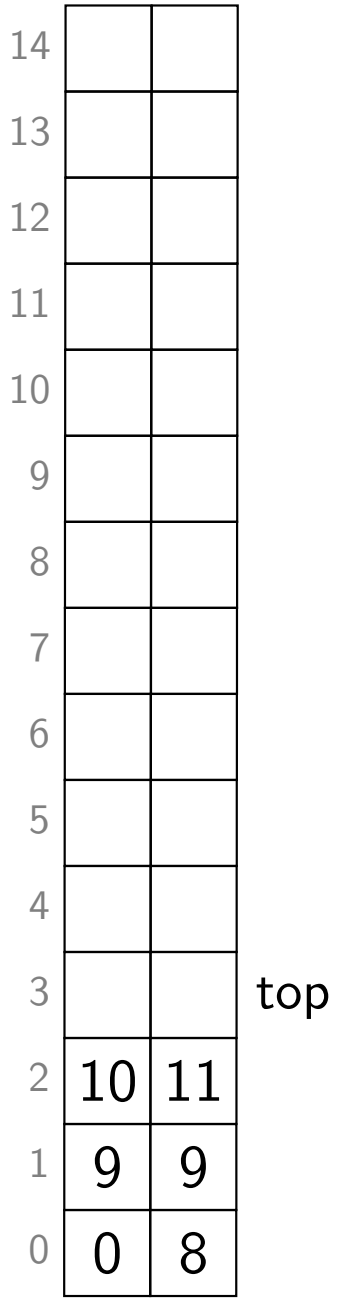

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      stackPush(&last, b);
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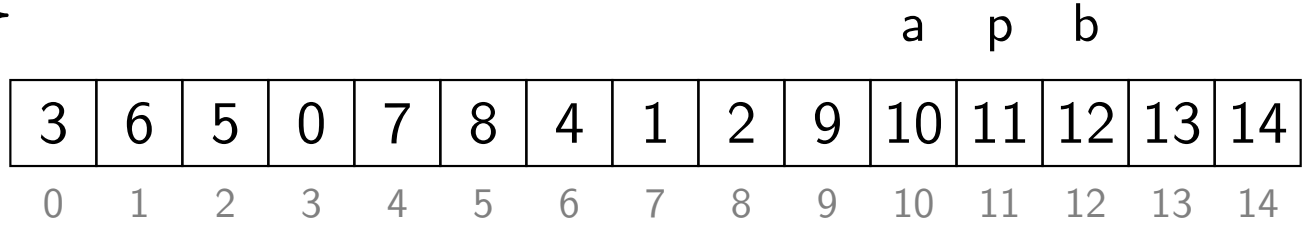

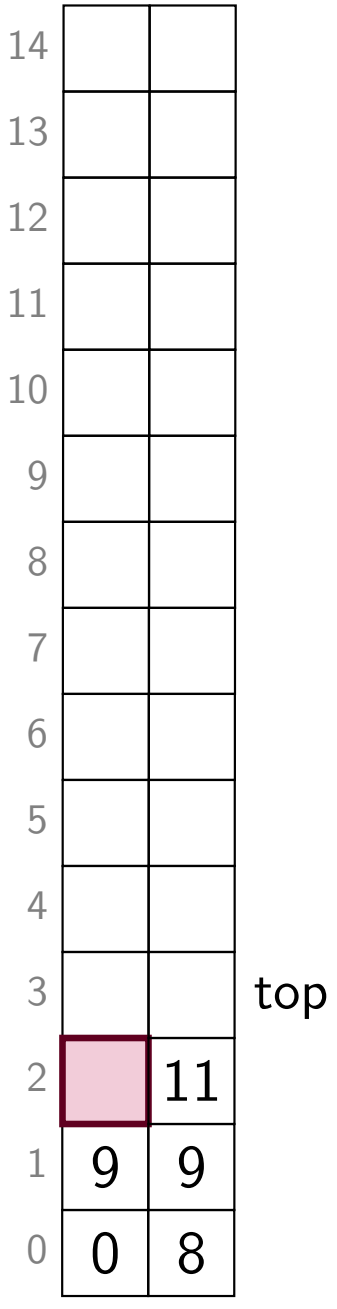

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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
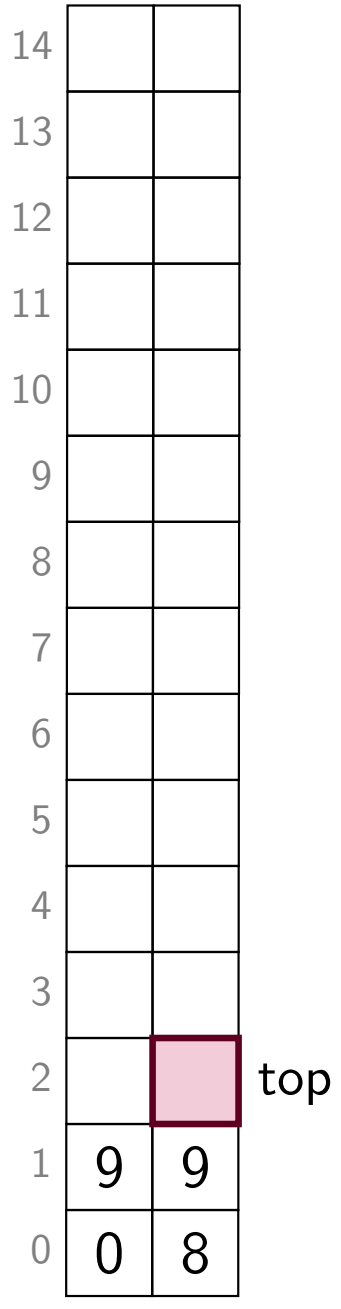

a b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			top
1	9	9	
0	0	8	

```
void sort (Tab t) {
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      stackPush(&first, p+1);
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    }
  }
}
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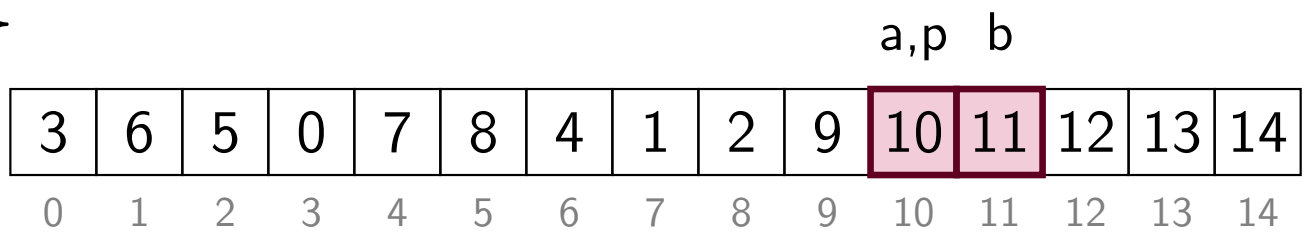

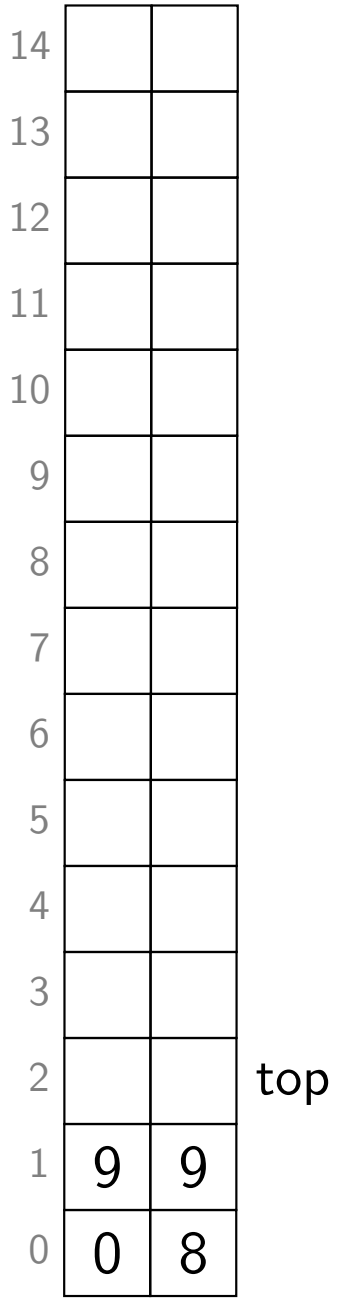

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      stackPush(&first, p+1);
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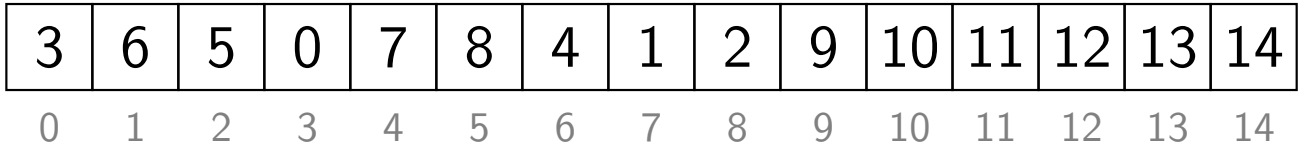
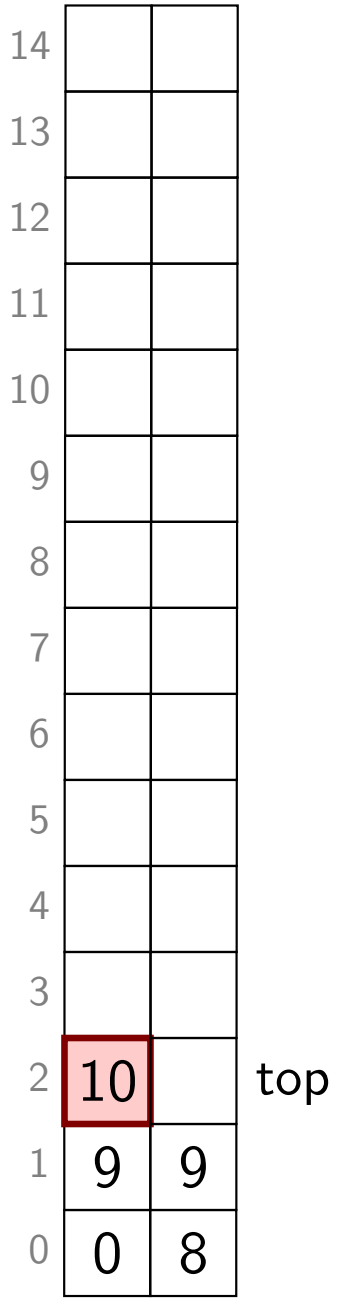
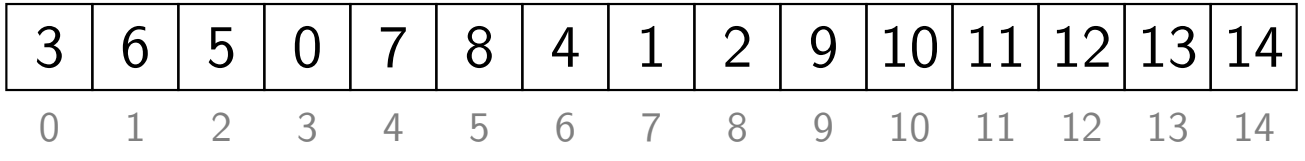
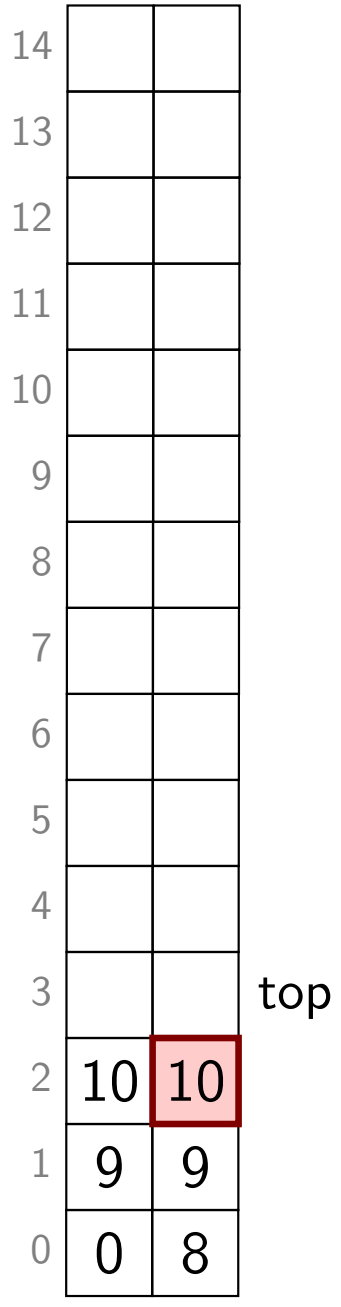
```





```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
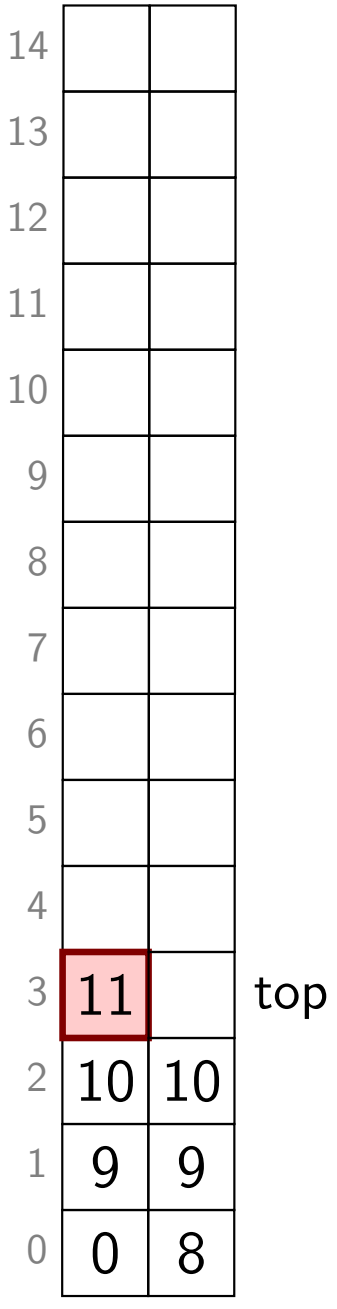

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
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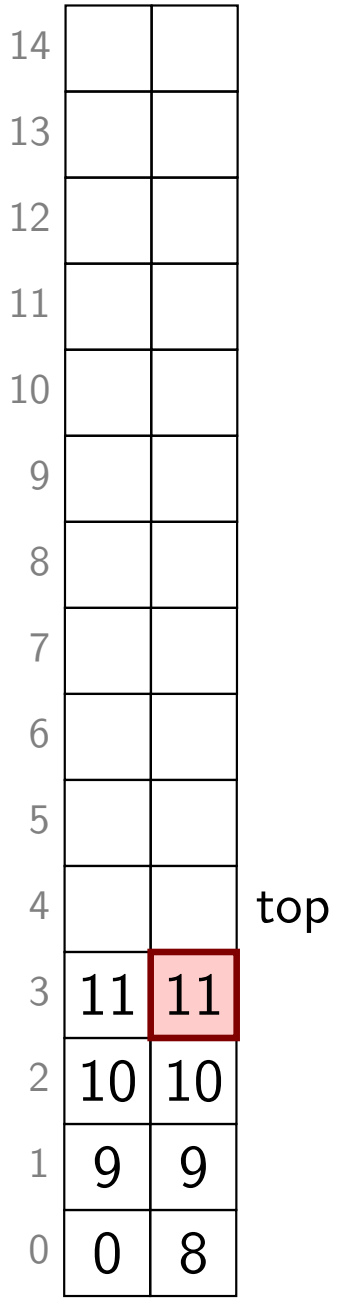
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
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      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4			top
3	11	11
2	10	10
1	9	9
0	0	8

```
void sort (Tab t) {
  uint p, a, b;
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
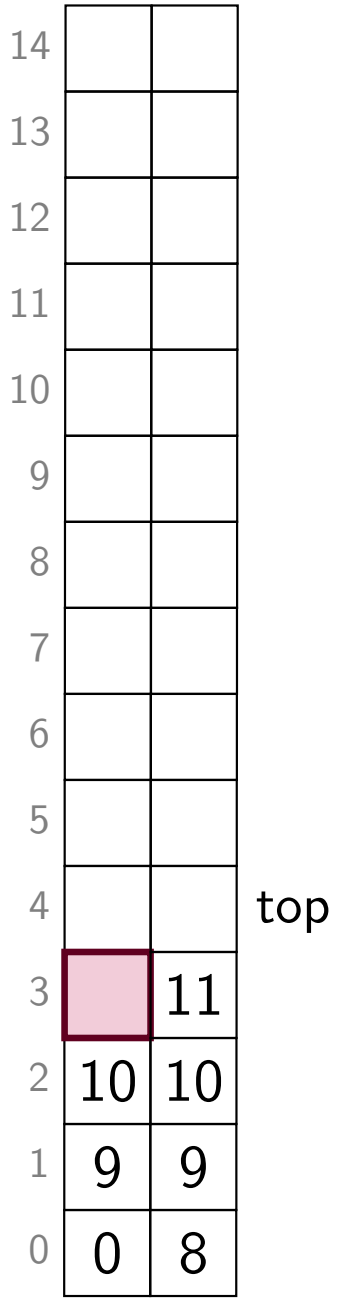

p a,b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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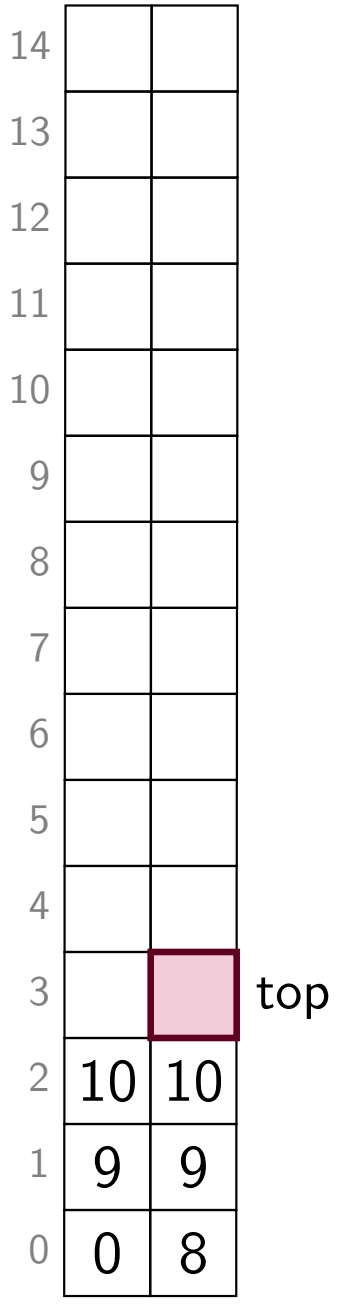
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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  uint p, a, b;
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

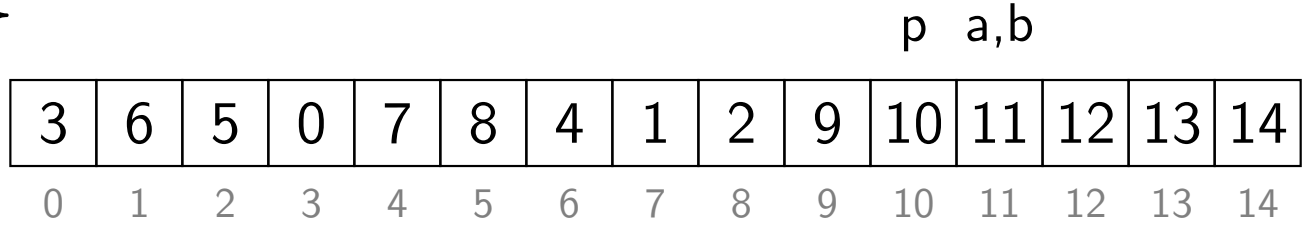

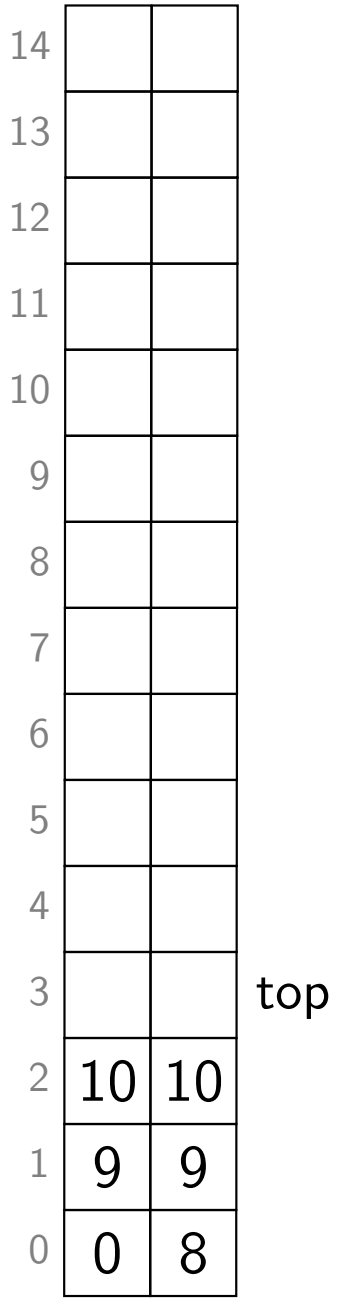

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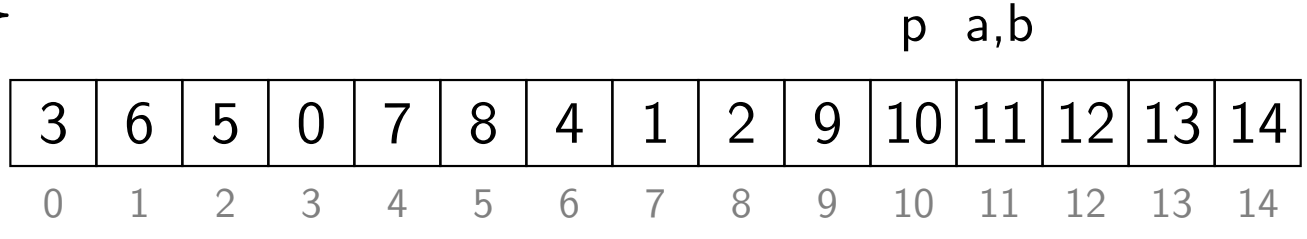
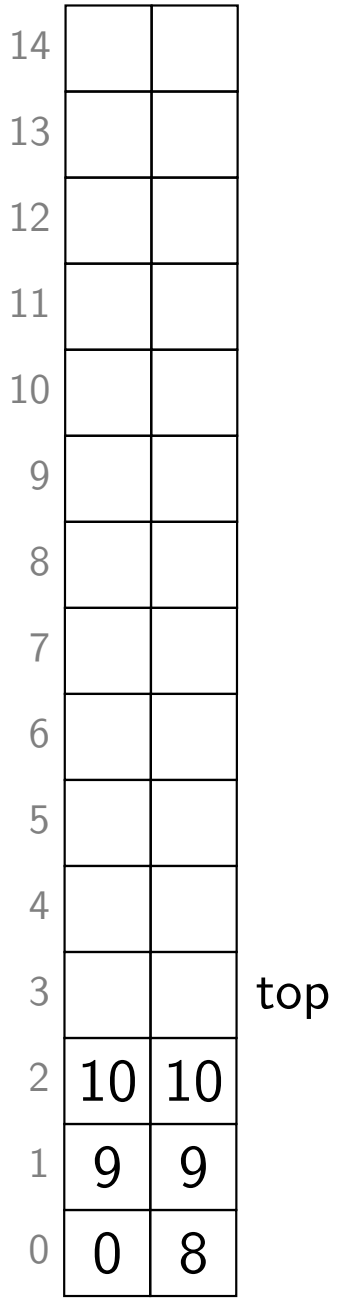
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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    }
  }
}
```
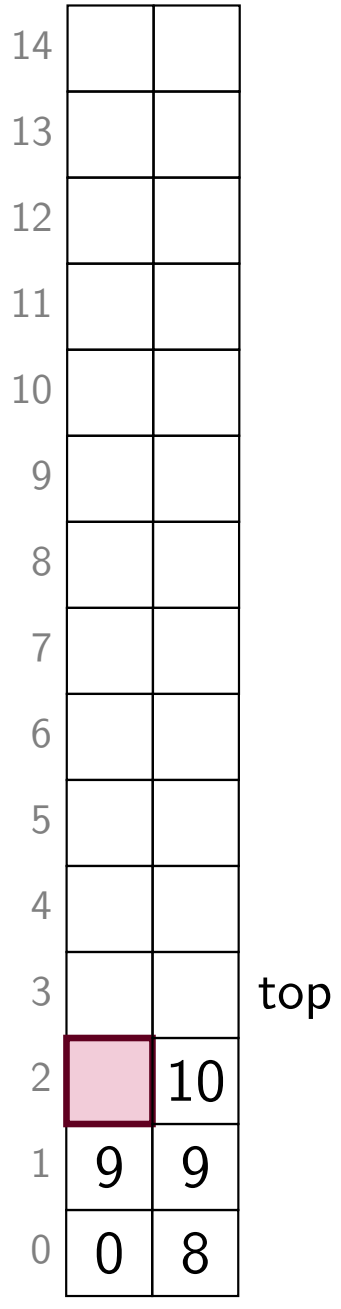

a,p b

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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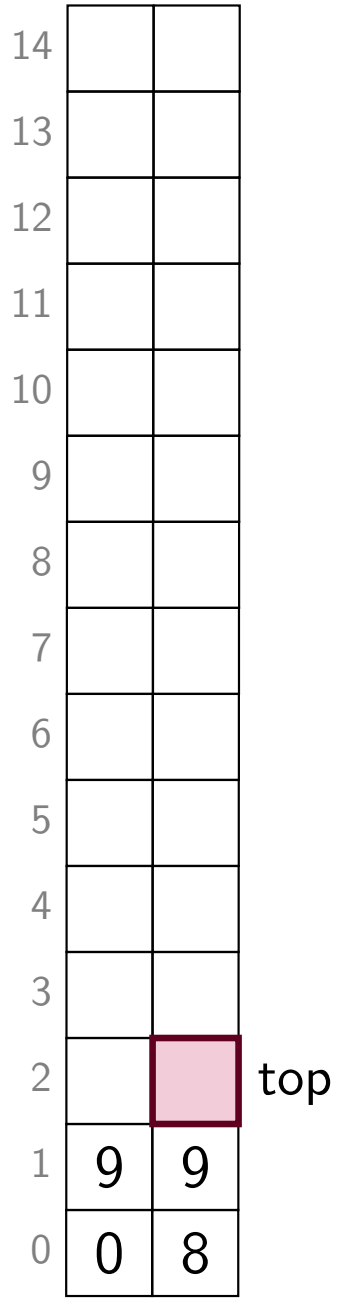
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2			top
1	9	9
0	0	8

```
void sort (Tab t) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			top
1	9	9	
0	0	8	

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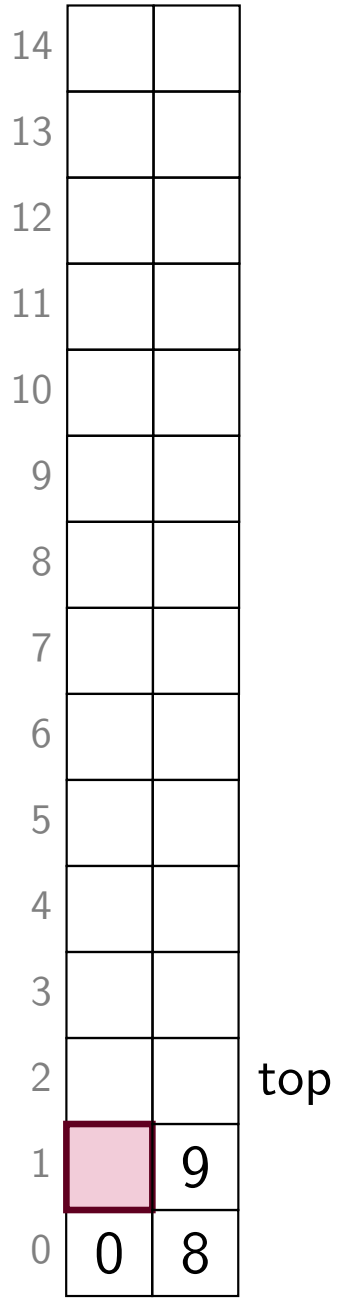
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a b,p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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}
```
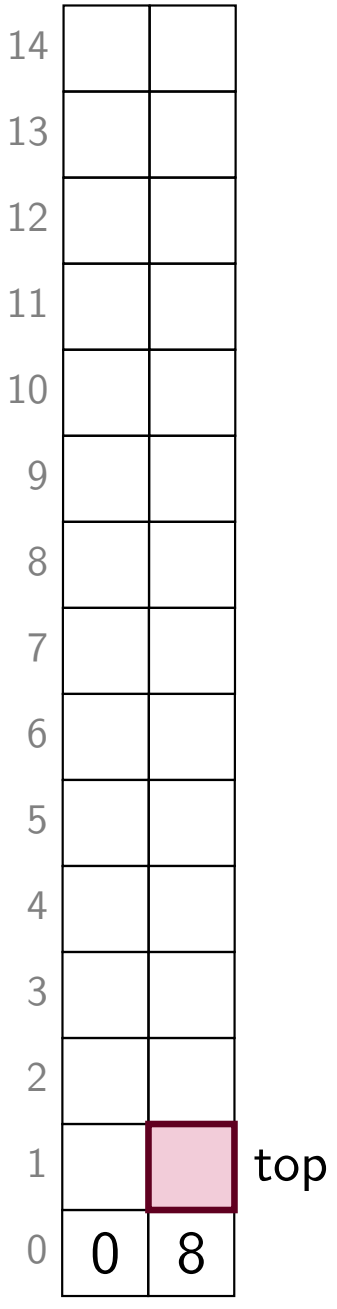

a,b p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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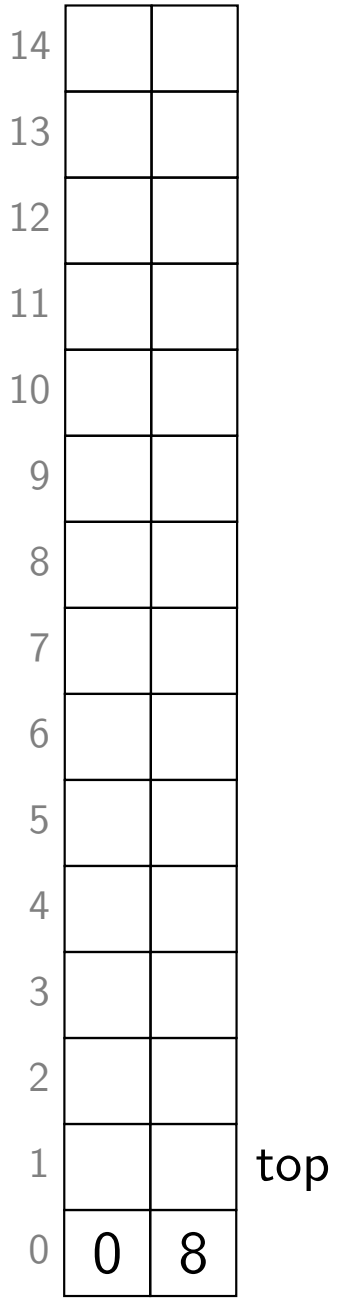
    }
  }
}
```

a,b p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
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}
```

a,b p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2		
1			top
0	0	8

```
void sort (Tab t) {
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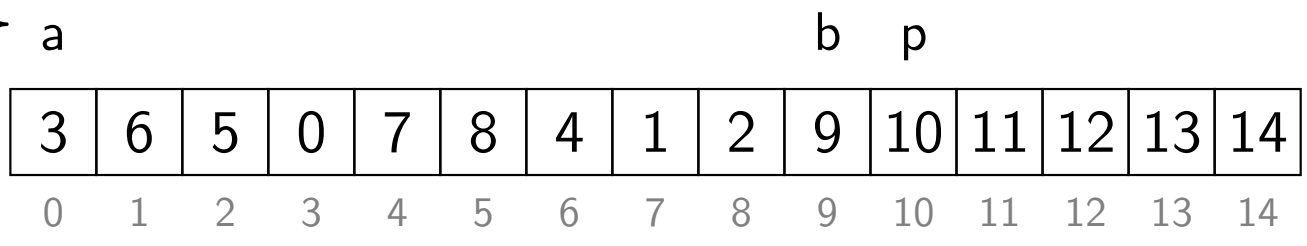

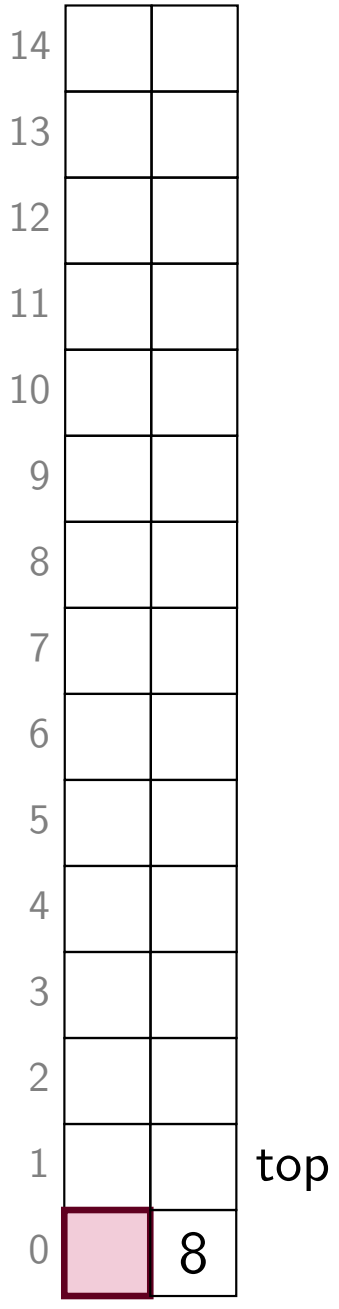

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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
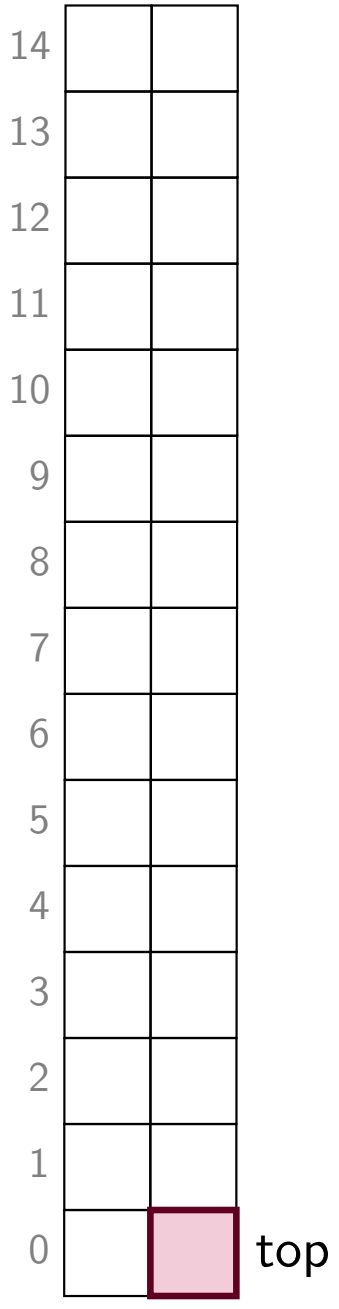

a b p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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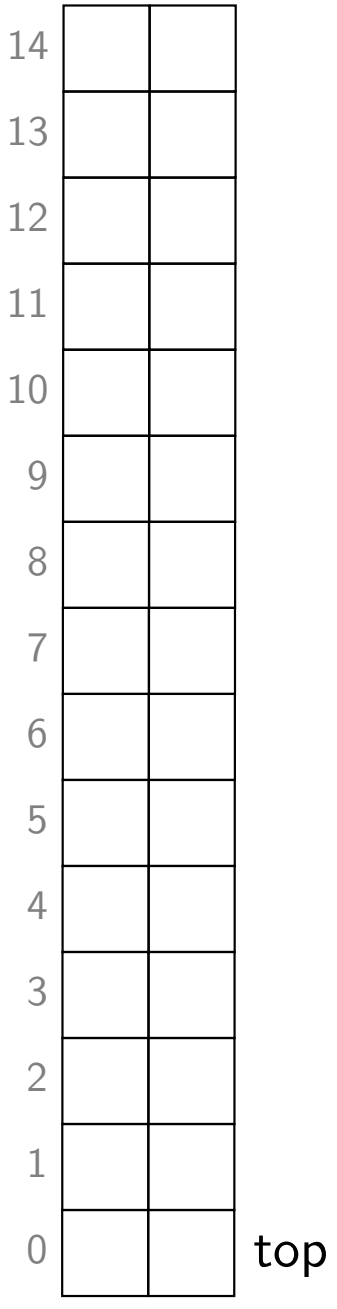
  }
}
```

a b p

3	6	5	0	7	8	4	1	2	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

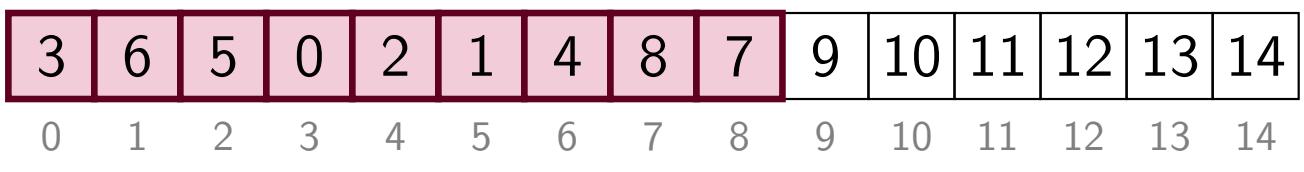

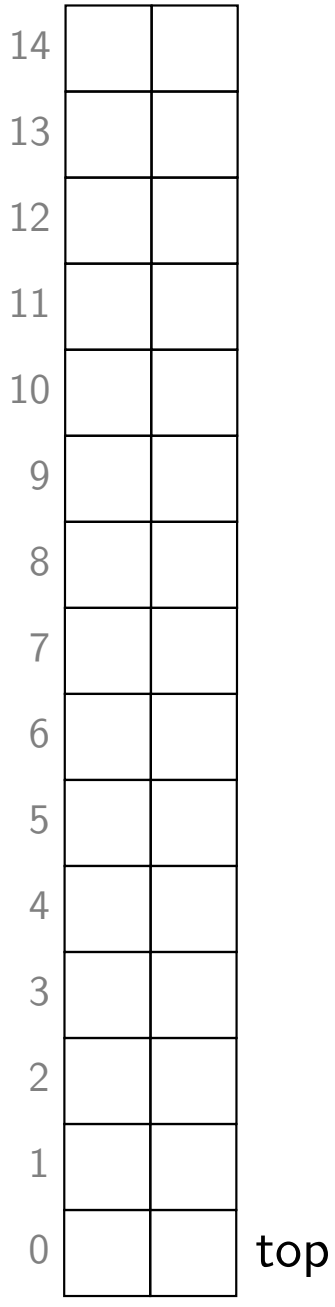

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
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    b = stackPop(&last);
    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
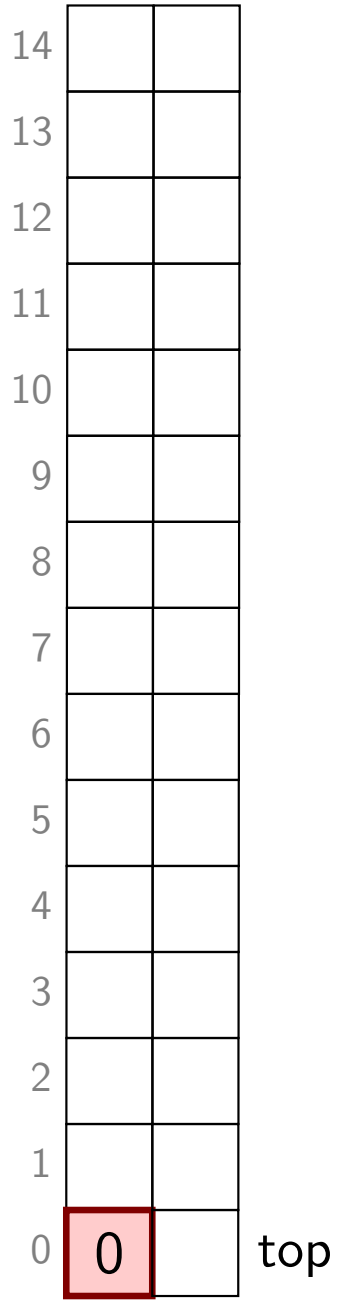

a p b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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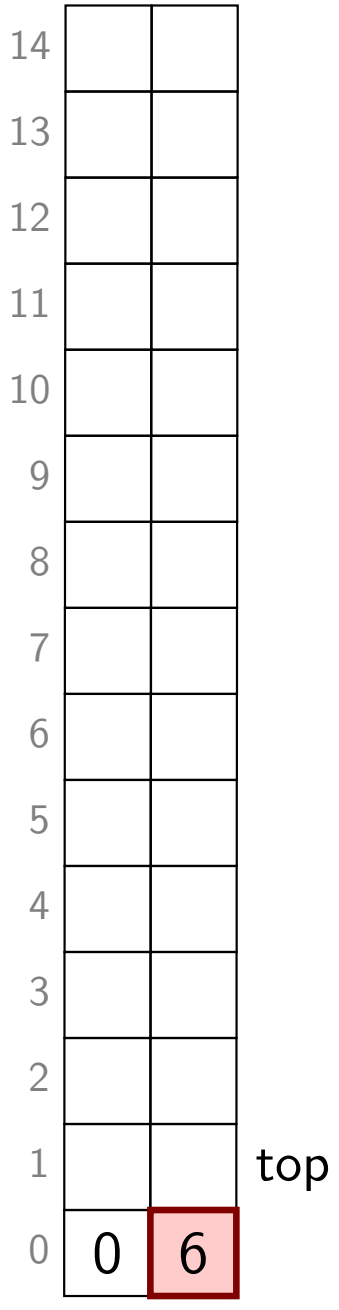
      stackPush(&last, b);
    }
  }
}
```

a p b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

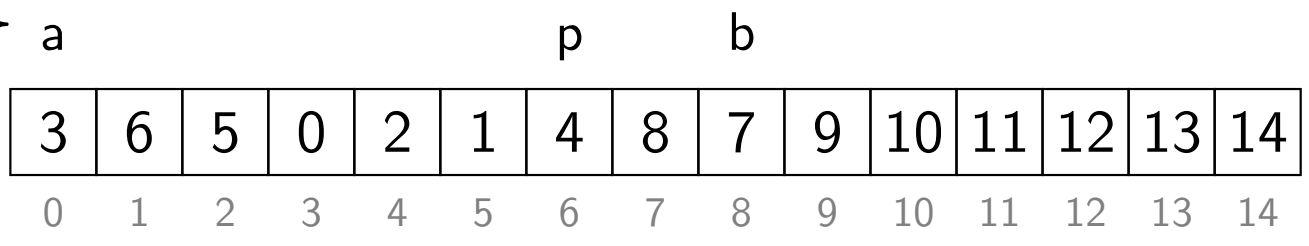

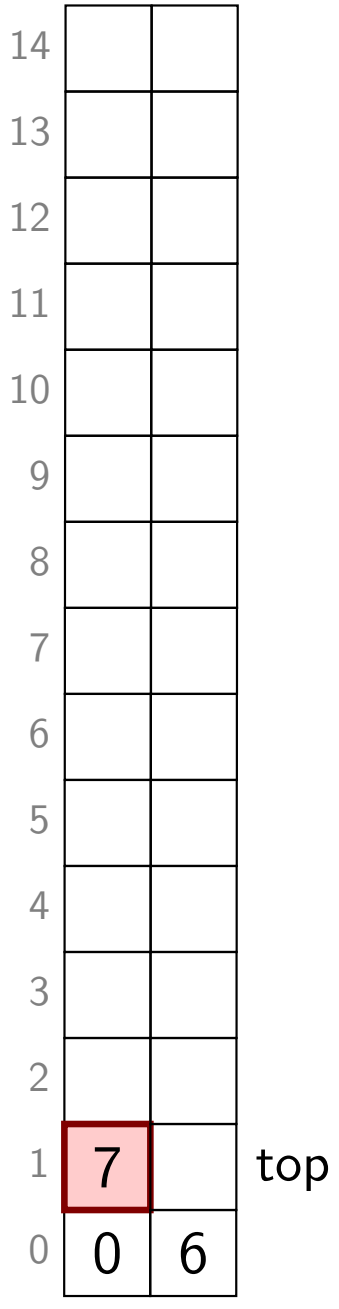

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void sort (Tab t) {
  uint p, a, b;
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  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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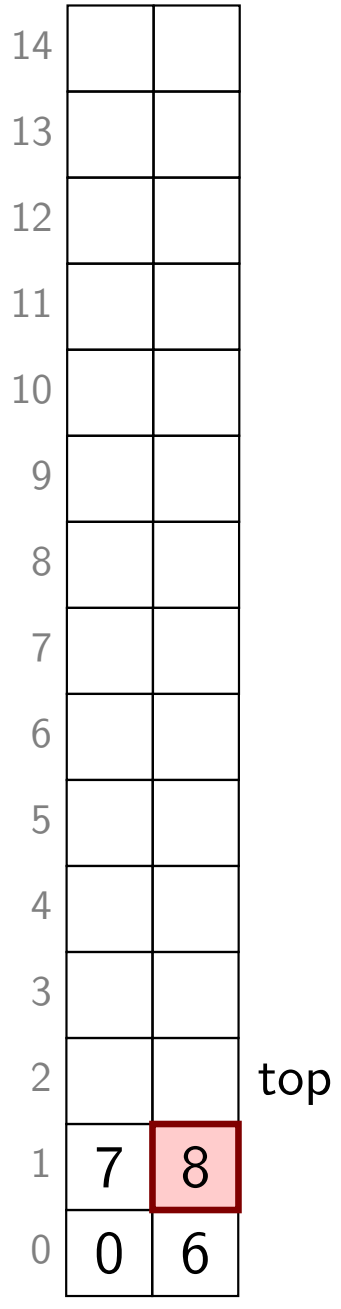
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2			top
1	7	8
0	0	6

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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    b = stackPop(&last);
    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
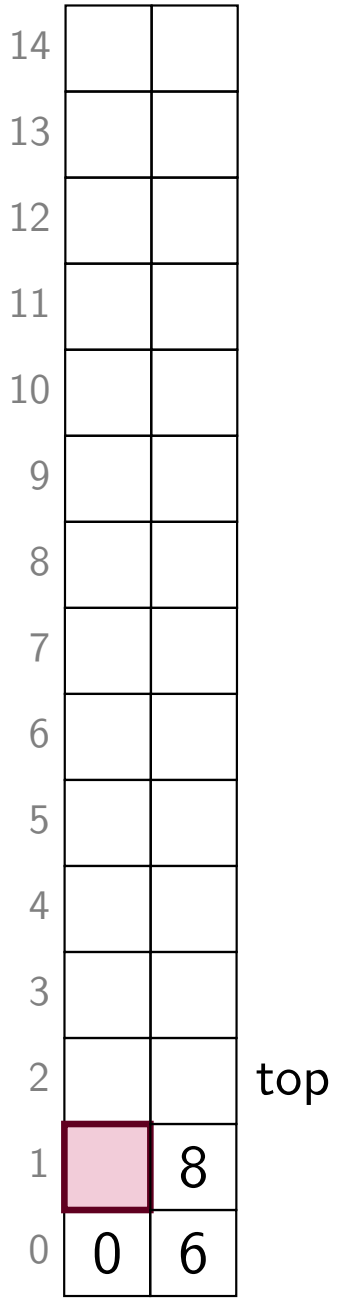

p a b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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  stackPush(&last, t.len-1);
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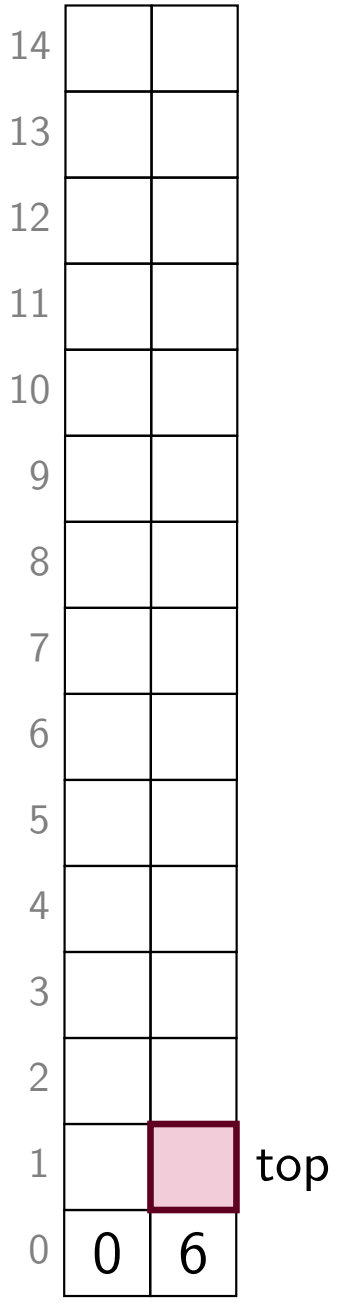
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a b

3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

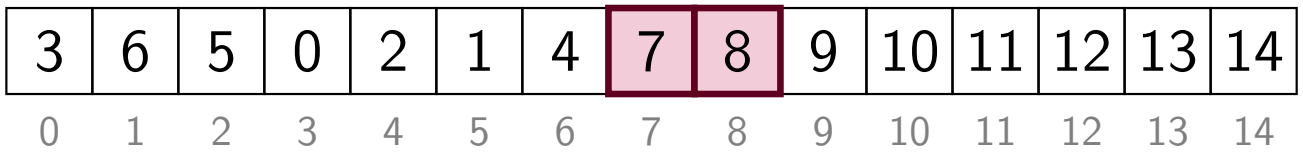
p a b

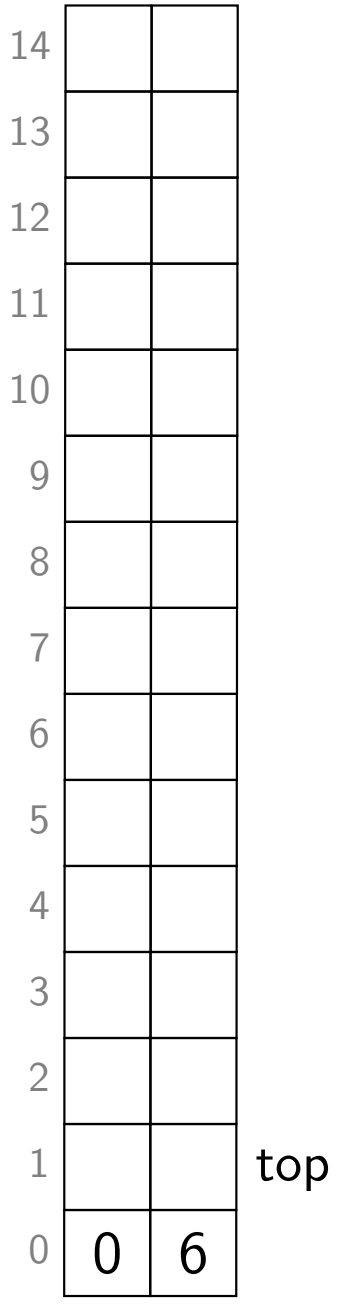
3	6	5	0	2	1	4	8	7	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2		
1		
0	0	6

top

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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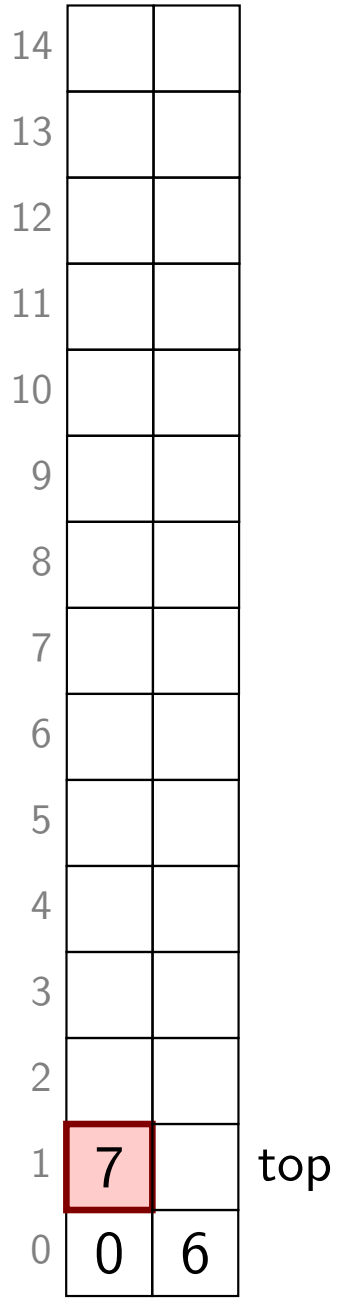
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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```
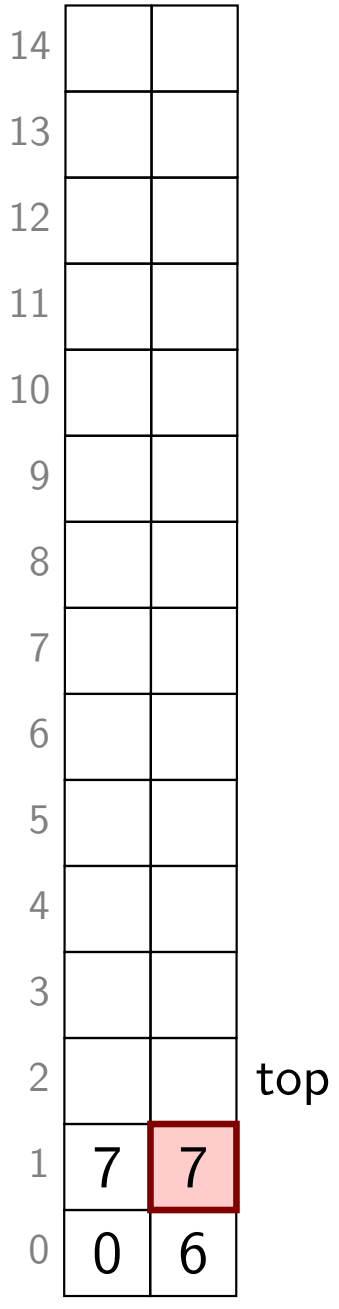

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
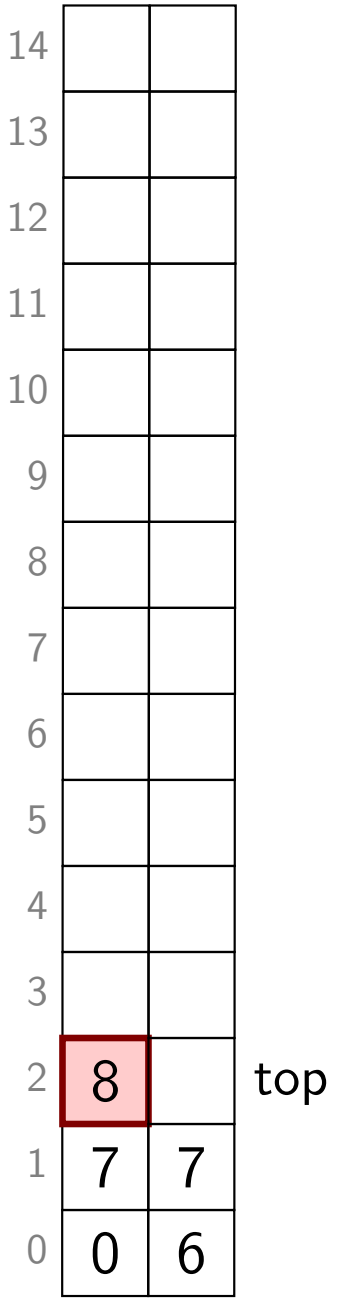

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
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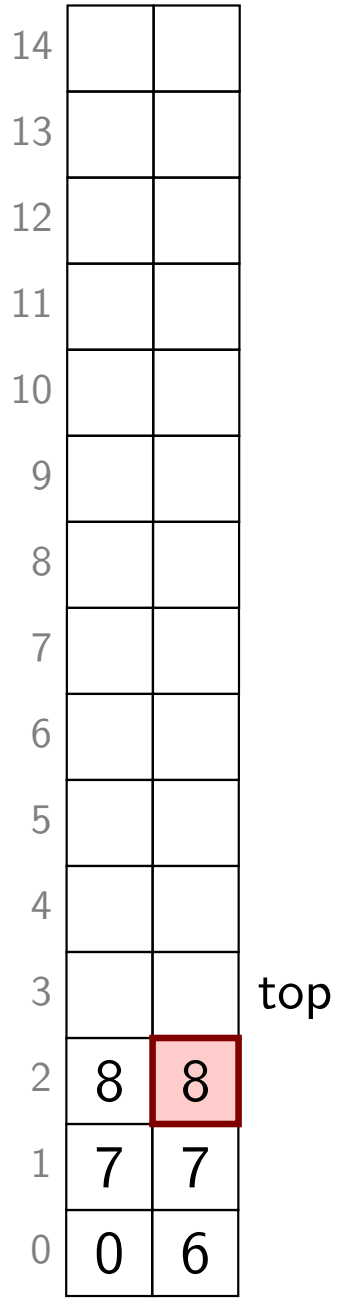
  }
}
```

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			top
2	8	8	
1	7	7	
0	0	6	

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
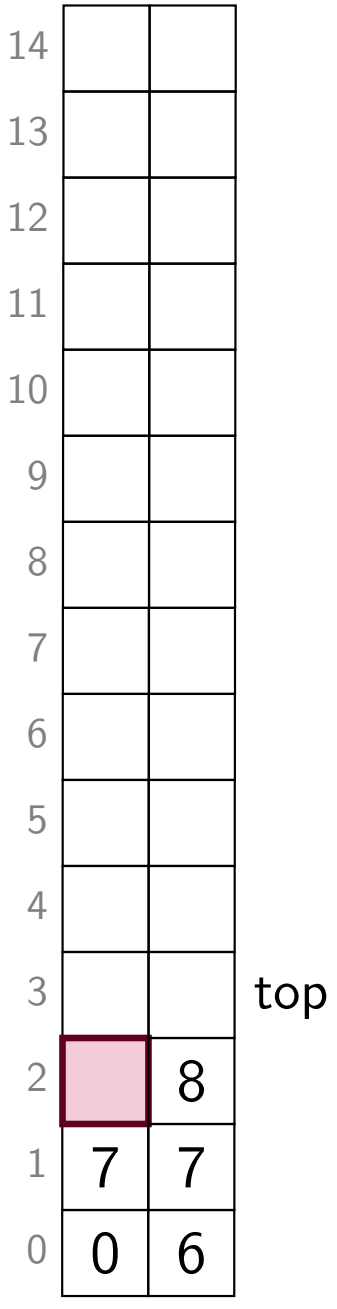

p a,b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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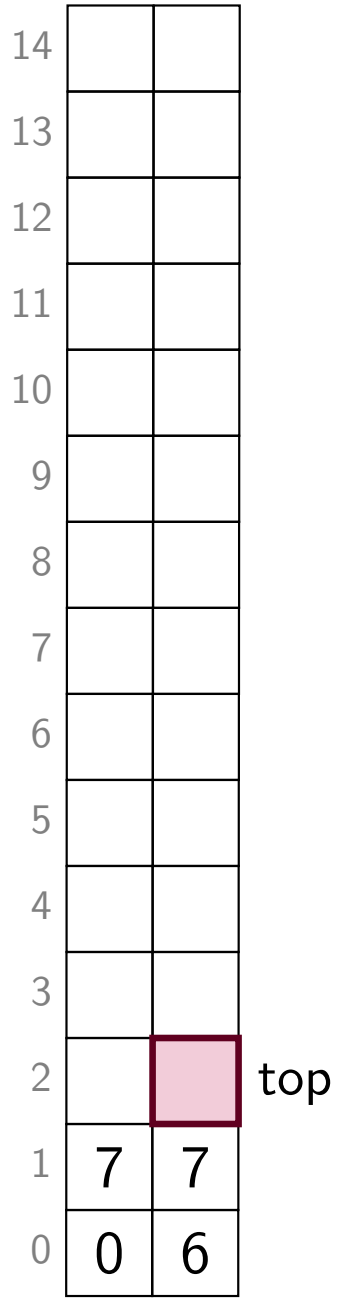
  }
}
```

p a,b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2			top
1	7	7
0	0	6

```
void sort (Tab t) {
  uint p, a, b;
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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2			top
1	7	7
0	0	6

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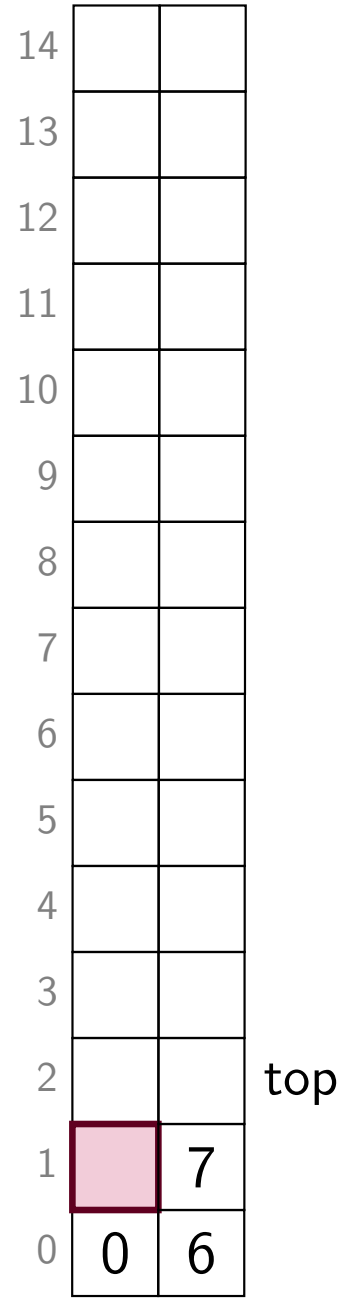
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
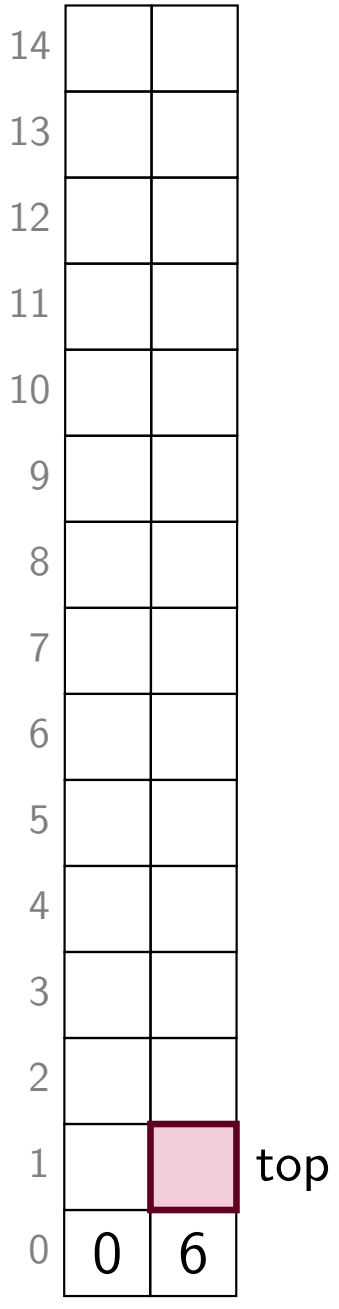

a,b,p

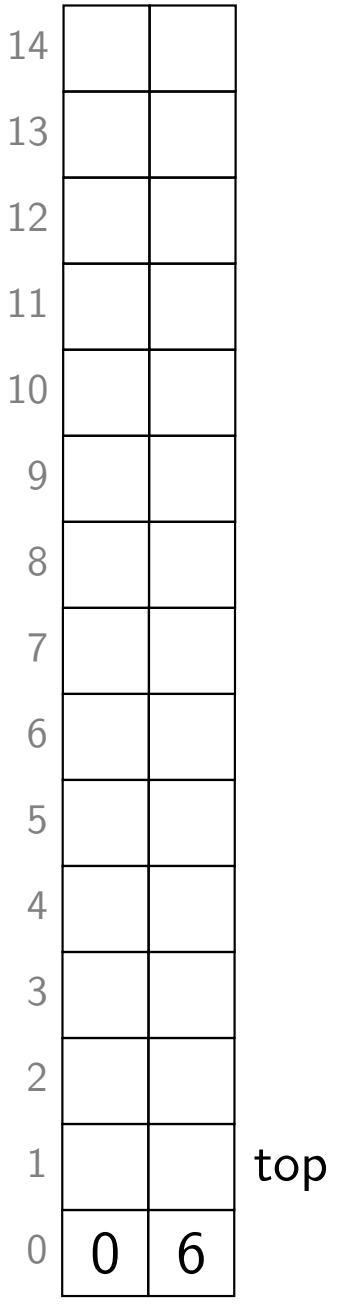
3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2		
1			top
0	0	6	

```
void sort (Tab t) {
  uint p, a, b;
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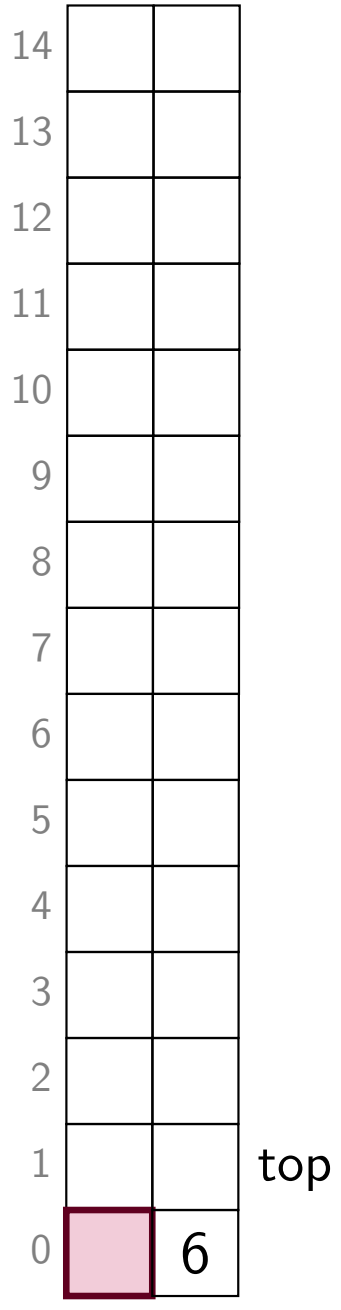
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a b,p

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
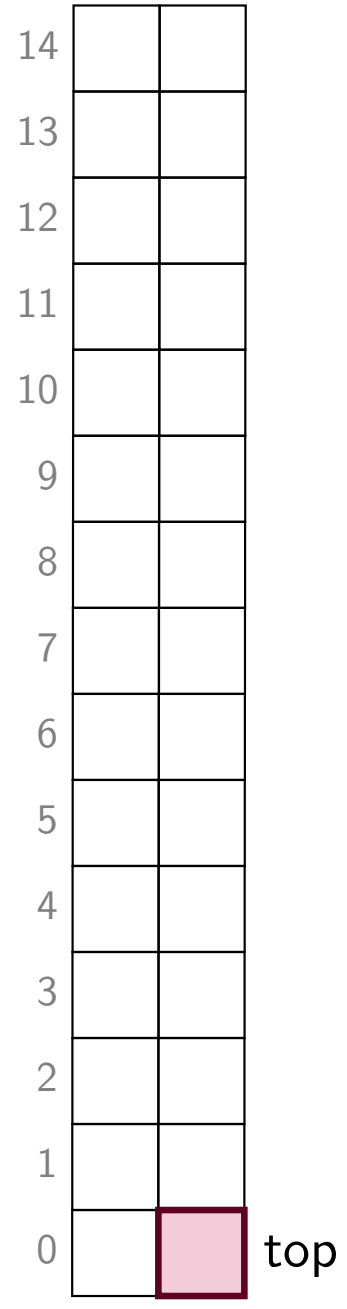

a b p

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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  uint p, a, b;
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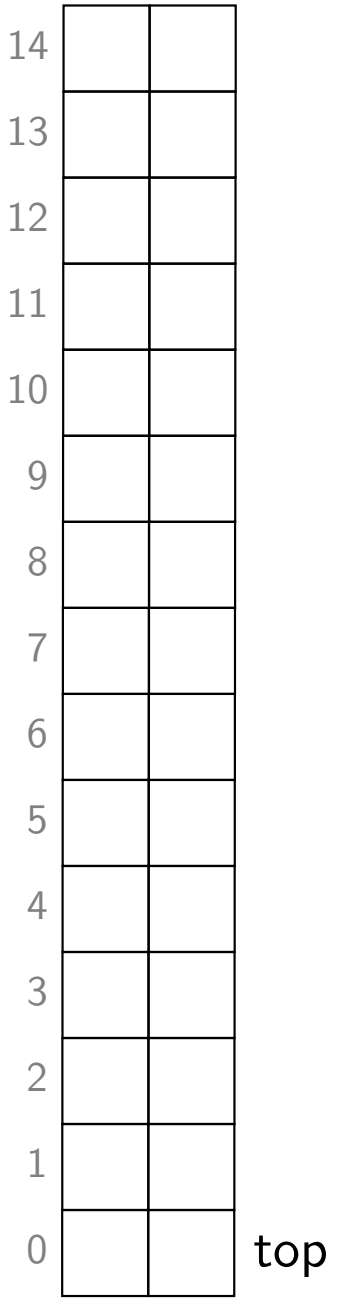
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a b p

3	6	5	0	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
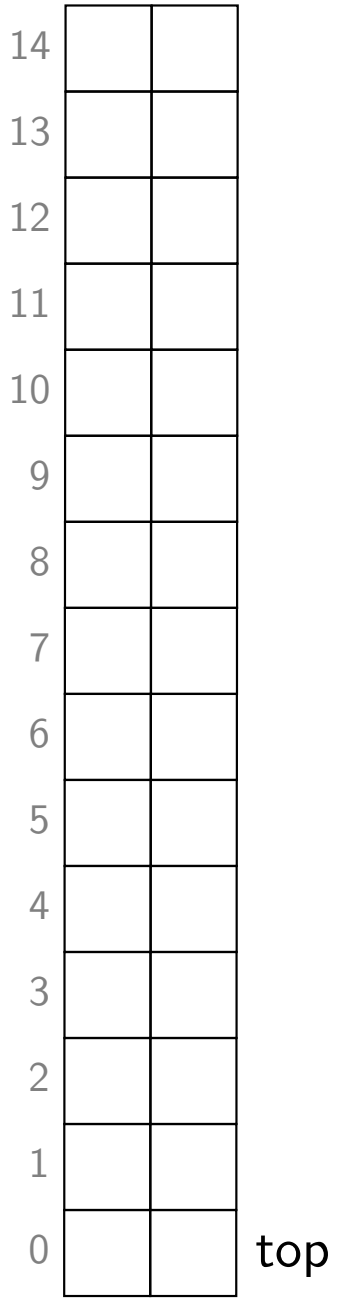

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
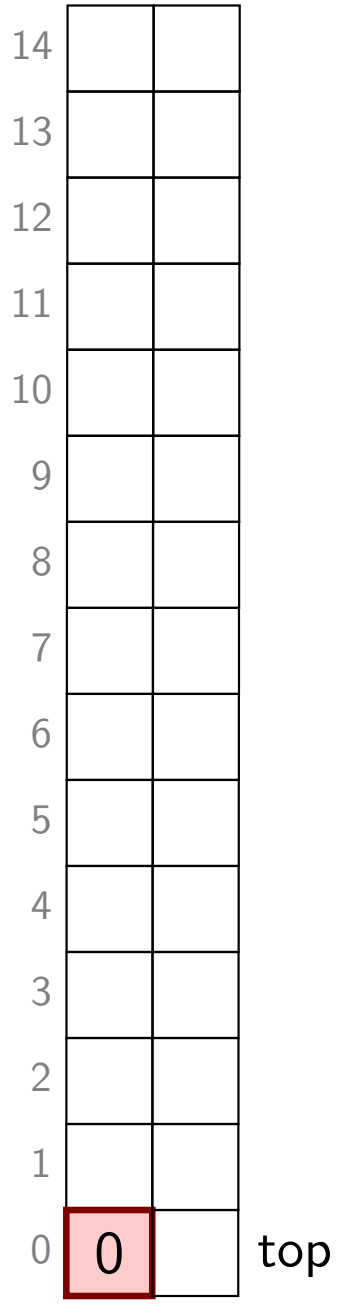

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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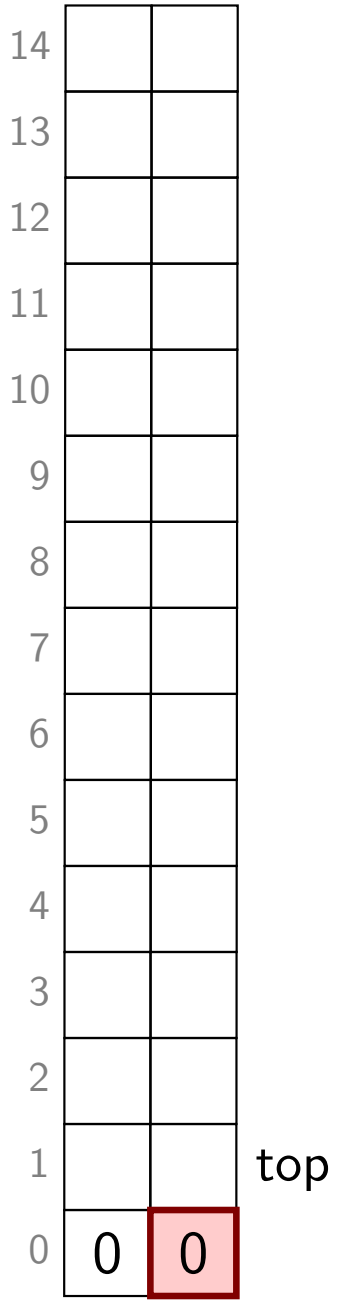
      stackPush(&last, b);
    }
  }
}
```

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
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  }
}
```
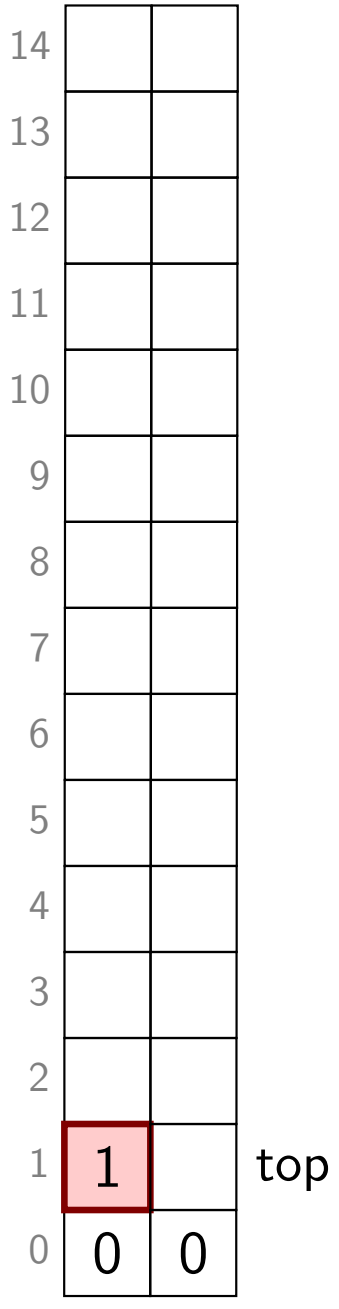

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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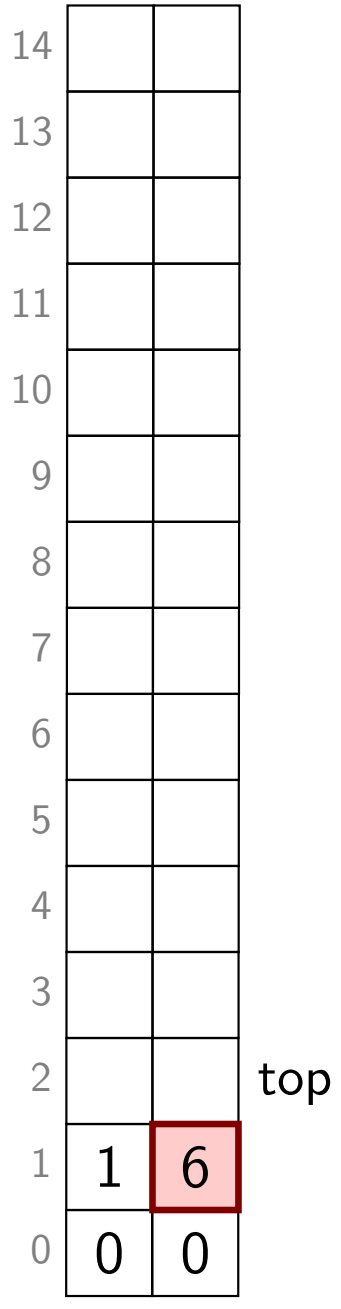
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
    }
  }
}
```
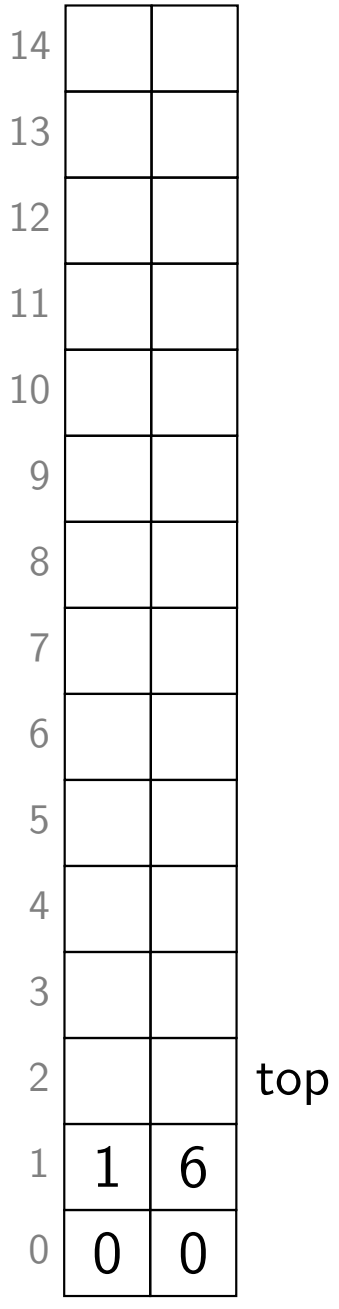

a,p b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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void sort (Tab t) {
  uint p, a, b;
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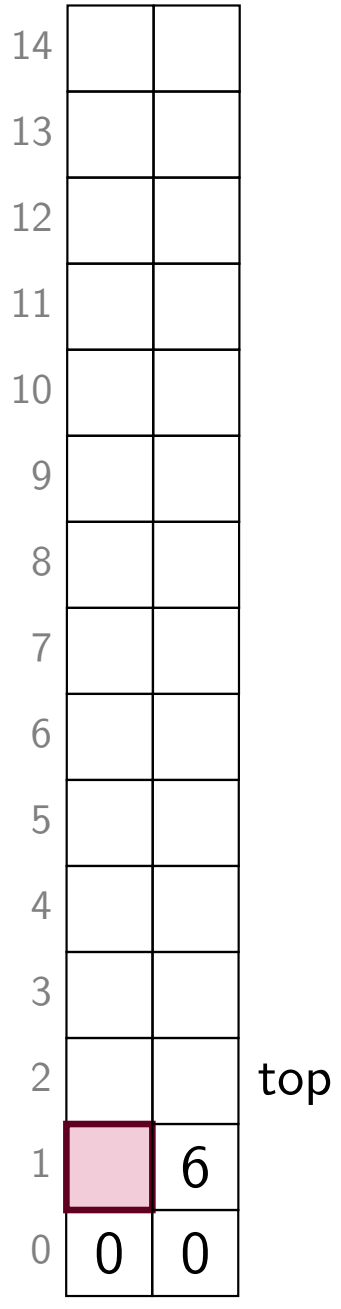
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
    }
  }
}
```
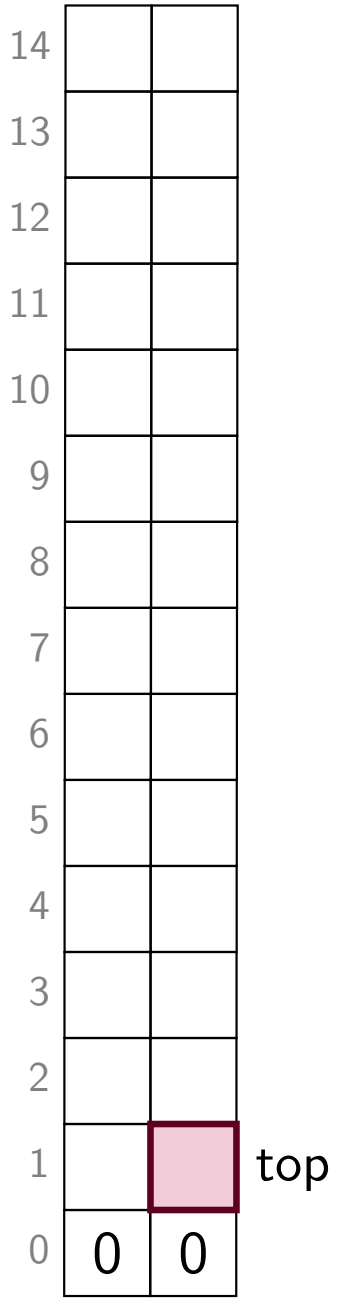

p a b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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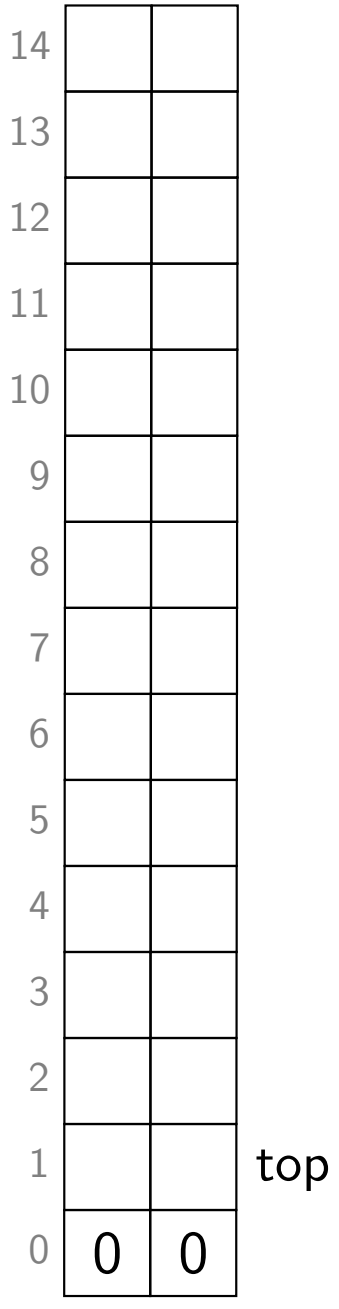
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a b

0	6	5	3	2	1	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
      stackPush(&first, p+1);
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}
```

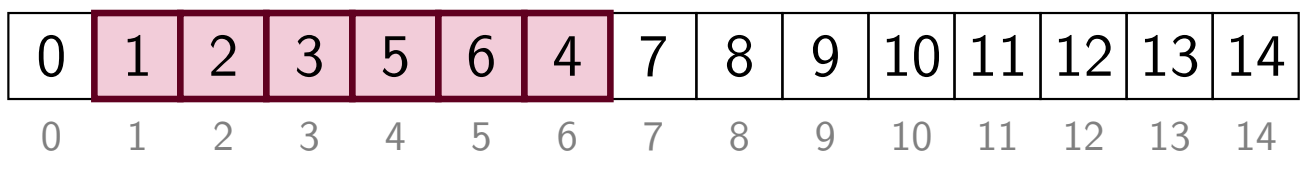

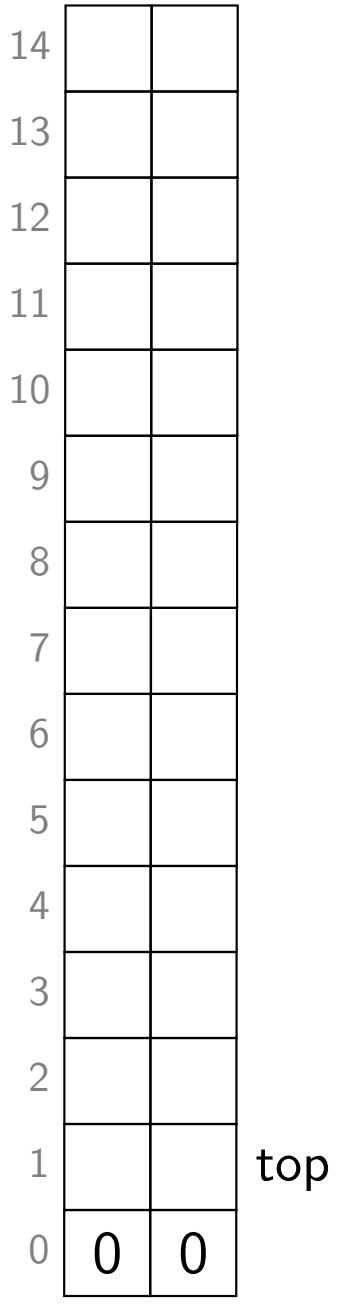

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      stackPush(&last, b);
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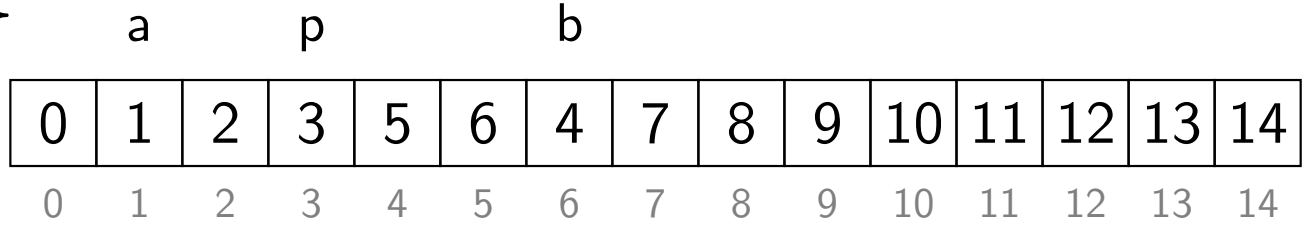

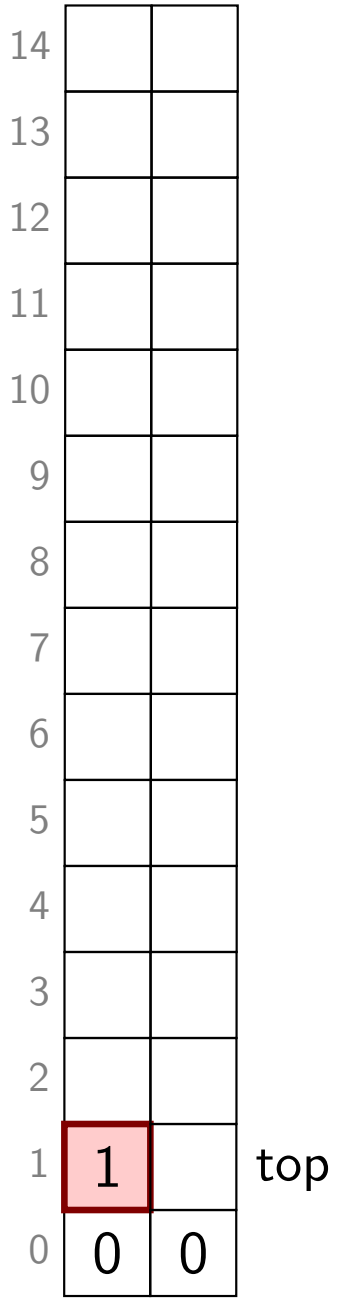

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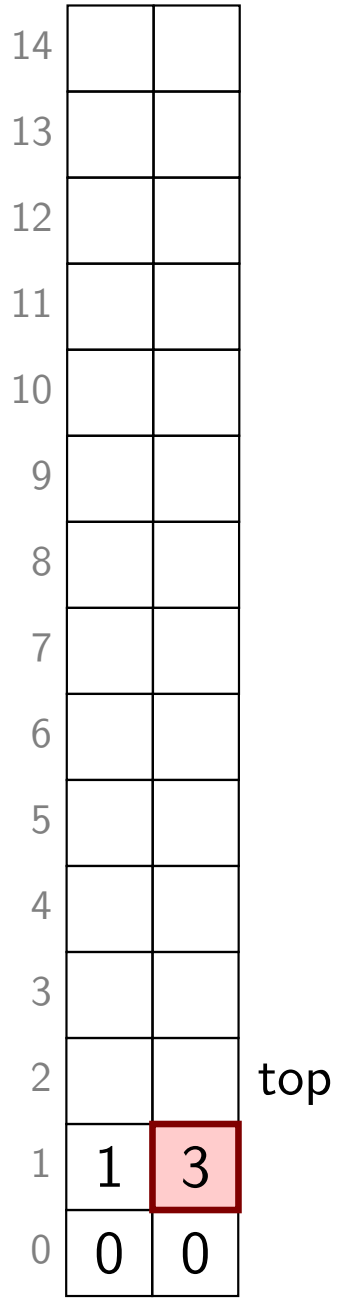
}
```

a p b

0	1	2	3	5	6	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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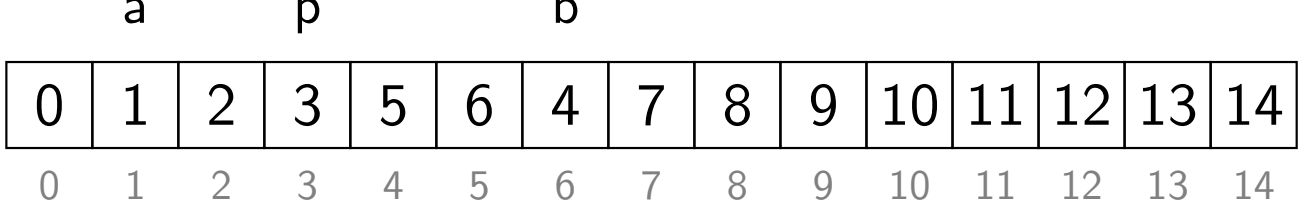

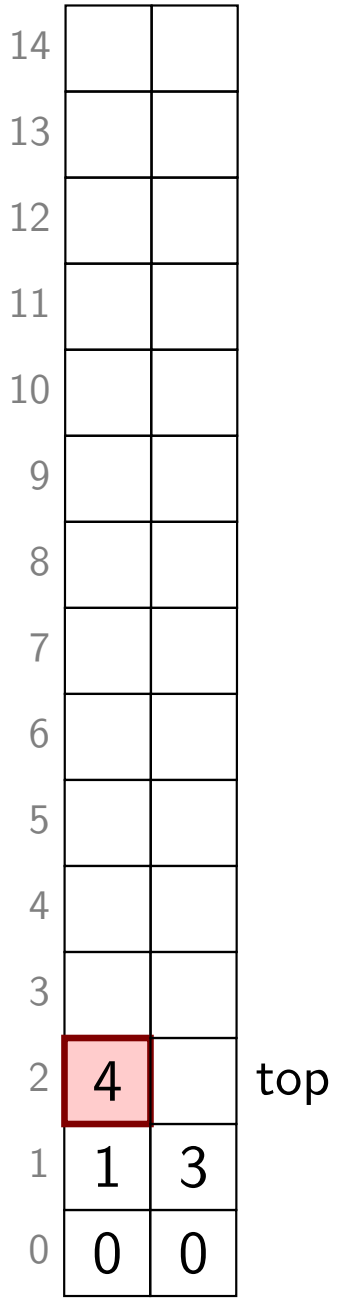

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```
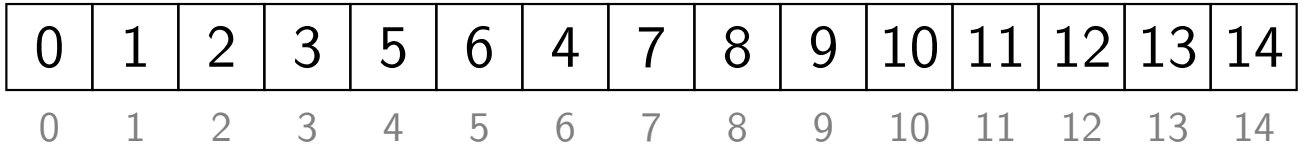
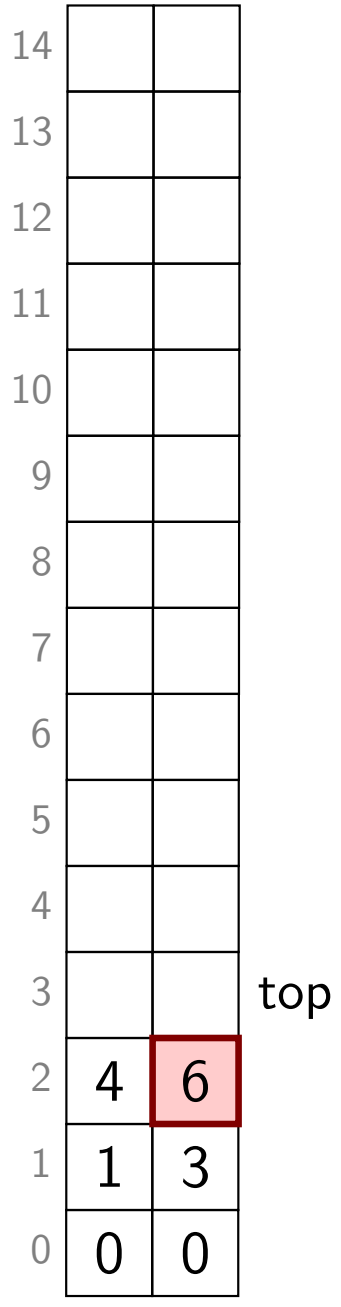
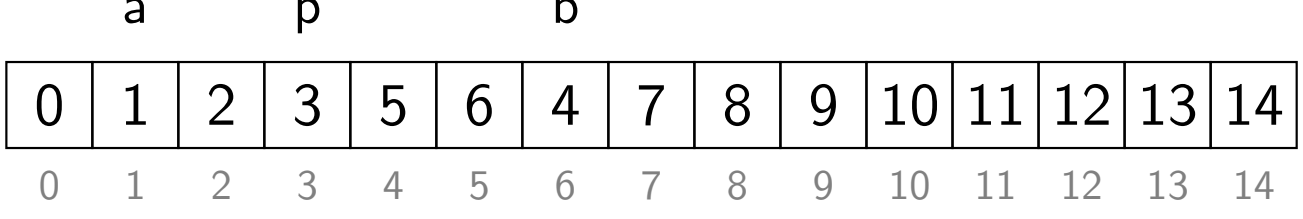
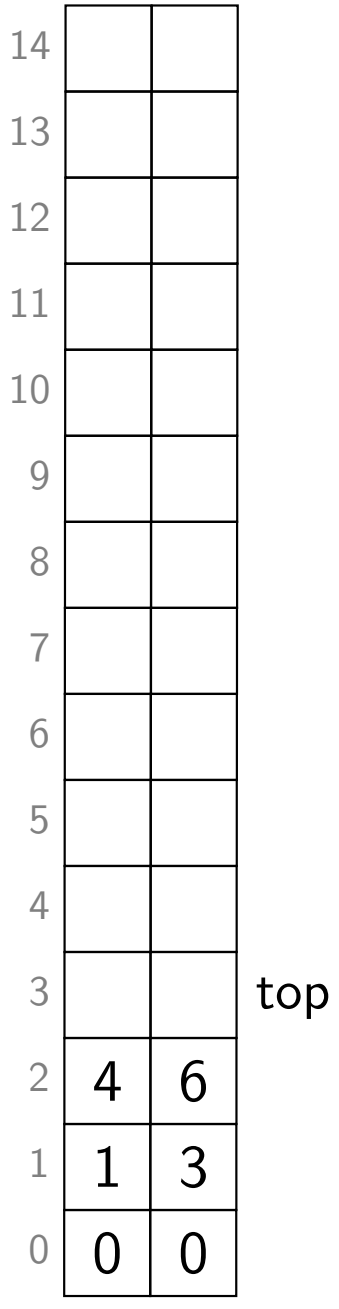





```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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    if (a < b) {
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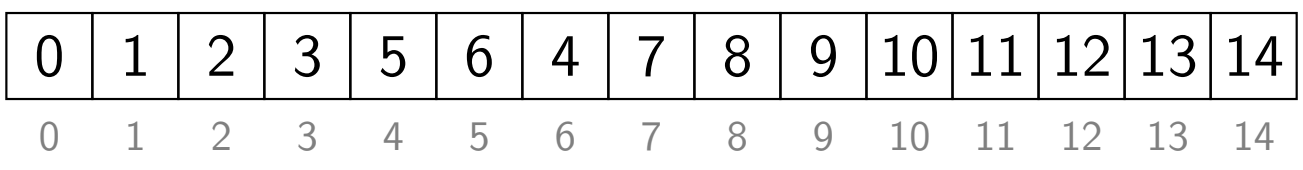
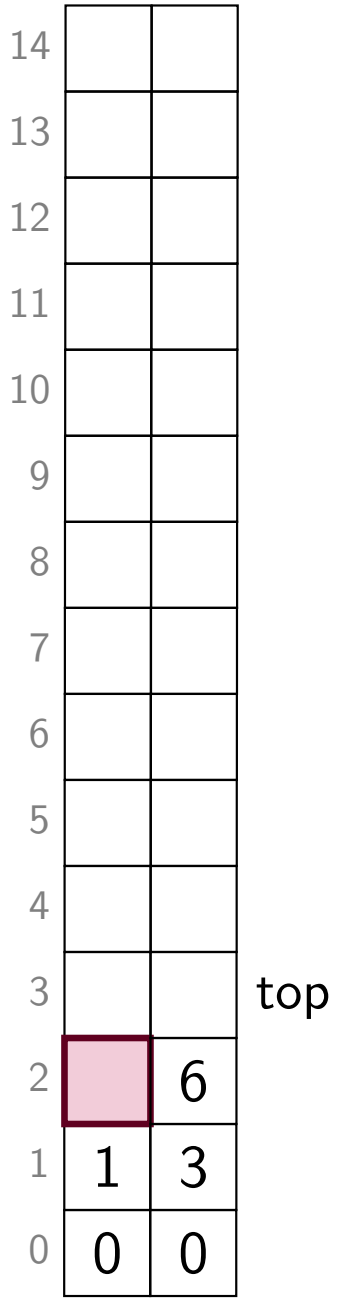
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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  stackPush(&first, 0);
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    b = stackPop(&last);
    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
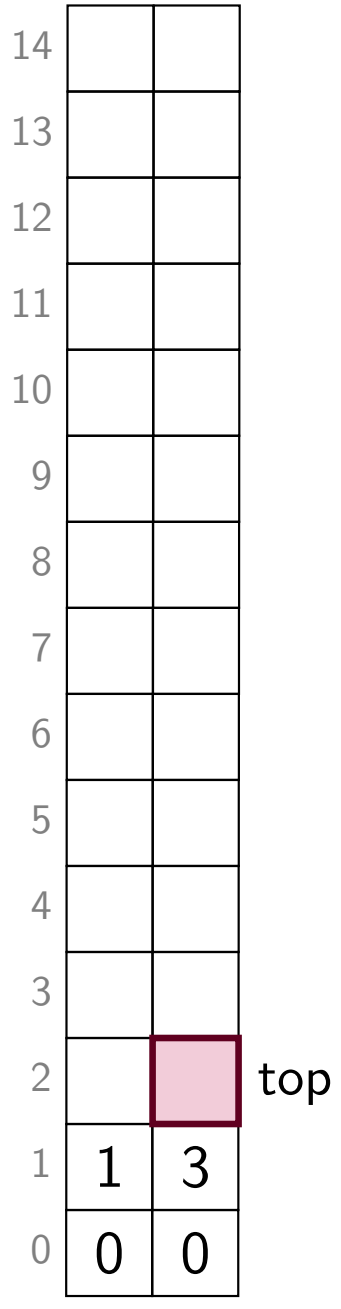

p a b

0	1	2	3	5	6	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a b

0	1	2	3	5	6	4	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3		
2			top
1	1	3
0	0	0

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
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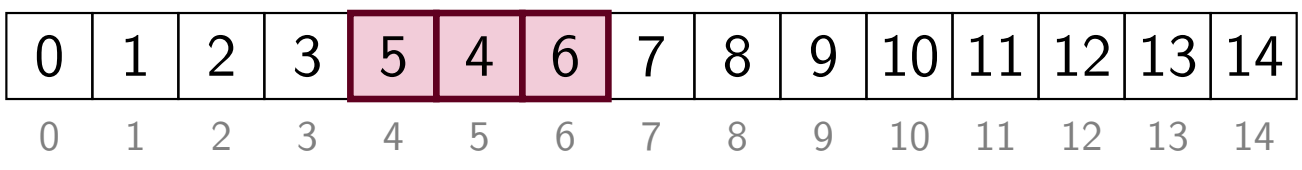
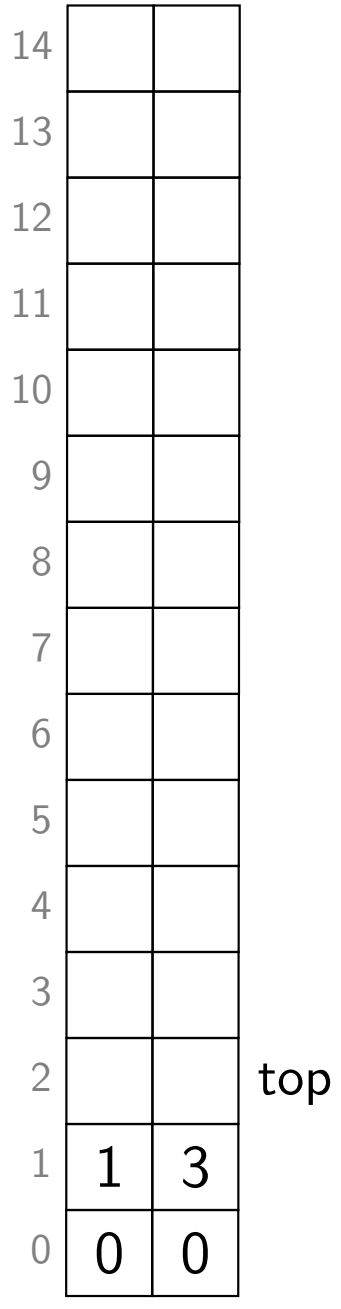
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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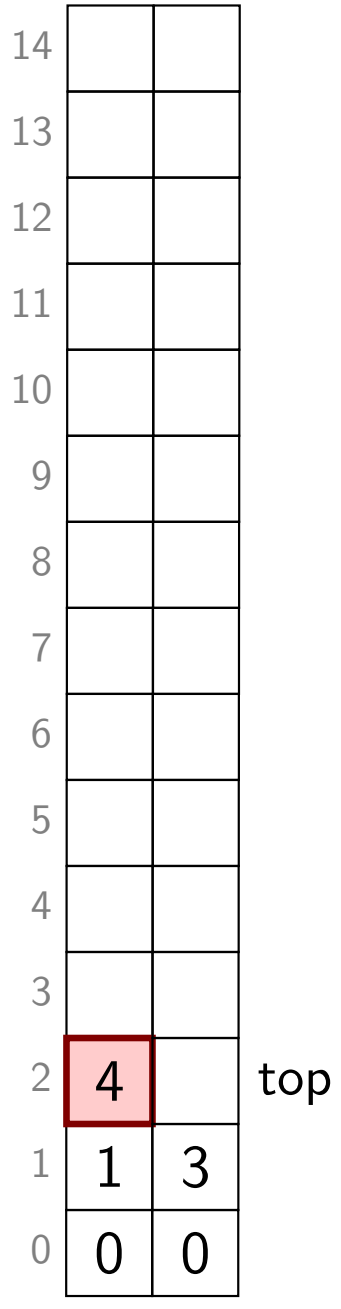
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			top
2	4	5	
1	1	3	
0	0	0	

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
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    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3	6		top
2	4	5	
1	1	3	
0	0	0	

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		top
3	6	6
2	4	5
1	1	3
0	0	0

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
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    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4			top
3	6	6
2	4	5
1	1	3
0	0	0

```
void sort (Tab t) {
  uint p, a, b;
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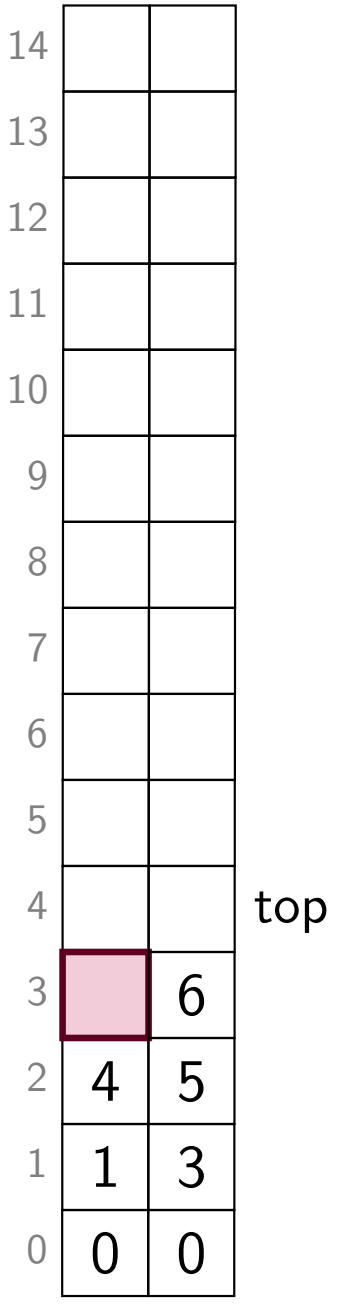
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
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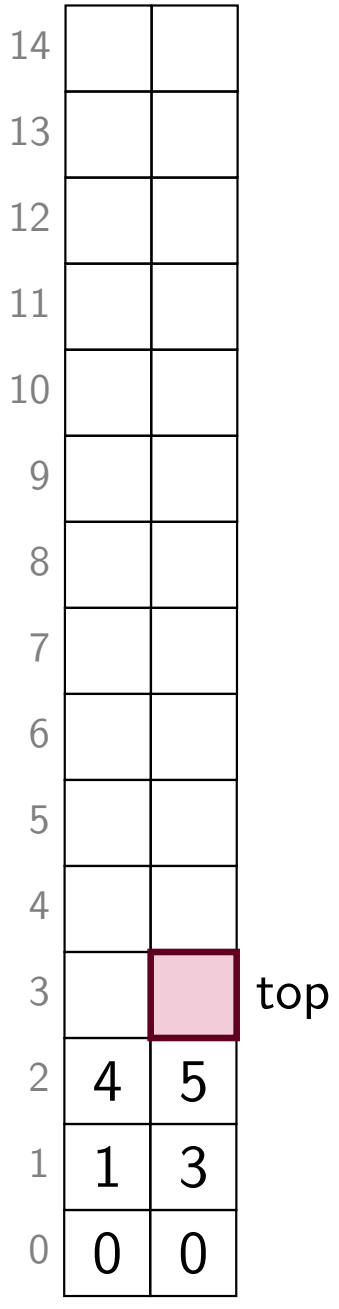
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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    if (a < b) {
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3			top
2	4	5
1	1	3
0	0	0

```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
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  stackPush(&last, t.len-1);
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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			top
2	4	5	
1	1	3	
0	0	0	

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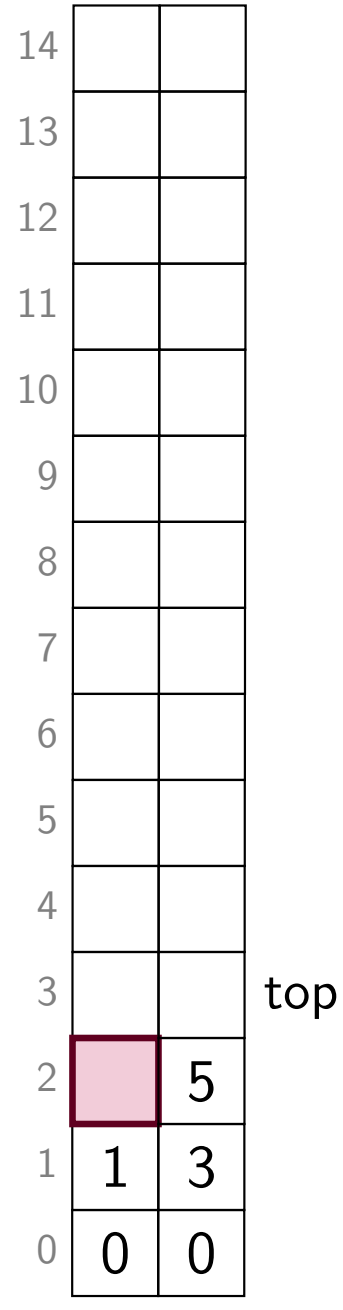
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
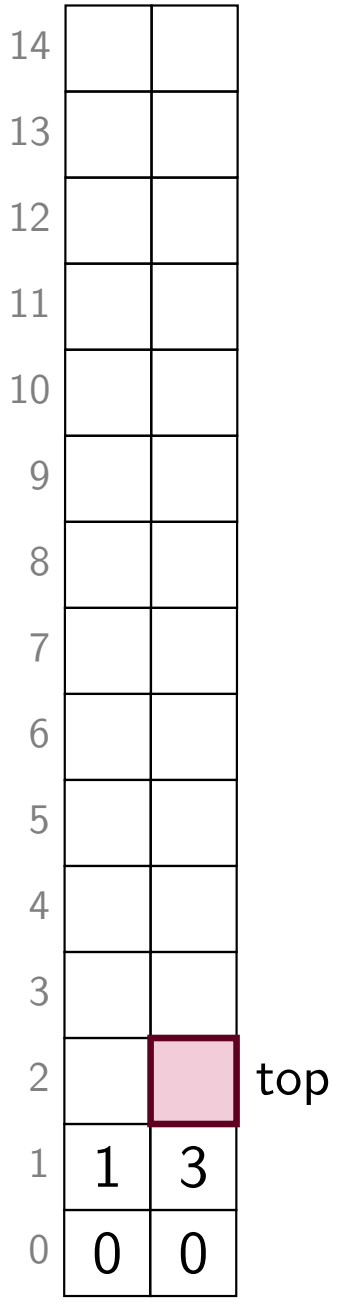

a b,p

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a b,p

0	1	2	3	5	4	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			top
1	1	3	
0	0	0	

```
void sort (Tab t) {
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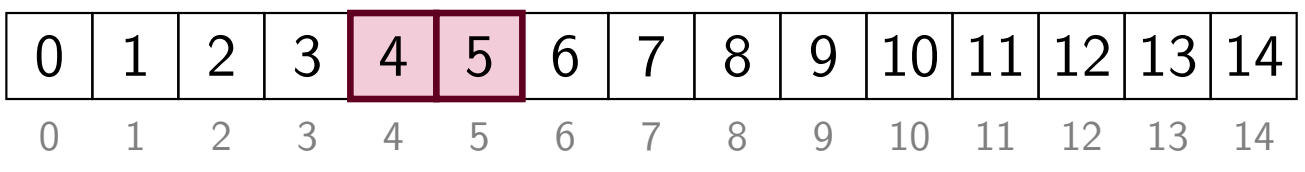
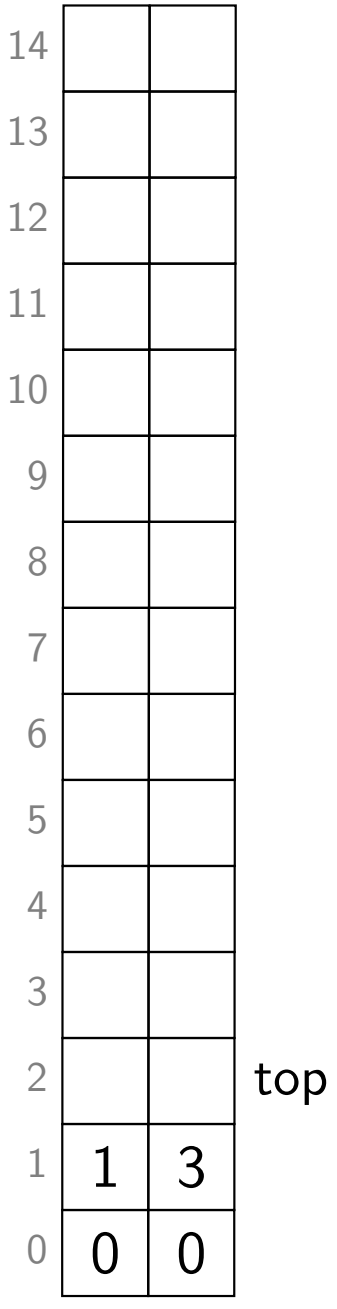
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```





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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
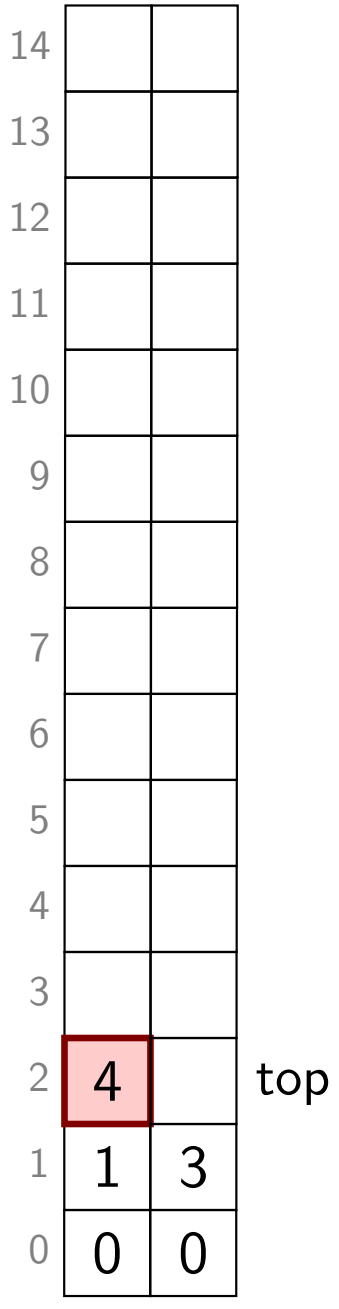

a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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    b = stackPop(&last);
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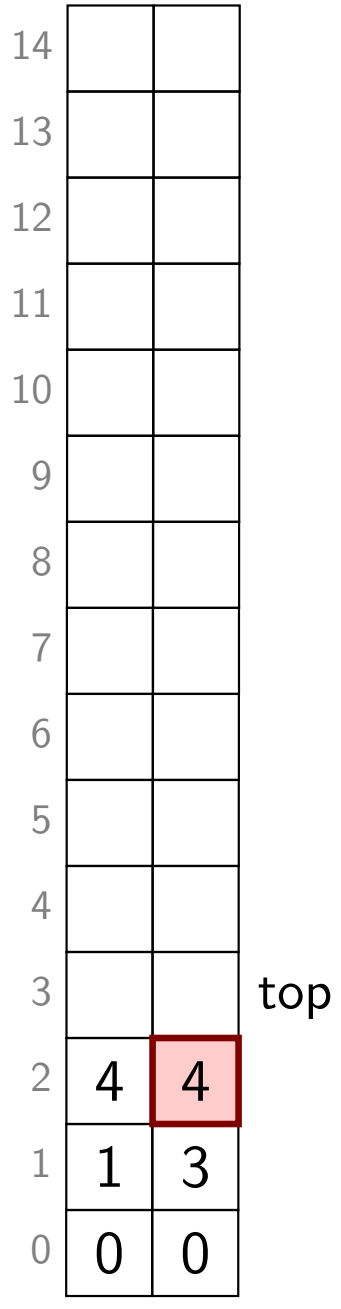
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

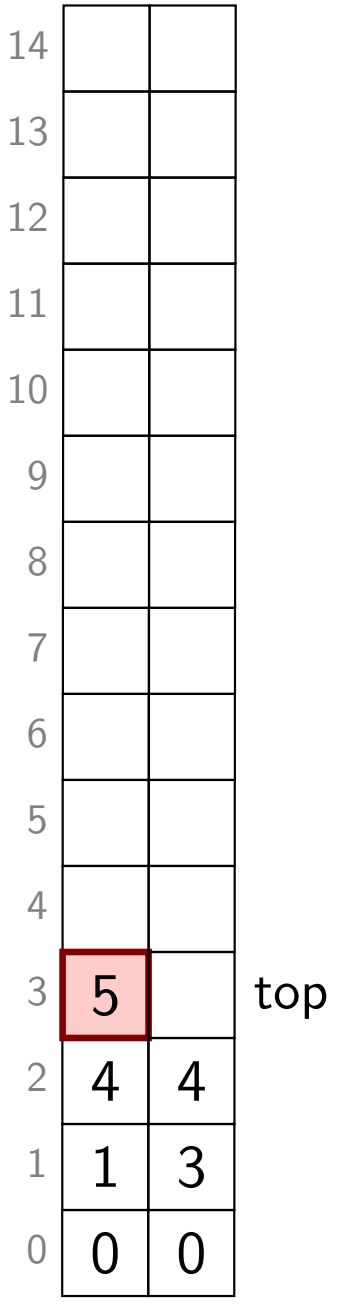
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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```
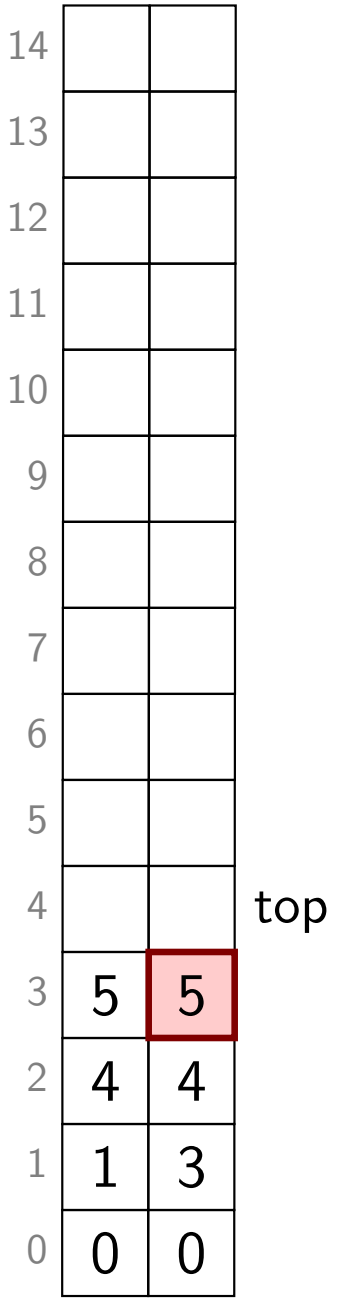

a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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}
```

a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4			top
3	5	5
2	4	4
1	1	3
0	0	0

```
void sort (Tab t) {
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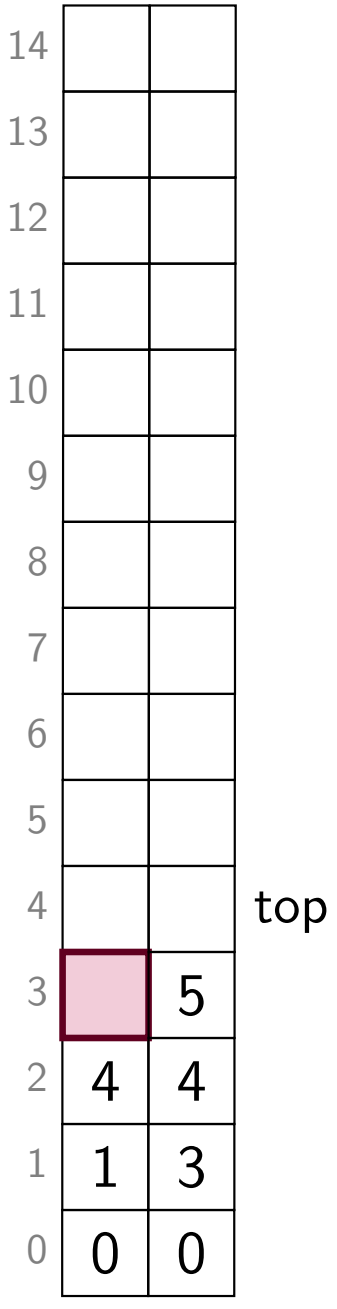
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
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    }
  }
}
```
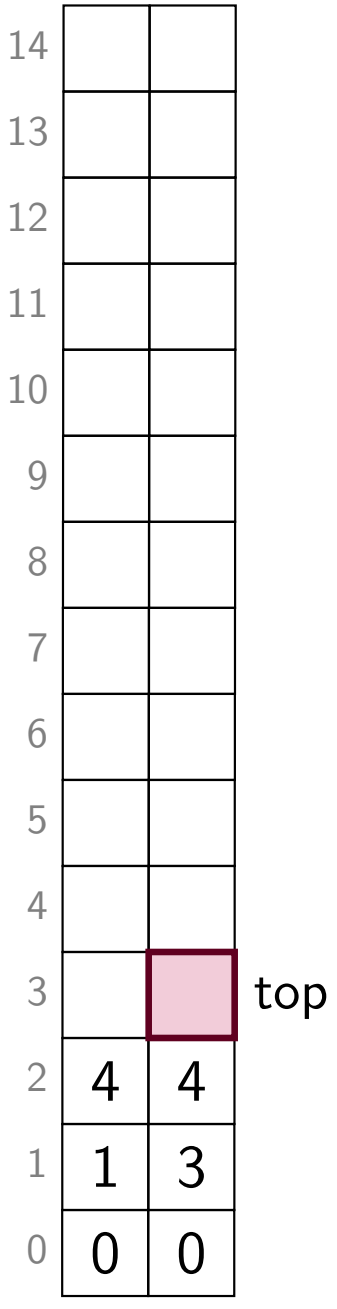

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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```

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14		
13		
12		
11		
10		
9		
8		
7		
6		
5		
4		
3			top
2	4	4
1	1	3
0	0	0

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      stackPush(&last, p);
      stackPush(&first, p+1);
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    }
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}
```

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

14			
13			
12			
11			
10			
9			
8			
7			
6			
5			
4			
3			top
2	4	4	
1	1	3	
0	0	0	

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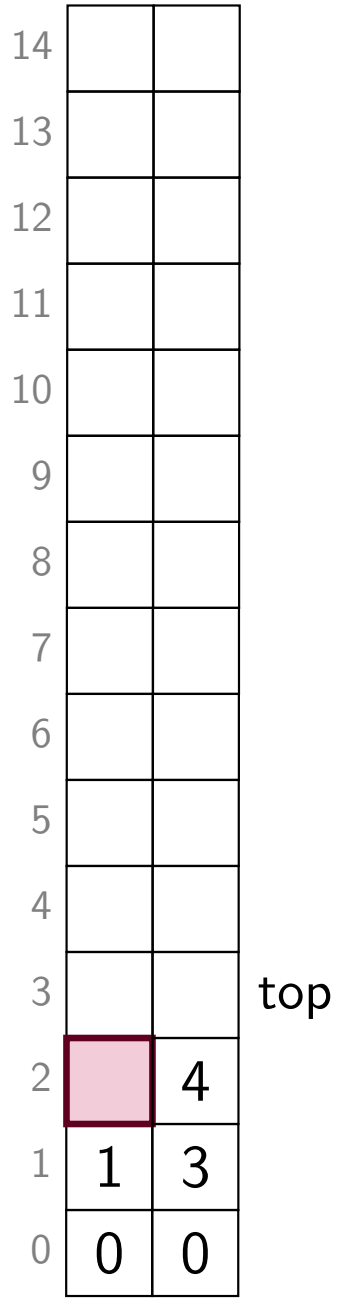
a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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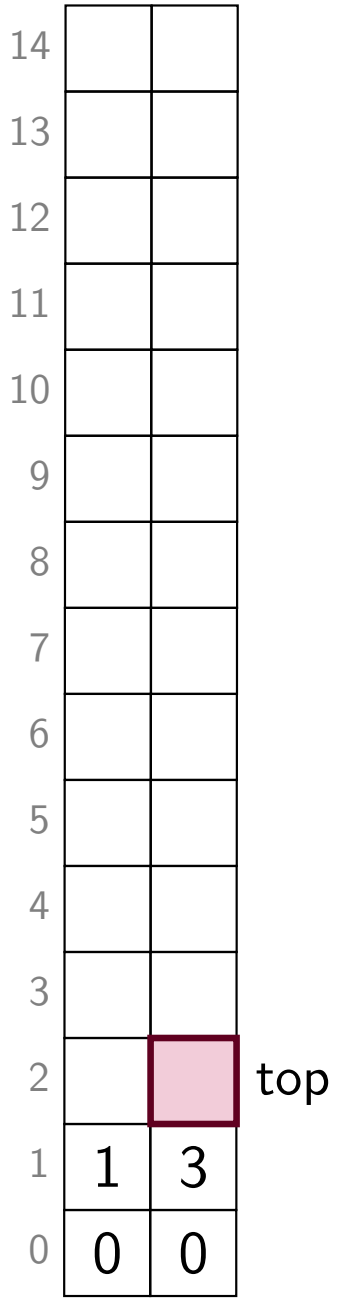
```

a,b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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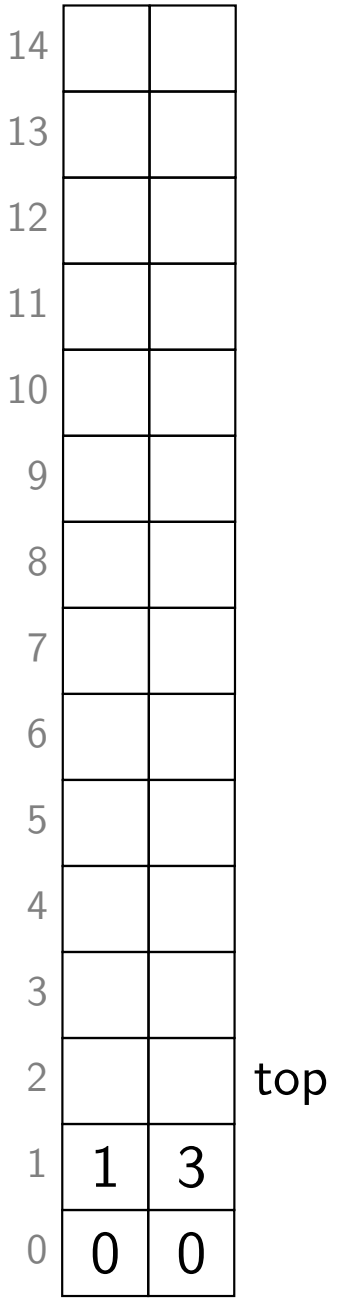
a,b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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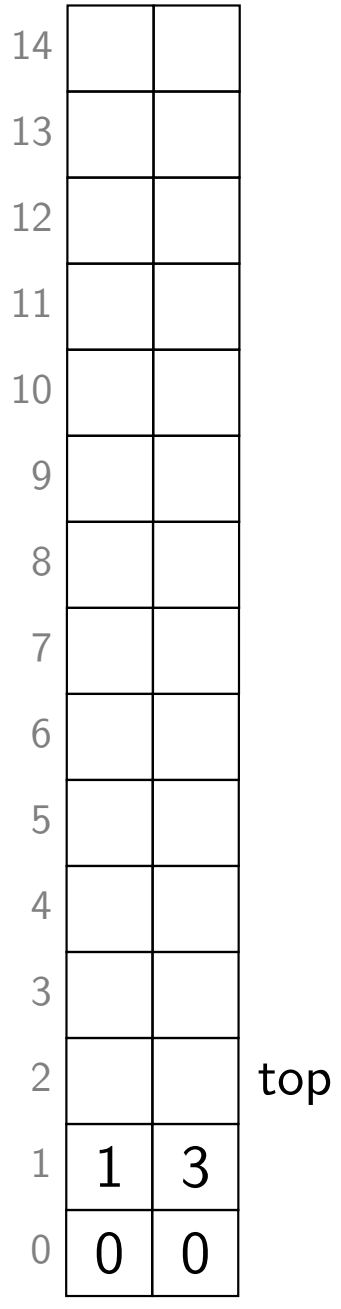
a,b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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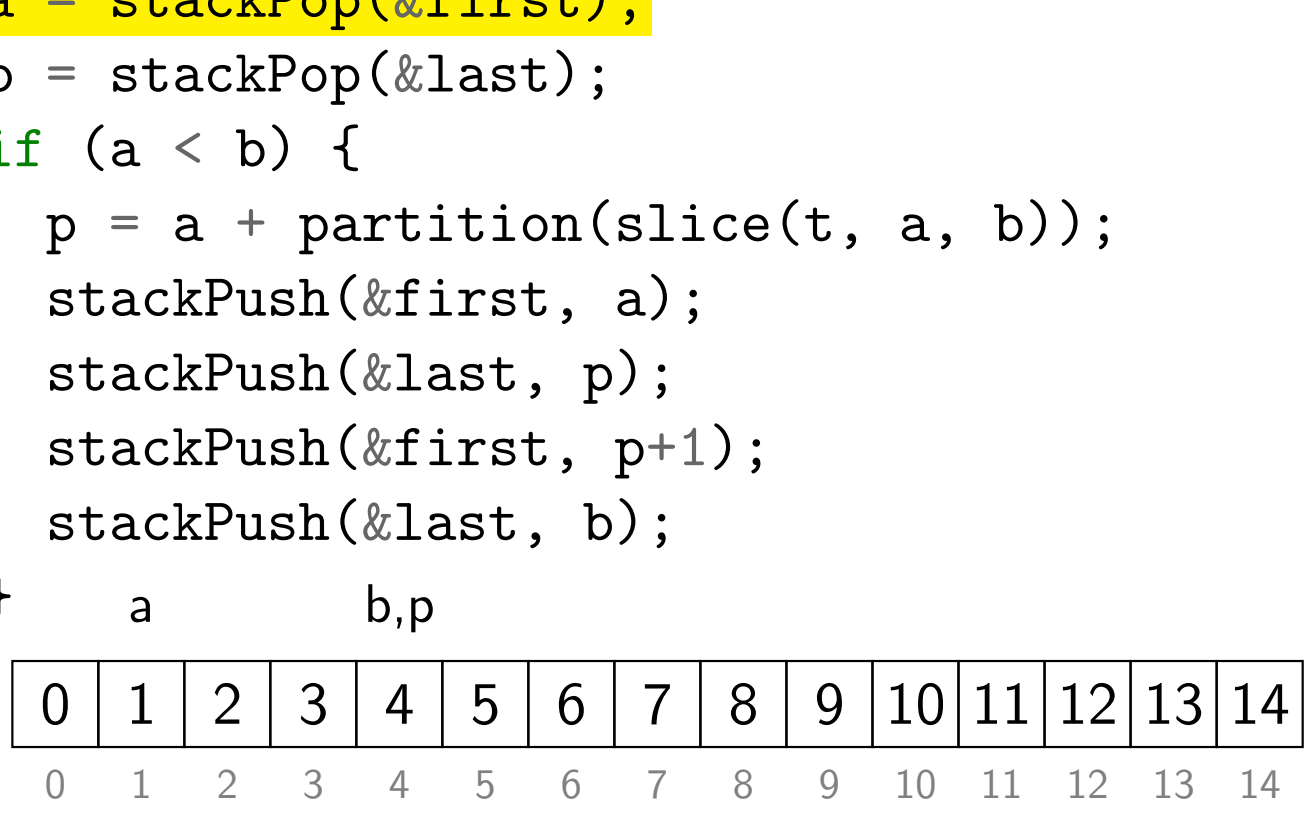

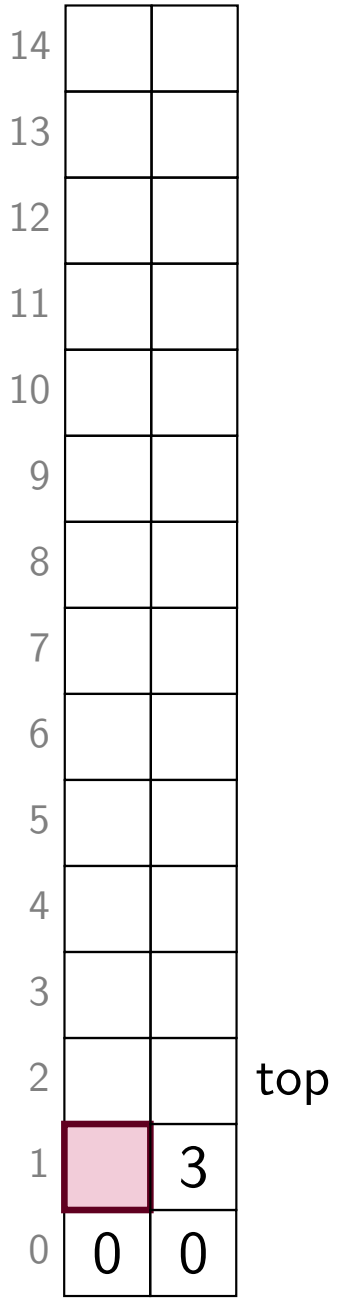

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}
```
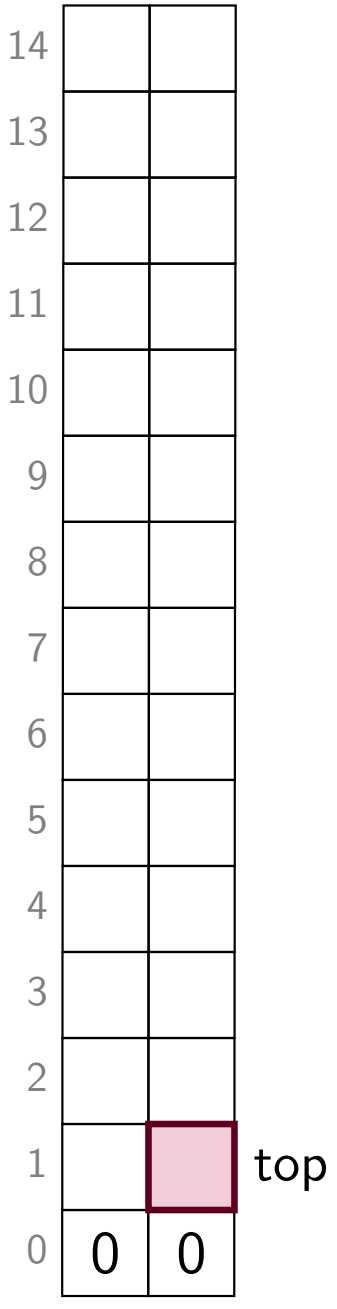

a b p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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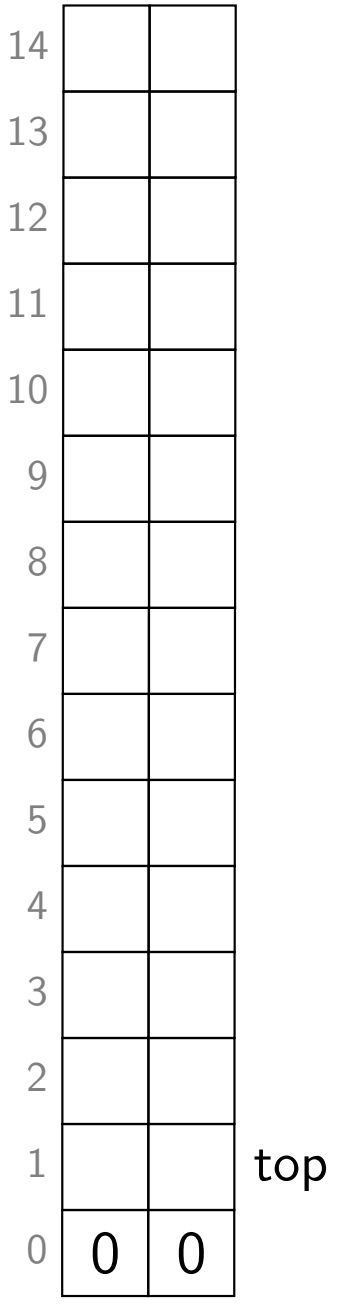
a b p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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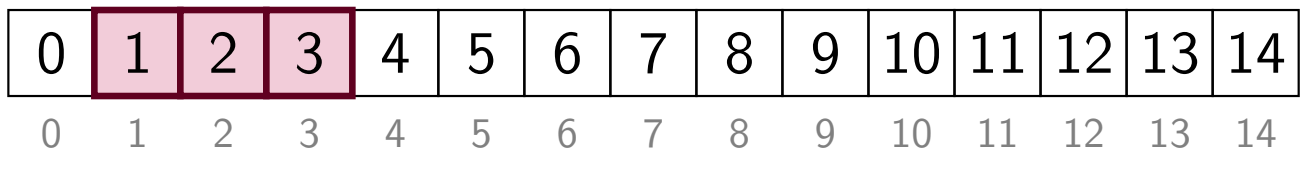

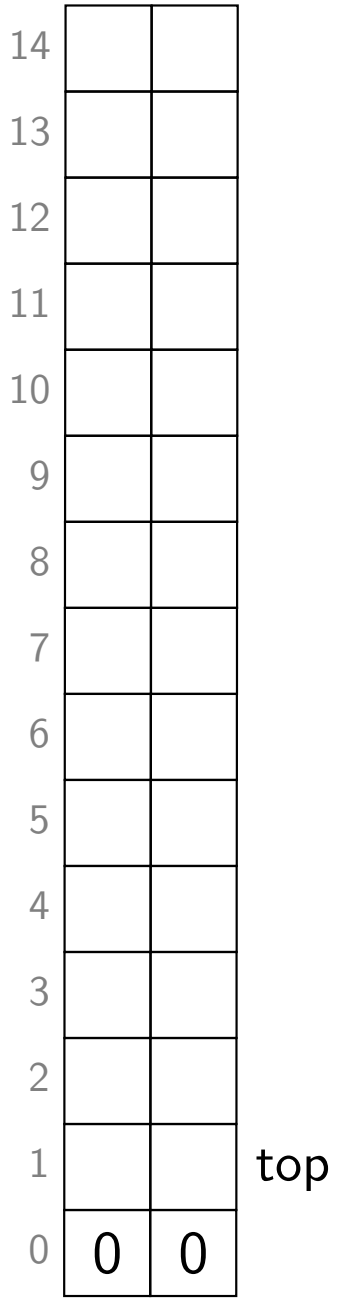

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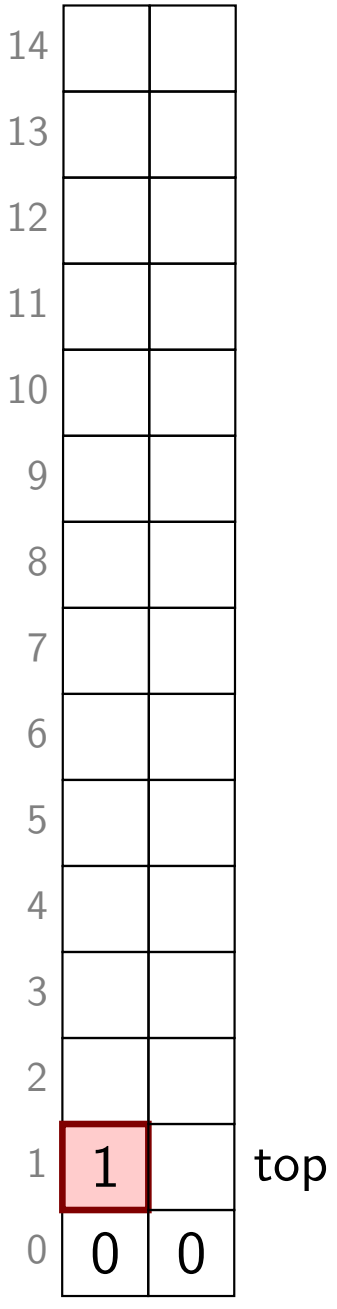
```

a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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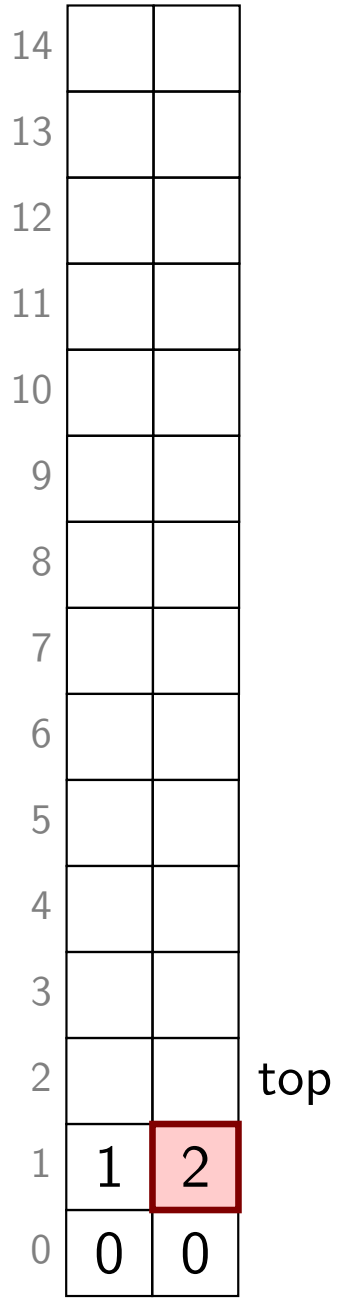
a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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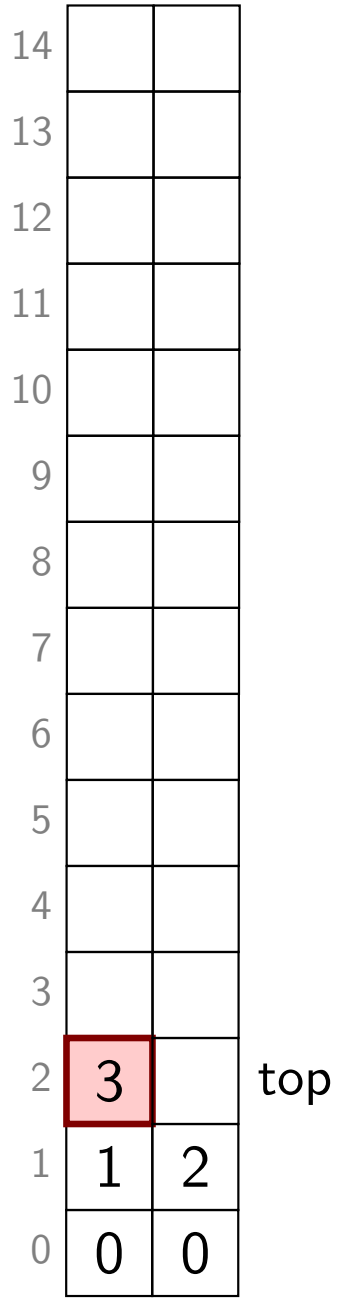
a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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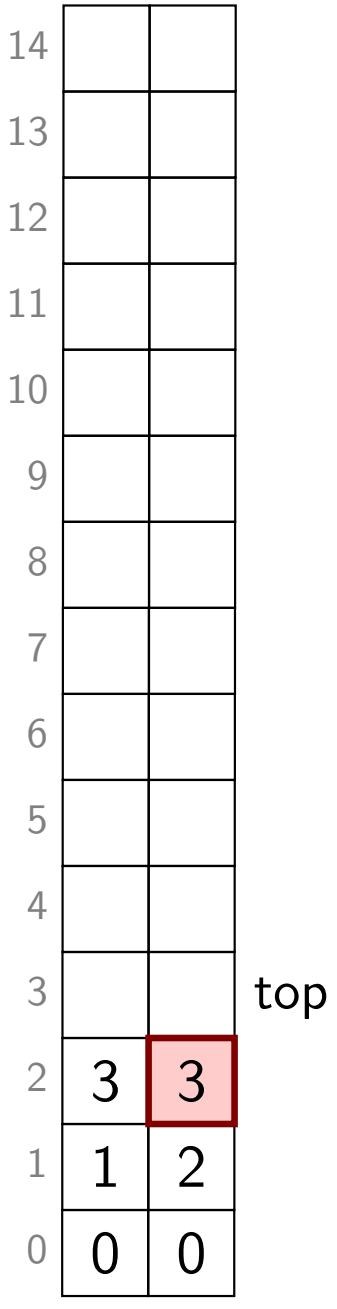
a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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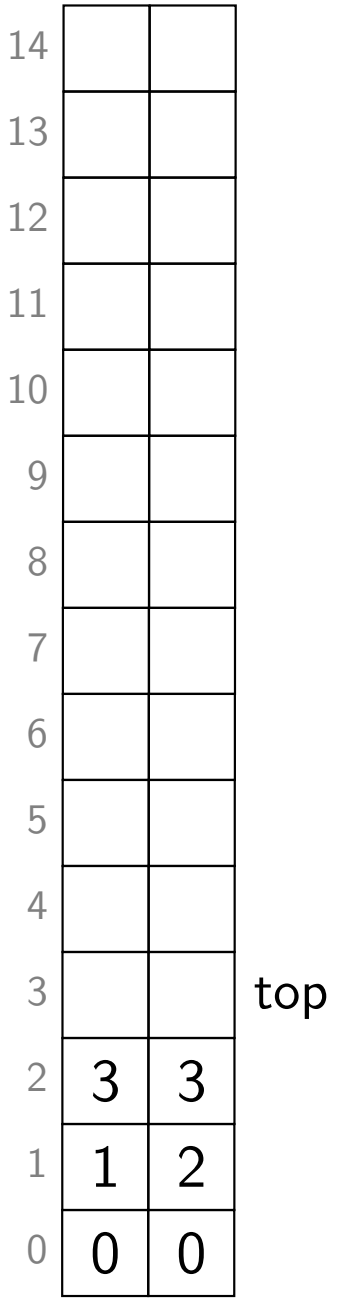
a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
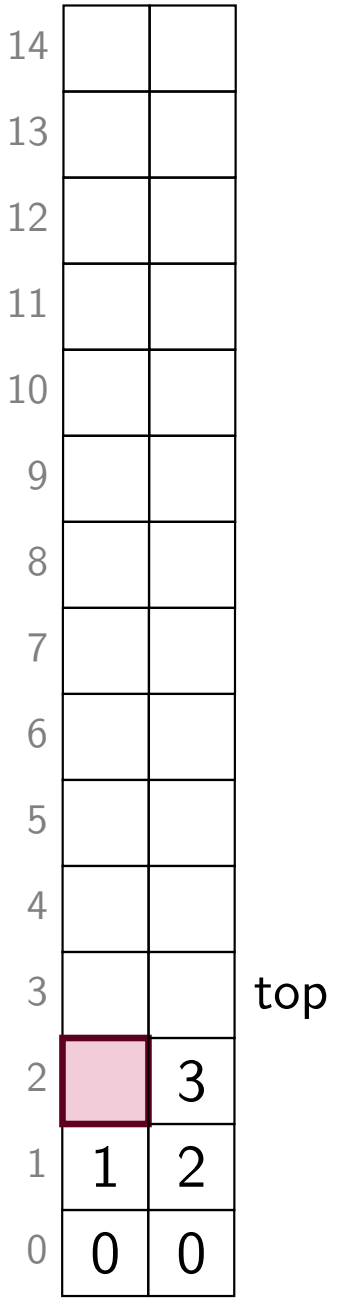

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
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  }
}
```
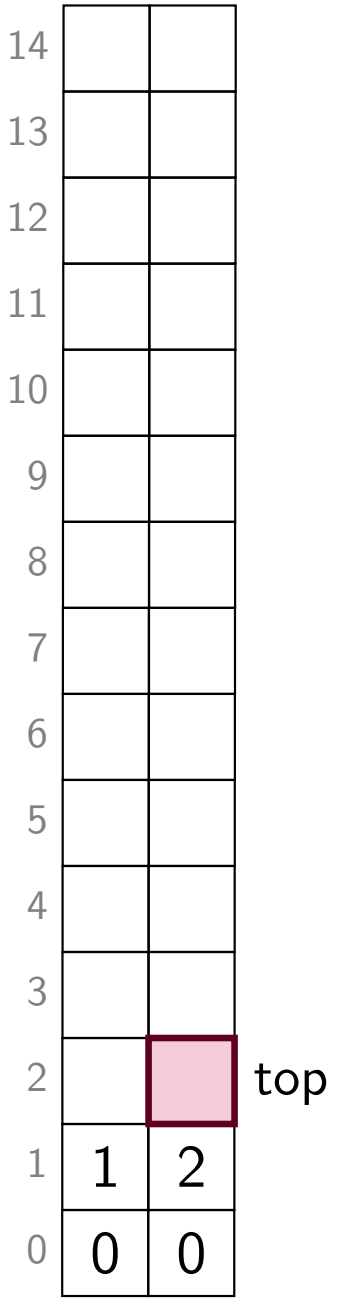

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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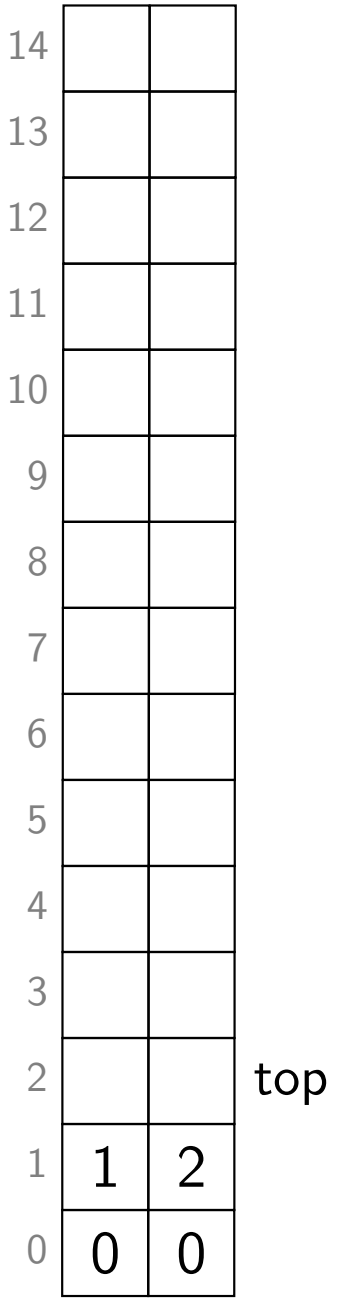
}
```

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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    }
  }
}
```
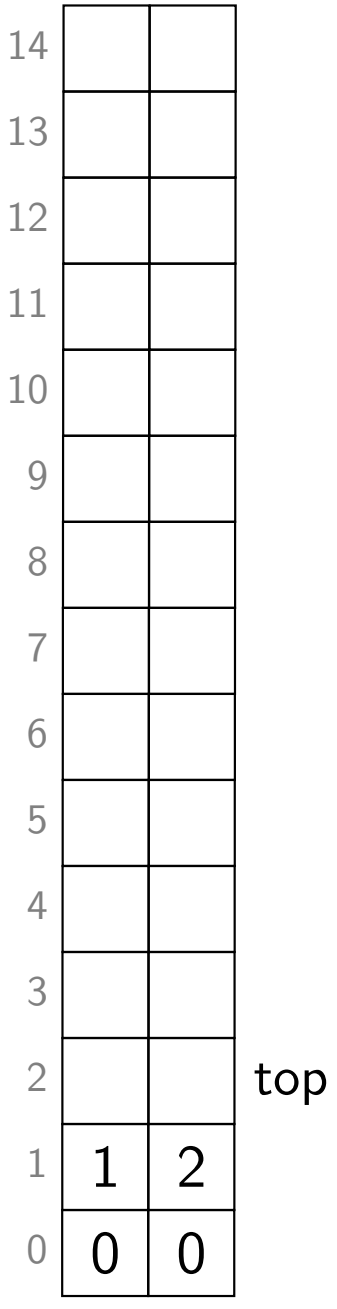

p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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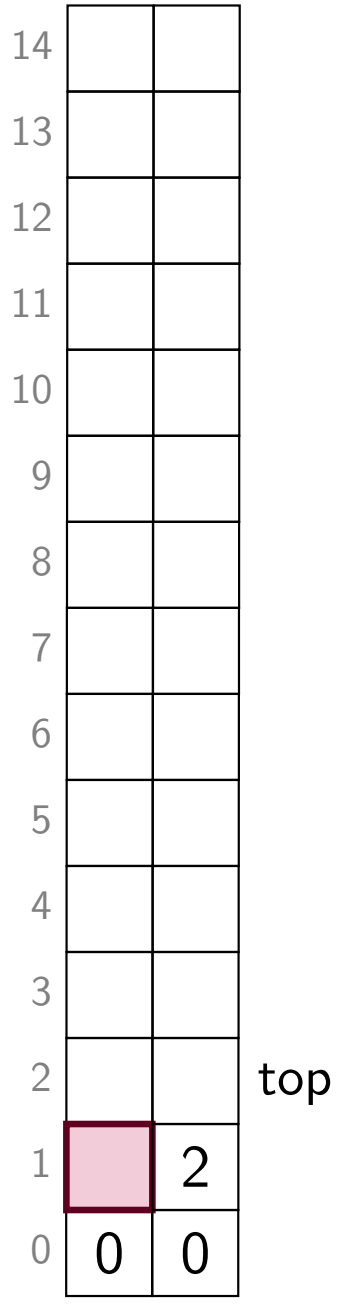
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
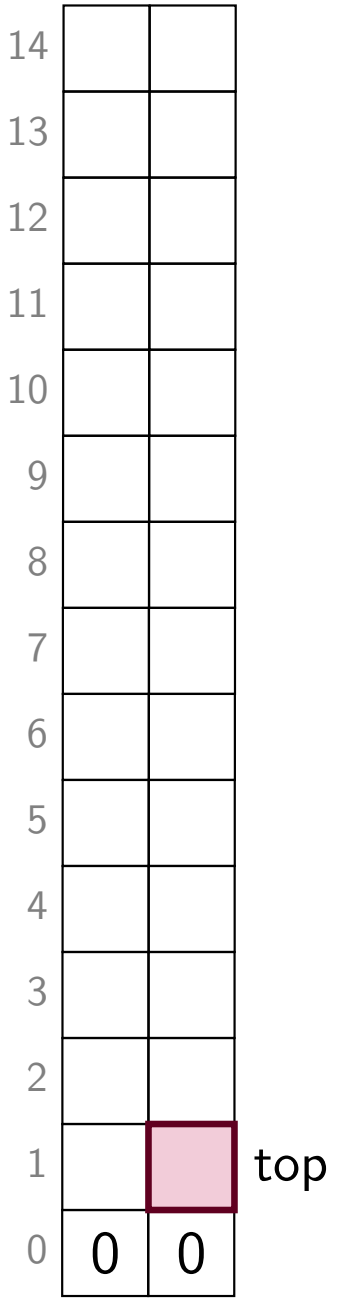

a b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&last, b);
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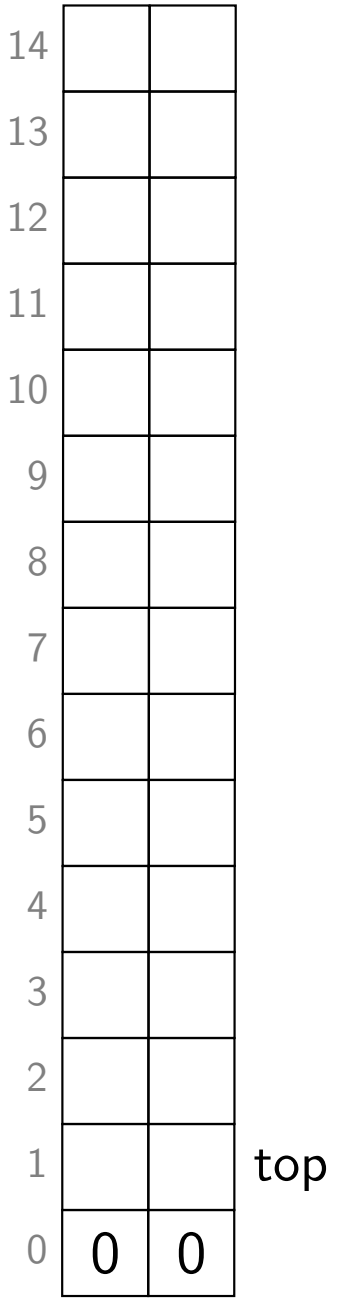
}
```

a b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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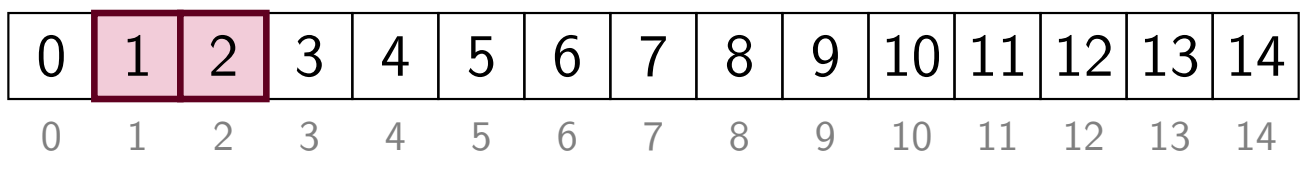

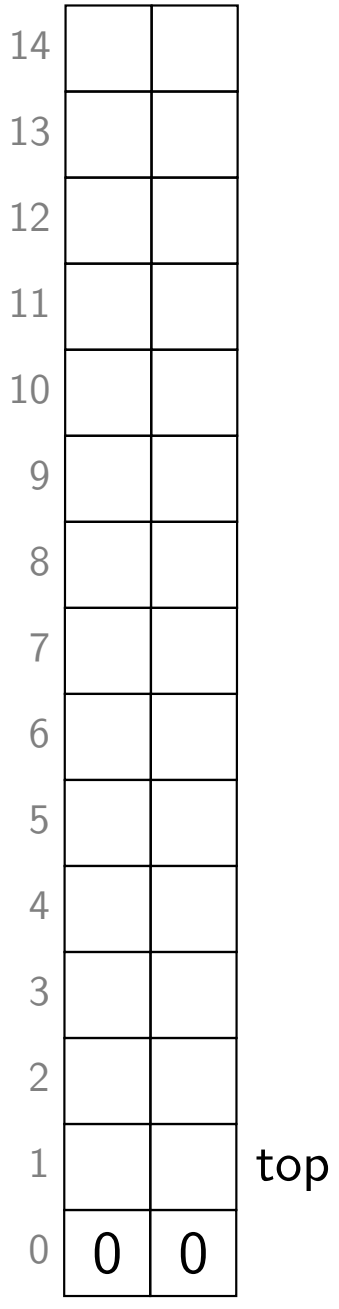

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}
```
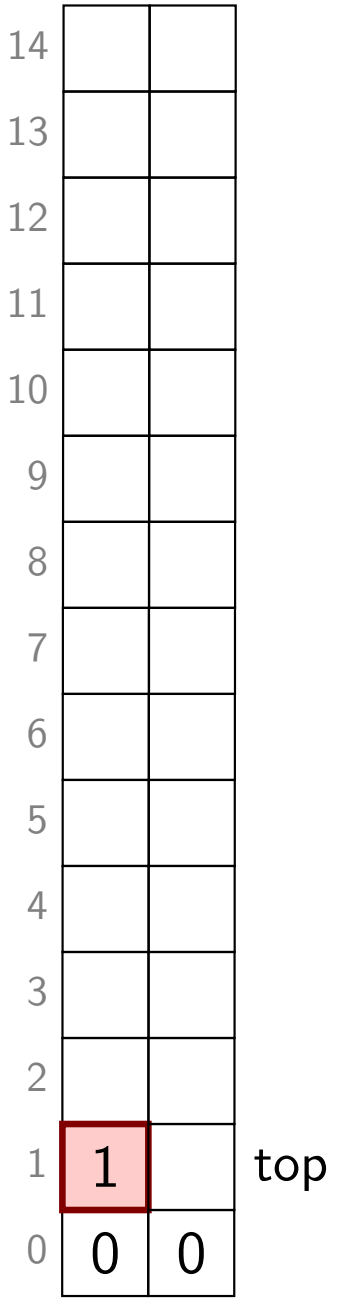

a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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a,p b

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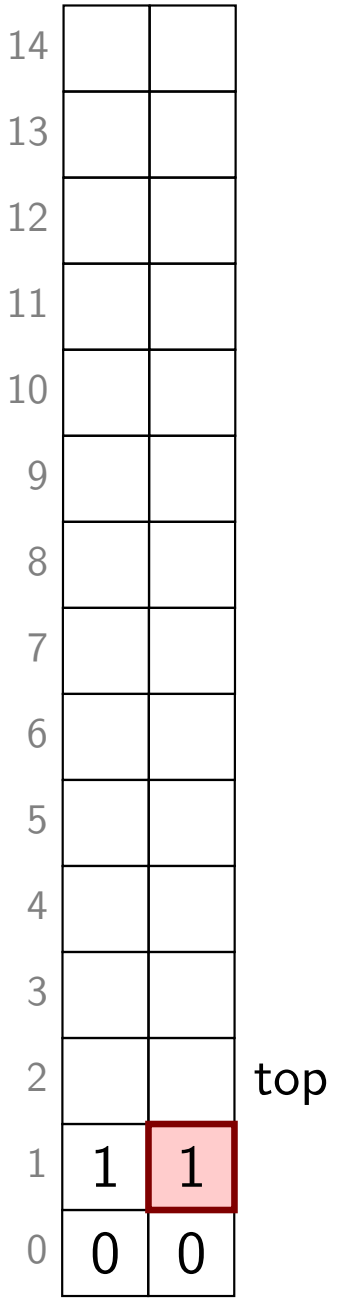

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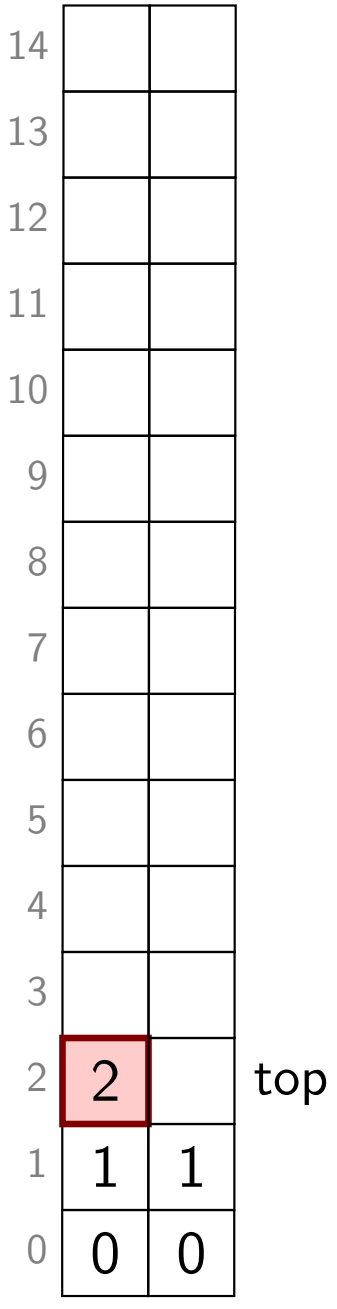
a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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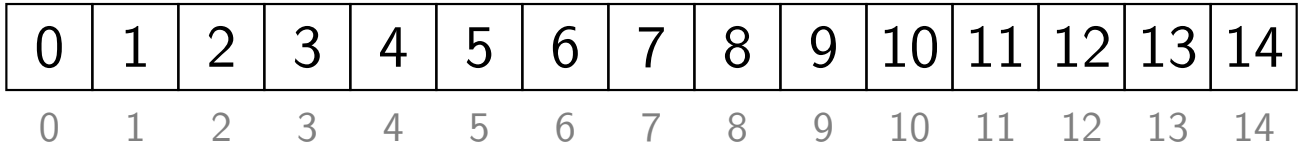
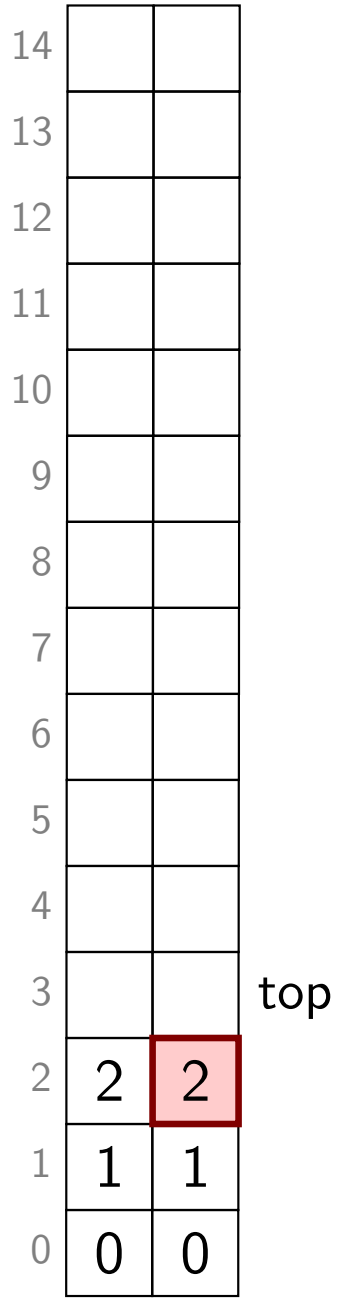
a,p b





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a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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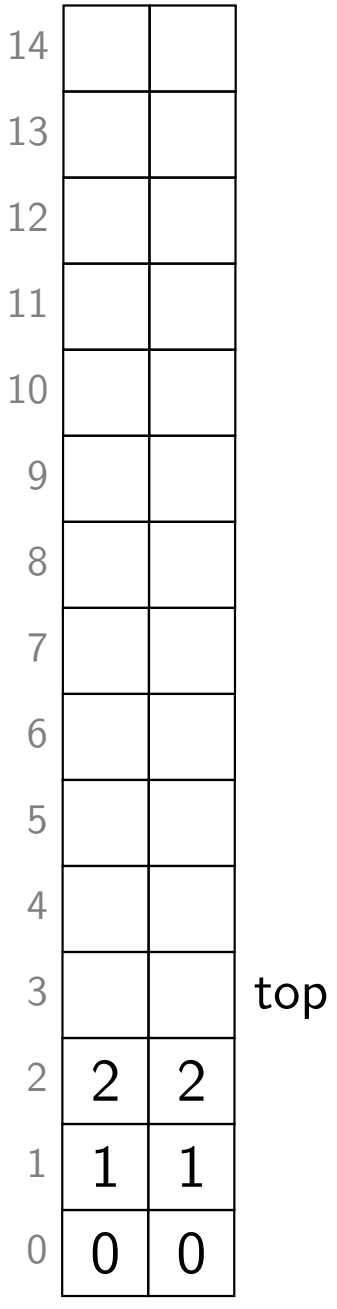

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p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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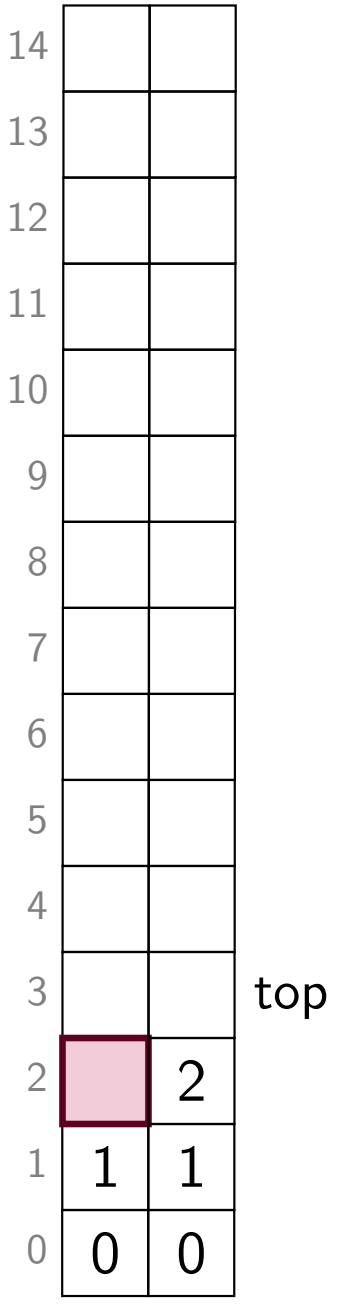

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p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
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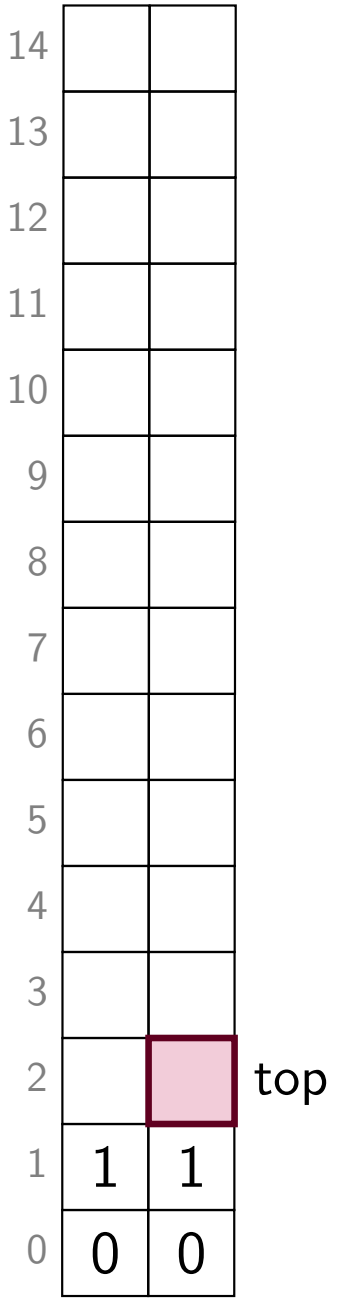

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p a,b

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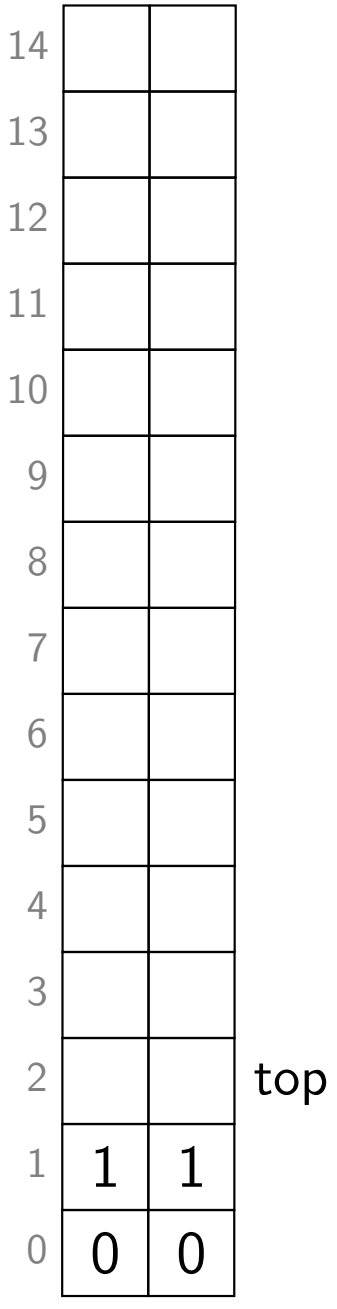

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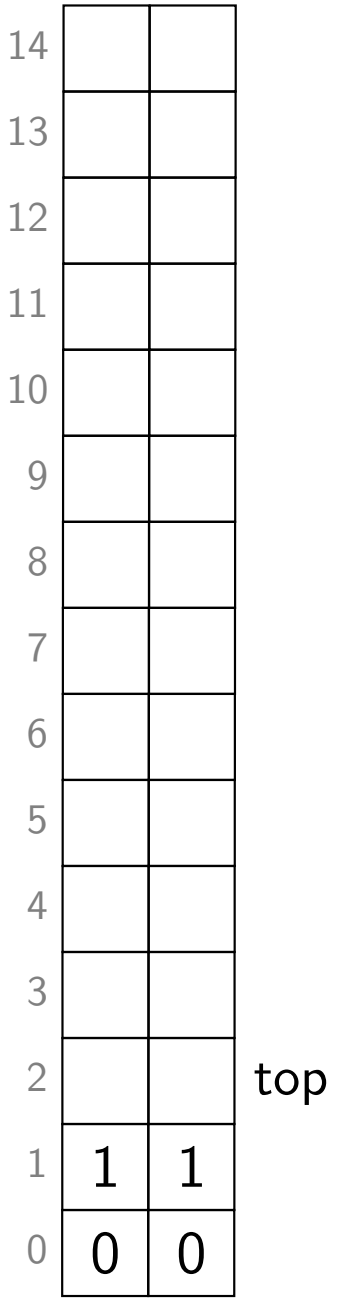
p a,b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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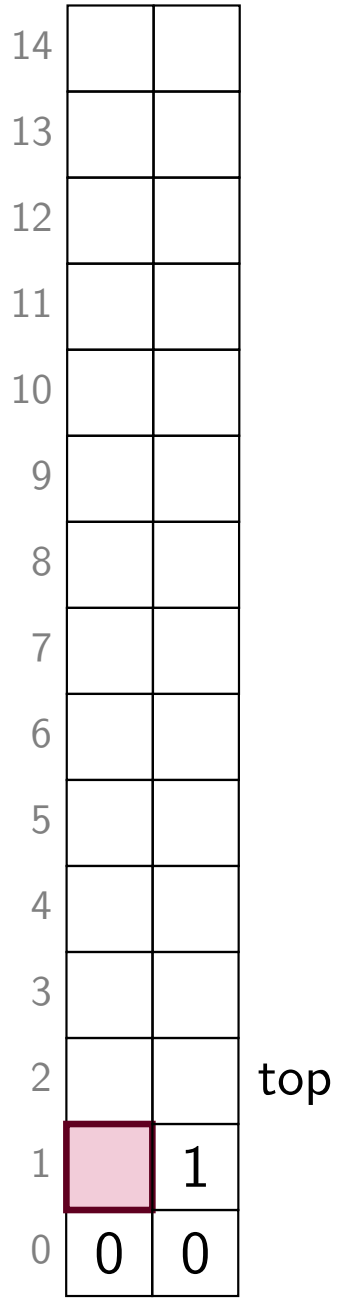
a,p b

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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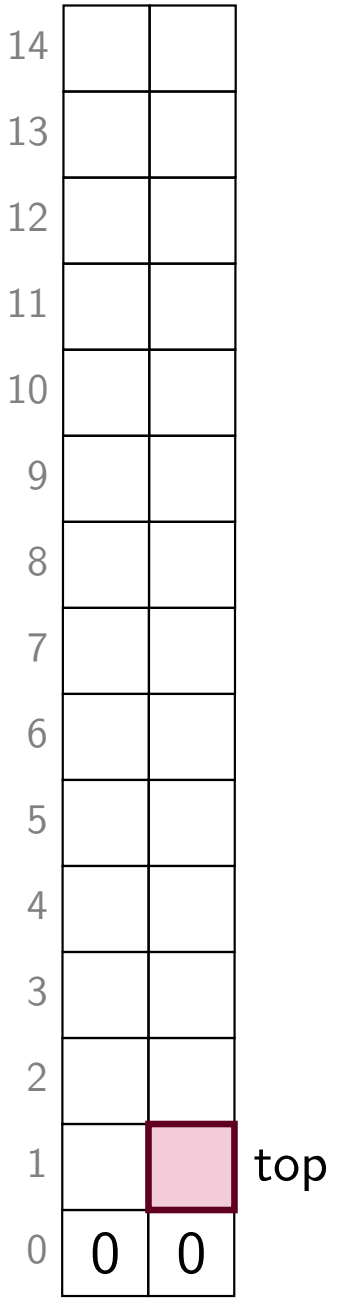
a,b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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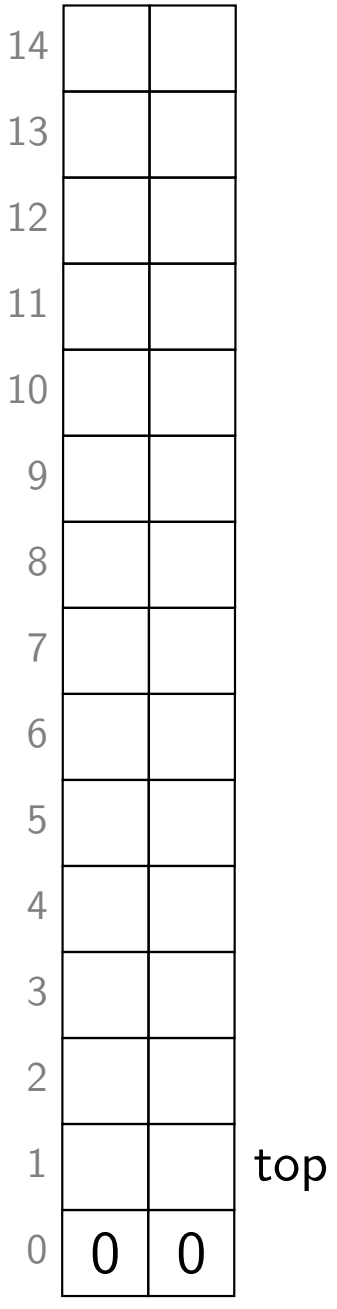
a,b,p

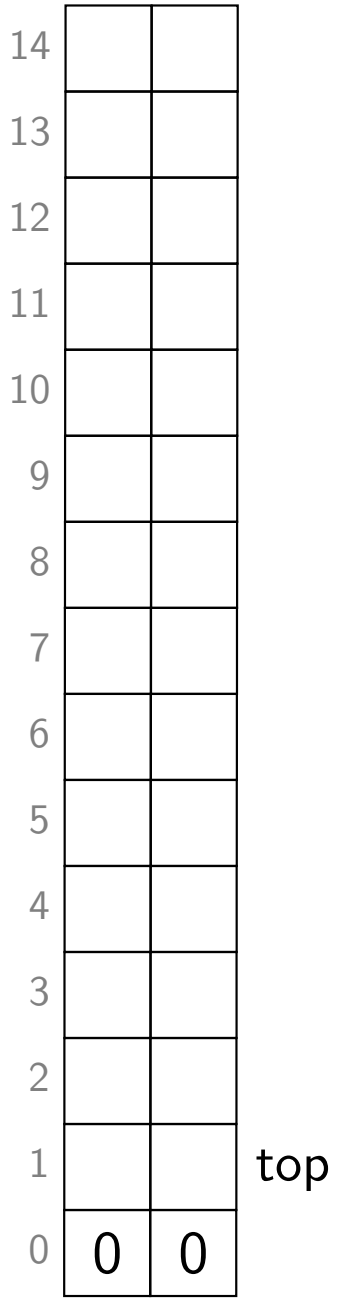
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



```
void sort (Tab t) {
  uint p, a, b;
  Stack first = stackNew(t.len);
  Stack last = stackNew(t.len);
  stackPush(&first, 0);
  stackPush(&last, t.len-1);
  while (!stackEmpty(first)) {
    a = stackPop(&first);
    b = stackPop(&last);
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b,p

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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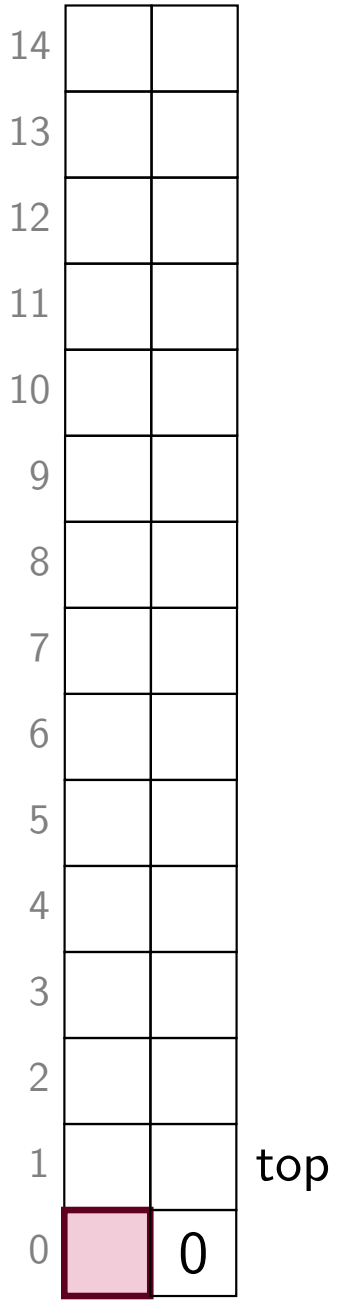
    if (a < b) {
      p = a + partition(slice(t, a, b));
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    } a  b,p
  }
}
```

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14



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      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```
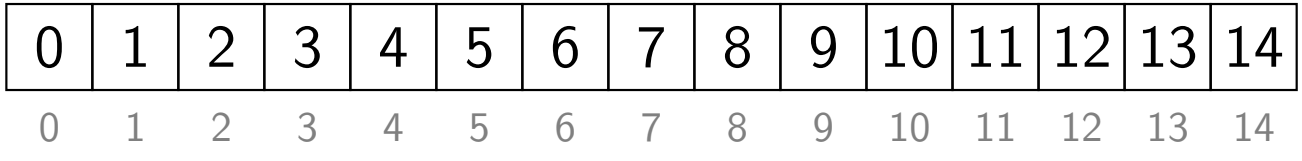
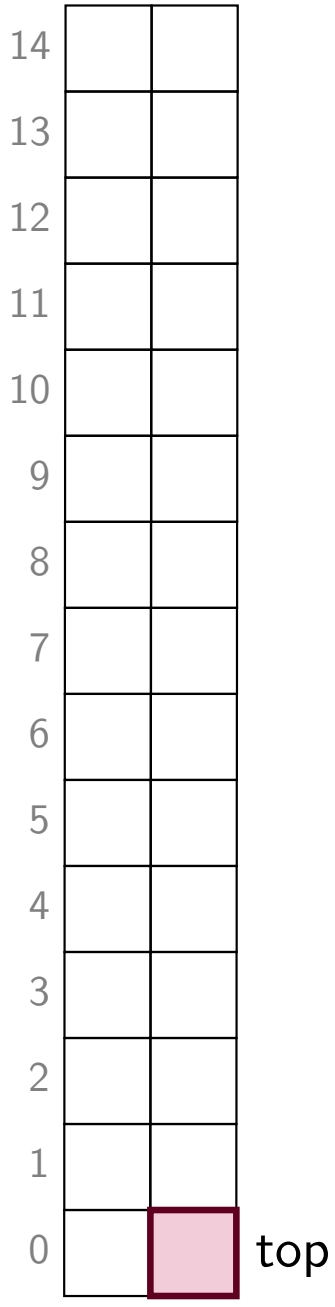

a,b p





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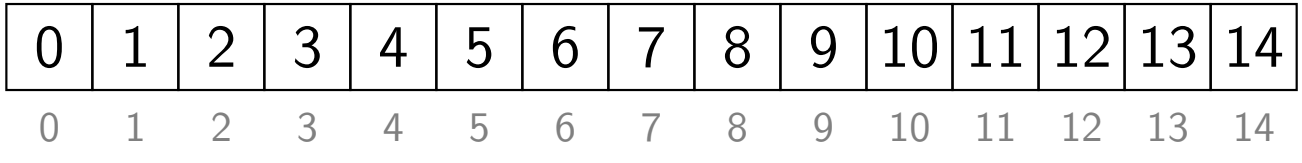
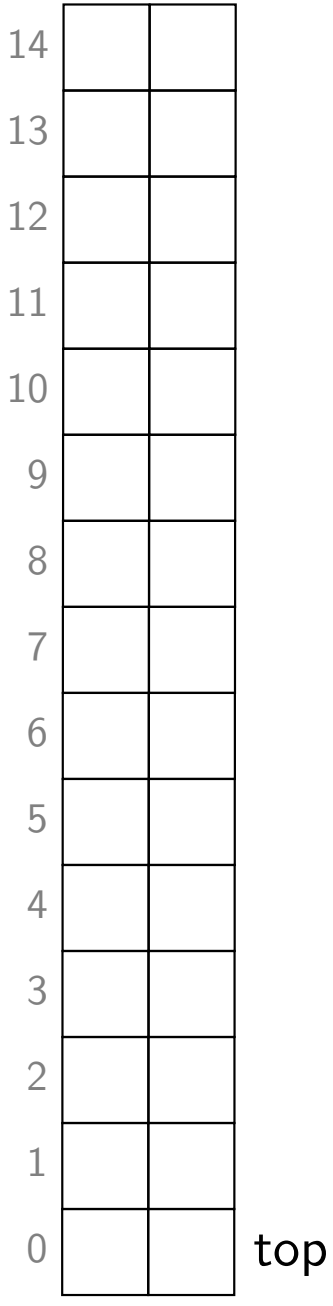
      stackPush(&first, a);
      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b p





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      stackPush(&last, p);
      stackPush(&first, p+1);
      stackPush(&last, b);
    }
  }
}
```

a,b p