

2048

Moving Up

The screenshot shows the 2048 game interface. At the top left, the title "2048" is displayed in a large, bold font. To its right, there are two score boxes: "SCORE 548" and "BEST 25056". Below the title, a instruction reads "Join the numbers and get to the 2048 tile!" and a "New Game" button is visible. The main part of the interface is a 4x4 grid of tiles. The tiles are arranged as follows:

		2	4
		2	4
16	8	2	4
64	32	16	4

```

//method to add new random tile
public void picknew ()
{
    int x = (int) (Math.random () * 4);
    int y = (int) (Math.random () * 4);

    while (b [x] [y] != 0)
    {
        x = (int) (Math.random () * 4);
        y = (int) (Math.random () * 4);
    }

    b [x] [y] = 2;
}

```

This will crash when the board is full. The final tile cannot place.

	[0]	[1]	[2]	[3]
[0]	0	0	0	0
[1]	0	0	0	0
[2]	0	0	0	0
[3]	0	0	0	0

	[0]	[1]	[2]	[3]
[0]	0	0	0	0
[1]	0	0	2	0
[2]	0	0	0	0
[3]	0	0	0	0

x = 1
y = 2

//method to move tiles up

```
public void ShuffleUp ()
```

```
{
```

```
    for (int n = 0 ; n < 4 ; n++)
```

```
    {
```

```
        for (int i = 0 ; i < 3 ; i++)
```

```
        {
```

```
            if (b [0] [n] == 0)
```

```
            {
```

```
                b [0] [n] = b [1] [n];
```

```
                b [1] [n] = b [2] [n];
```

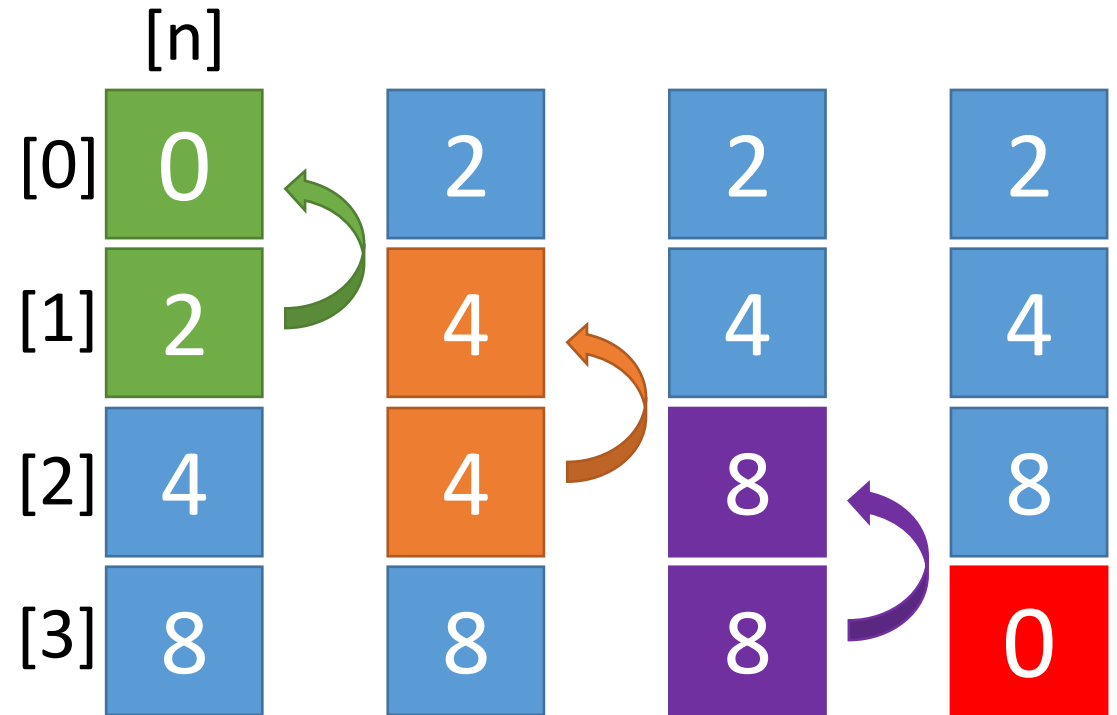
```
                b [2] [n] = b [3] [n];
```

```
                b [3] [n] = 0;
```

```
            }
```

```
        }
```

```
    }  
    //continued....
```



```
//shuffleUp continued
```

```
for (int i = 0 ; i < 2 ; i++)
```

```
{
```

```
    if (b [1] [n] == 0)
```

```
    {
```

```
        b [1] [n] = b [2] [n];
```

```
        b [2] [n] = b [3] [n];
```

```
        b [3] [n] = 0;
```

```
    }
```

```
}
```

```
if (b [2] [n] == 0)
```

```
{
```

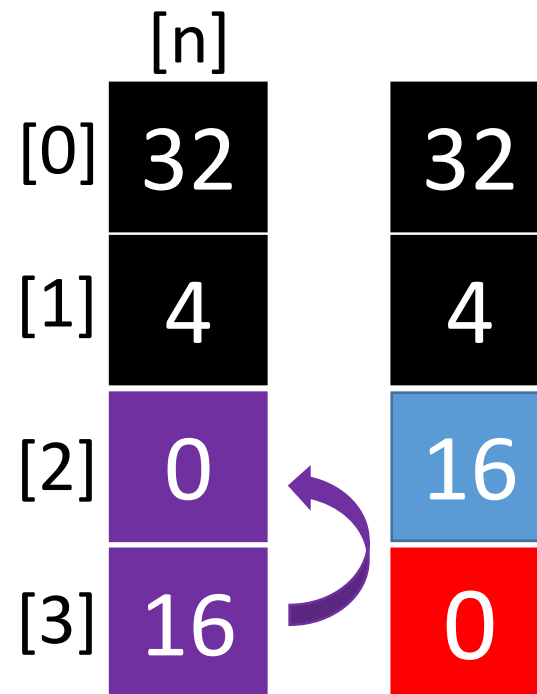
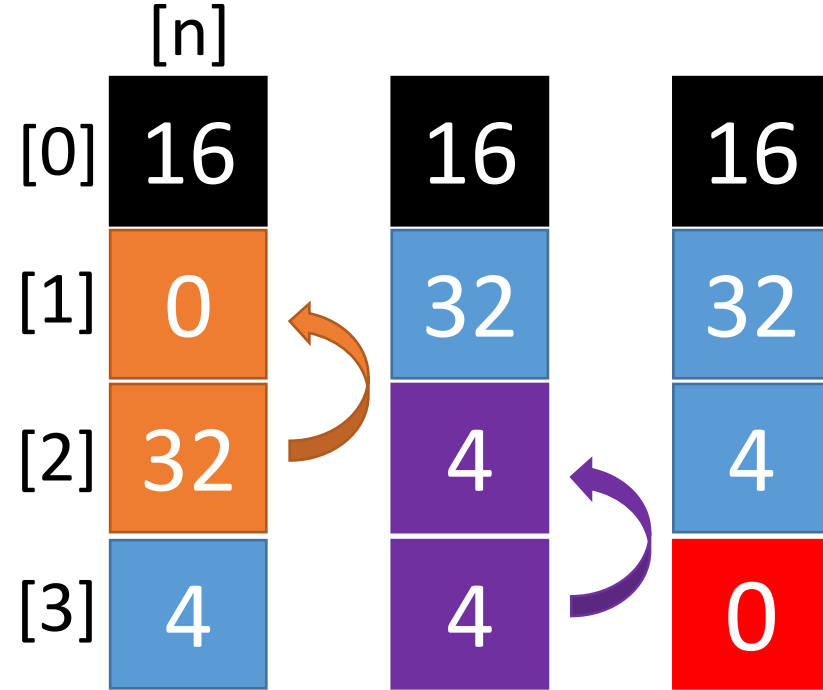
```
    b [2] [n] = b [3] [n];
```

```
    b [3] [n] = 0;
```

```
}
```

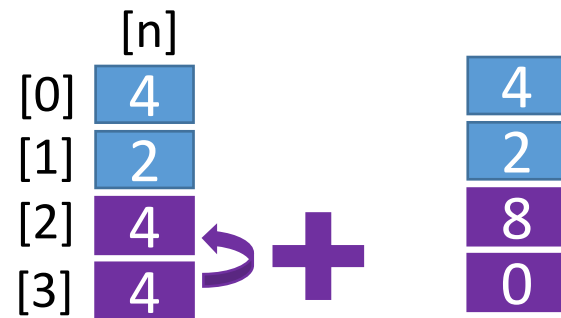
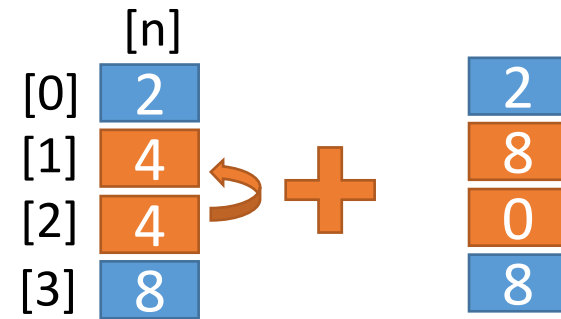
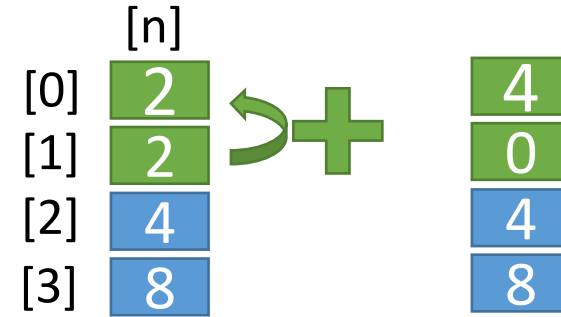
```
}
```

```
}
```



//method to add tiles when going up

```
public void UpBuddies () {  
    for (int n = 0 ; n < 4 ; n++) {  
        if (b [1] [n] == b [0] [n]) {  
            b [0] [n] += b [1] [n];  
            b [1] [n] = 0;  
            score += 2;  
        }  
        if (b [2] [n] == b [1] [n]) {  
            b [1] [n] += b [2] [n];  
            b [2] [n] = 0;  
            score += 2;  
        }  
        if (b [3] [n] == b [2] [n]) {  
            b [2] [n] += b [3] [n];  
            b [3] [n] = 0;  
            score += 2;  
        }  
    }  
}
```



```
public void moveUp()  
{  
    ShuffleUp ();  
    UpBuddies ();  
    ShuffleUp ();  
    ShuffleUp ();  
    picknew ();  
    picknew ();  
    redraw ();  
}
```