

Goal: Identify and fix an index out of range error.

You can access an item in an array by using its [index](#), allowing you to use the item just like any other variable.

Using an index to access an item

```
let characters = [  
    Character(name: .byte),  
    Character(name: .blu),  
    Character(name: .hopper)  
]
```

characters[0].toggleSwitch: Byte toggles a switch

characters[2].jump(): Hopper jumps

However, be careful that you don't try to access an item that doesn't exist! This will cause an [index out of range error](#), a [bug](#) that prevents your application from running.

Index out of range error

There's no item at index 3, so your code won't run.

```
characters[3].collectGem()
```

The code below contains an index out of range error that prevents the code from running. Find the error, fix it, and run your code.

```
var teamBlu: [Character] = []
```

```
// Note how many instances of Blu are in your array.
```

```
for i in 1...9 {  
    teamBlu.append(Character(name: .blu))  
}
```

```
// Place Blu at each column in row 4.
```

```
var columnPlacement = 0
```

```
for blu in teamBlu {  
    world.place(blu, at: Coordinate(column: columnPlacement, row: 4))  
    columnPlacement += 1  
}
```

```
// Find the index out of range error.
```

```
teamBlu[0].jump()  
teamBlu[2].collectGem()  
teamBlu[4].jump()  
teamBlu[6].collectGem()  
teamBlu[8].jump()
```