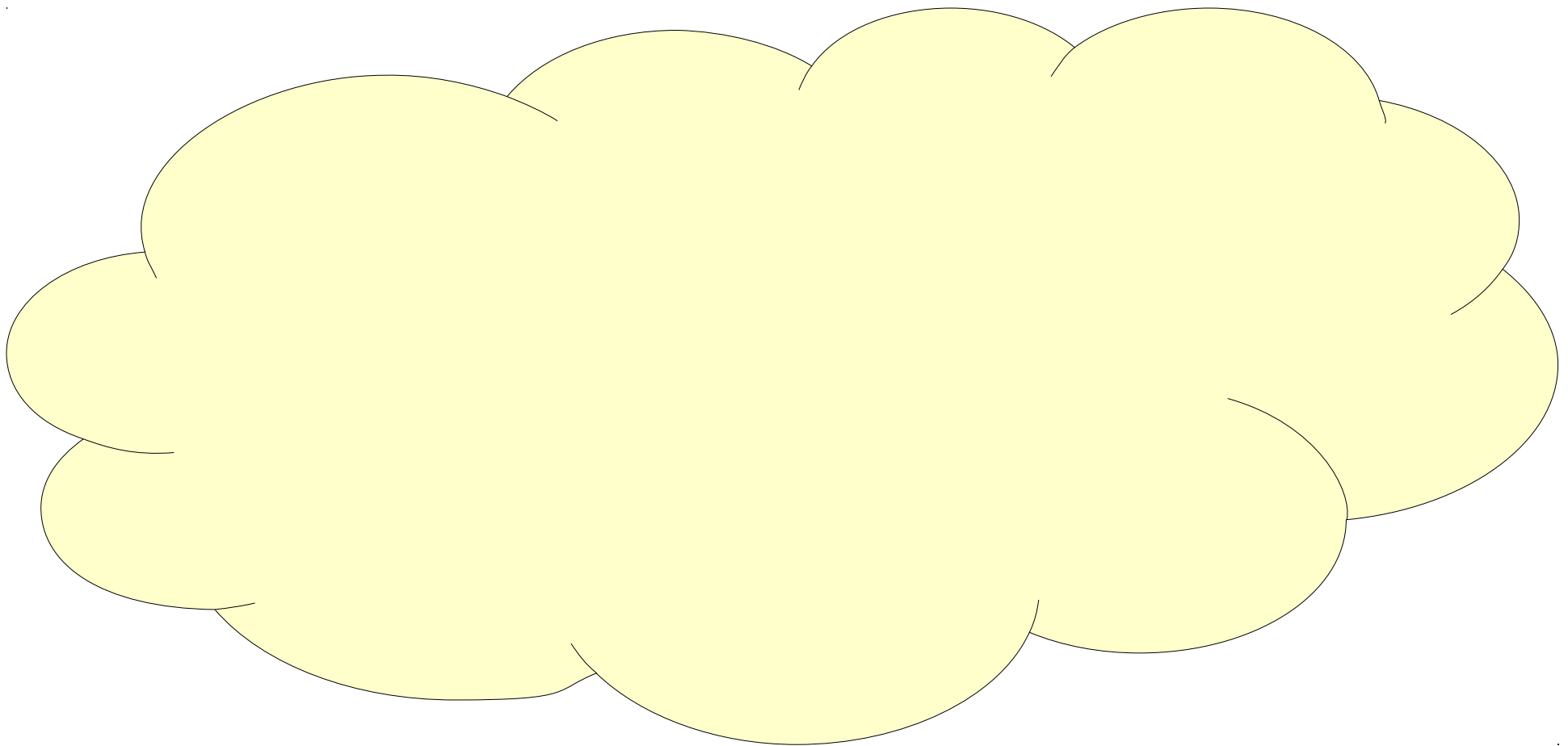


What is a Set?

- A **set** is a collection of distinct elements.
- Similar to an **ArrayList**, but elements are not stored in a sequence.
- Major operations are:
 - Adding an element.
 - Removing an element.
 - Checking whether an element exists.
- Useful for answering questions of the form “have I seen this before?”



```
HashSet<String> mySet = new HashSet<String>();
```

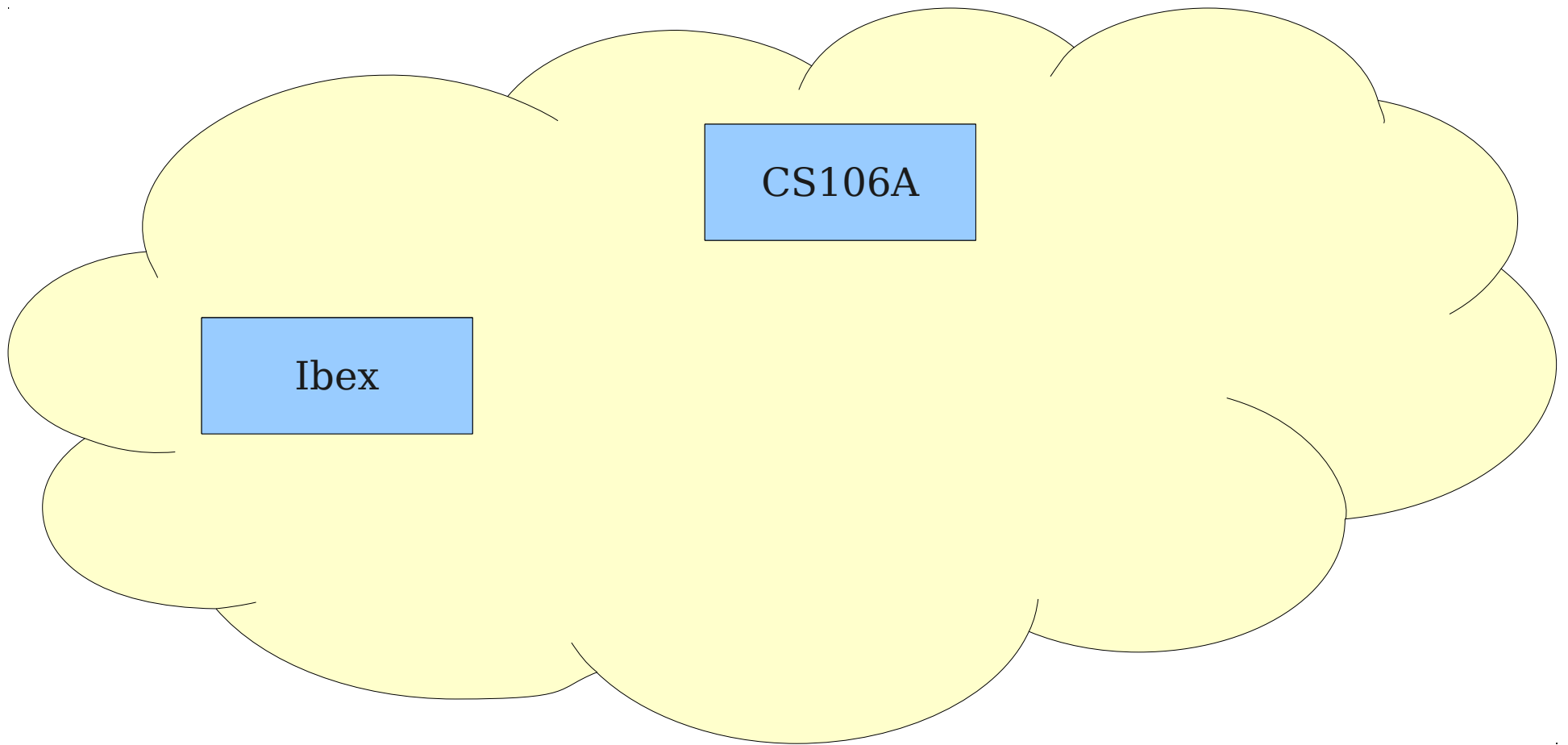


CS106A

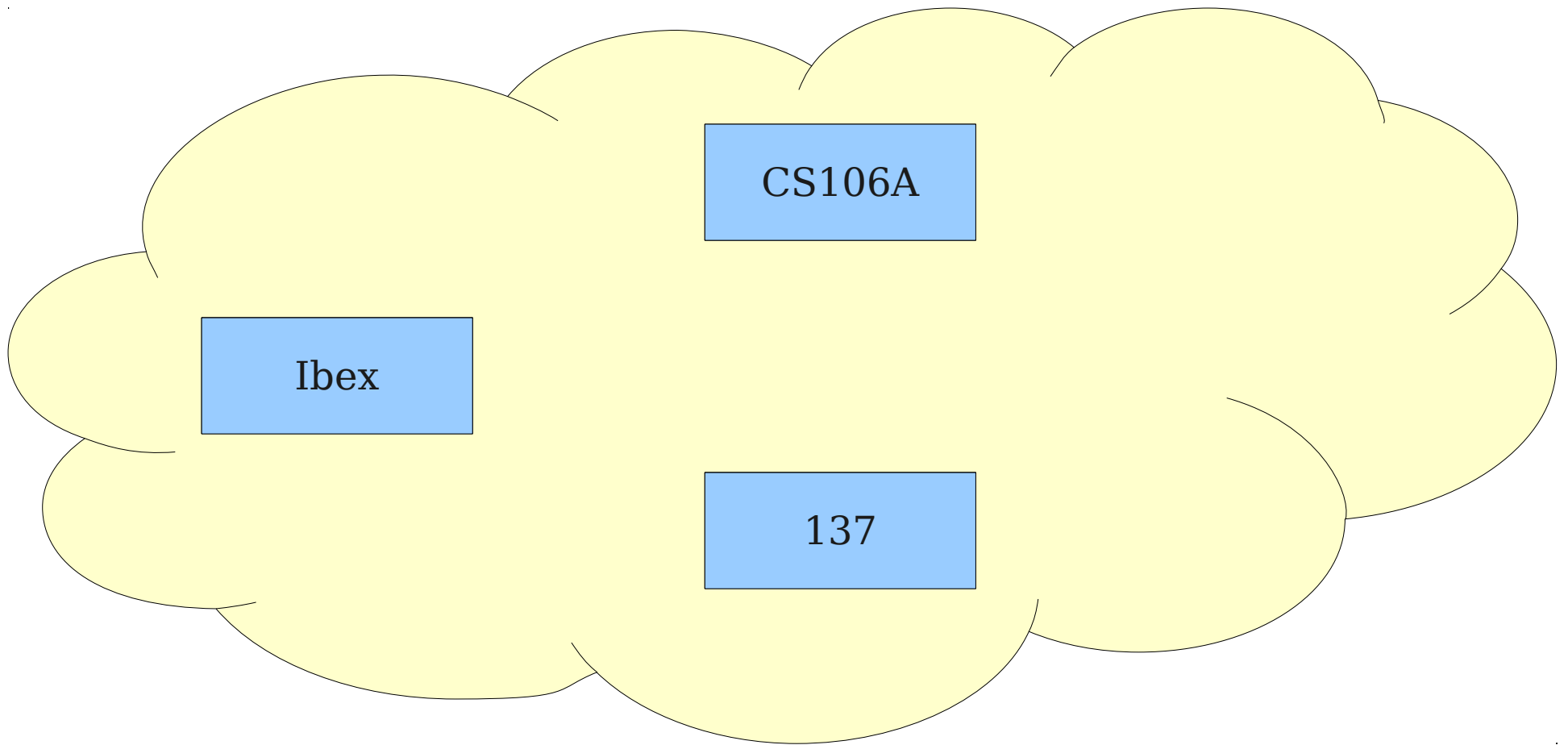
```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");
```

To add a value to a
HashSet, use the syntax

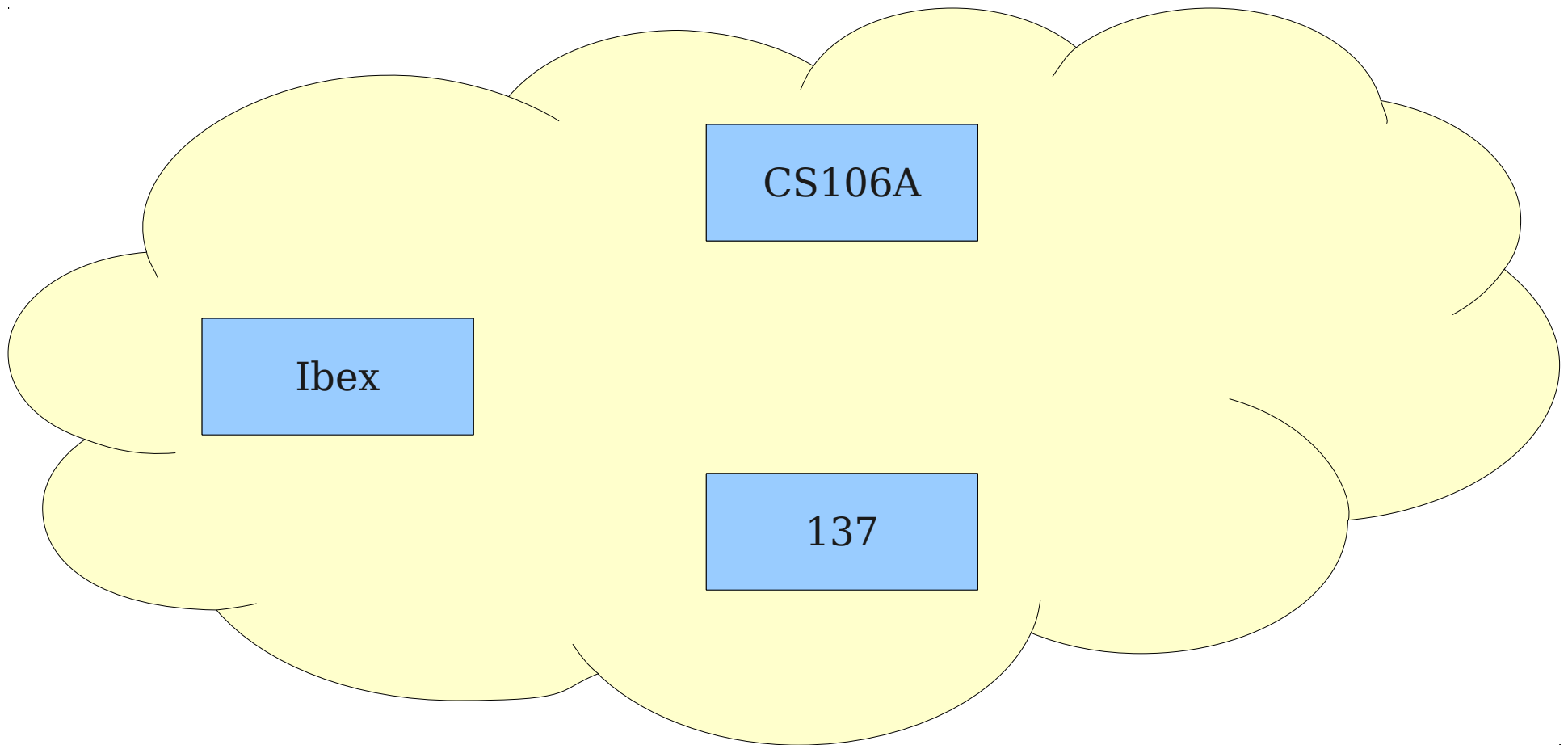
set.add(value)



```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");
```

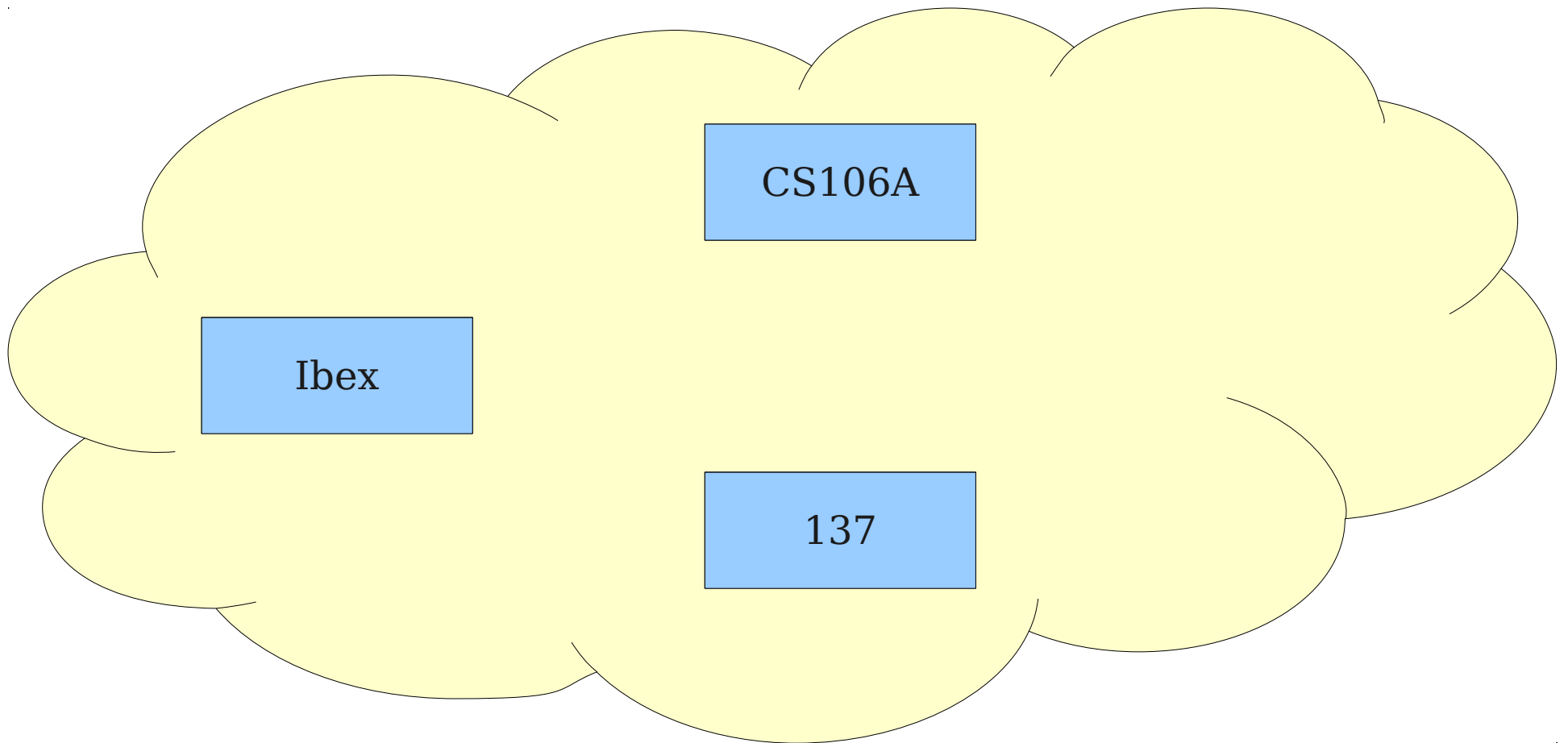


```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");
```

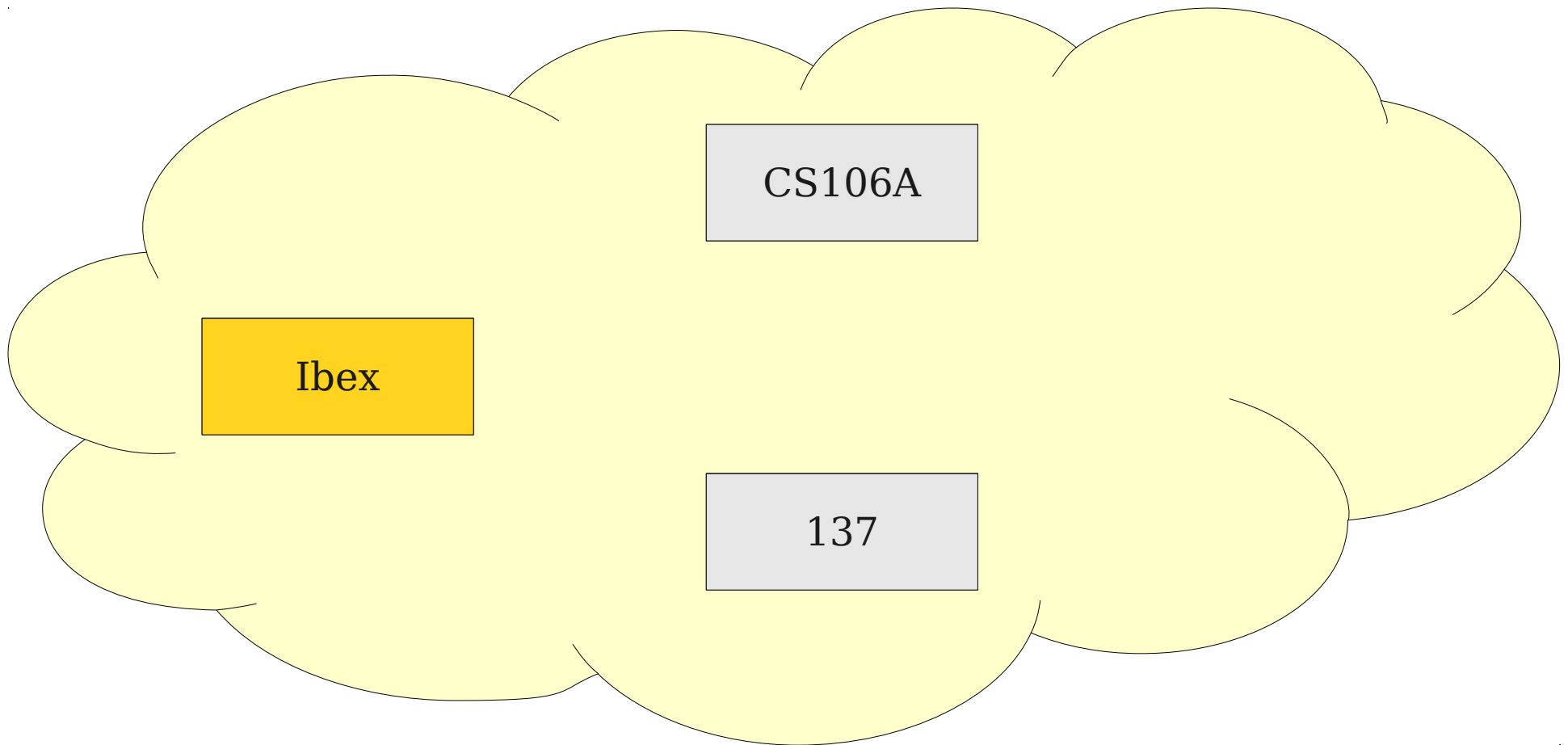


```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A");
```

If you **add** a value pair where the value exists, nothing happens.



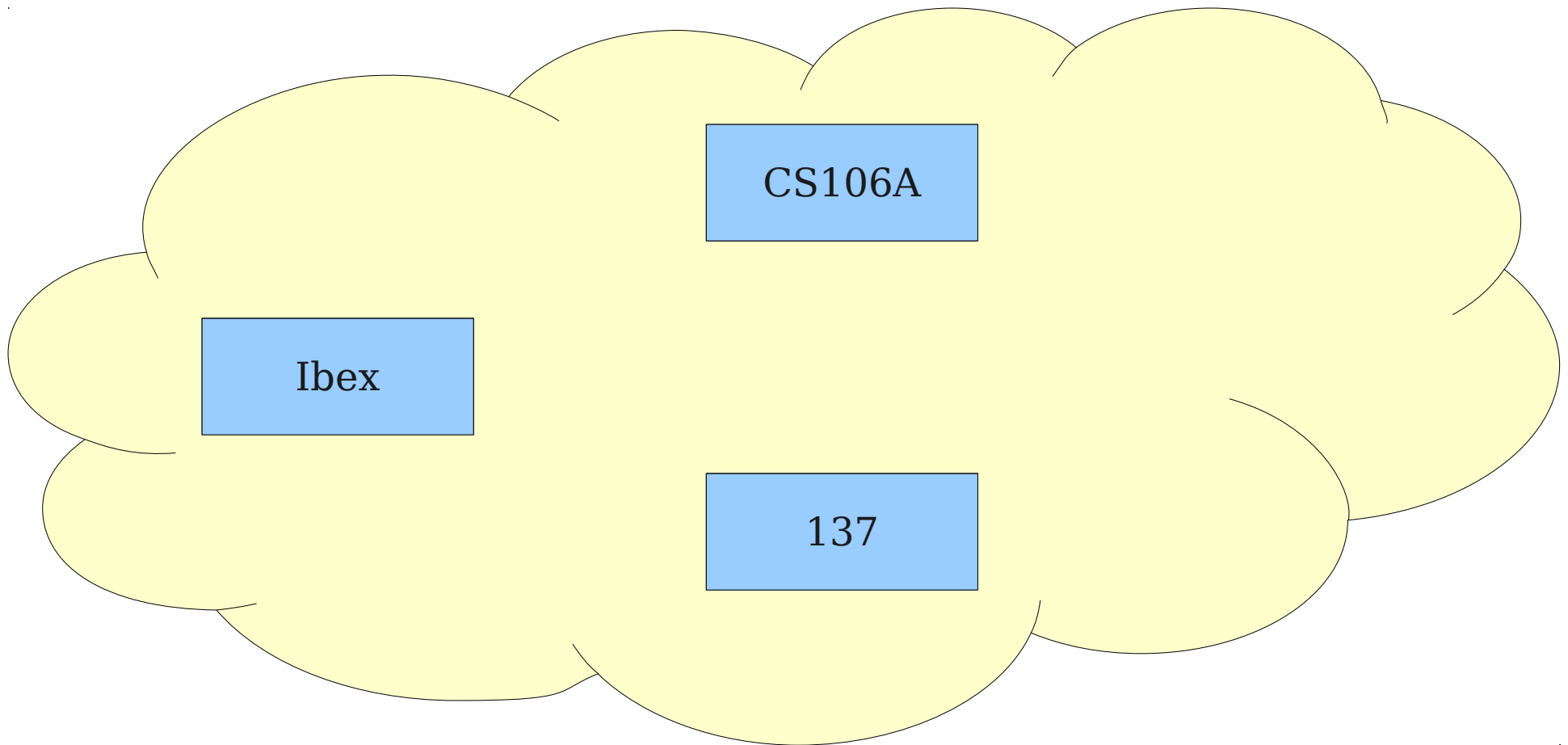
```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A");  
  
mySet.contains("Ibex");
```



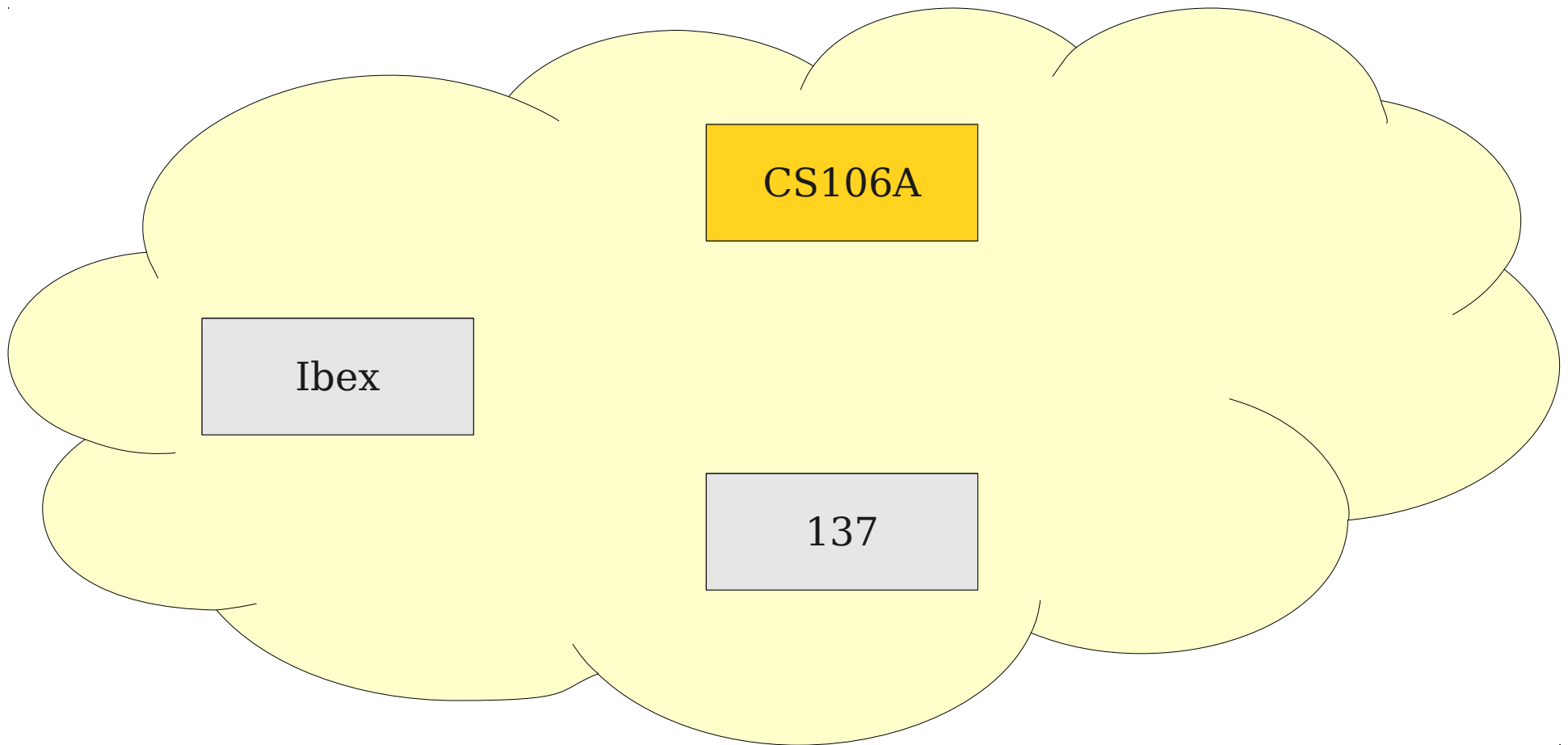
```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A");  
  
mySet.contains("Ibex");
```

To see if a value
exists:

set.contains(value)

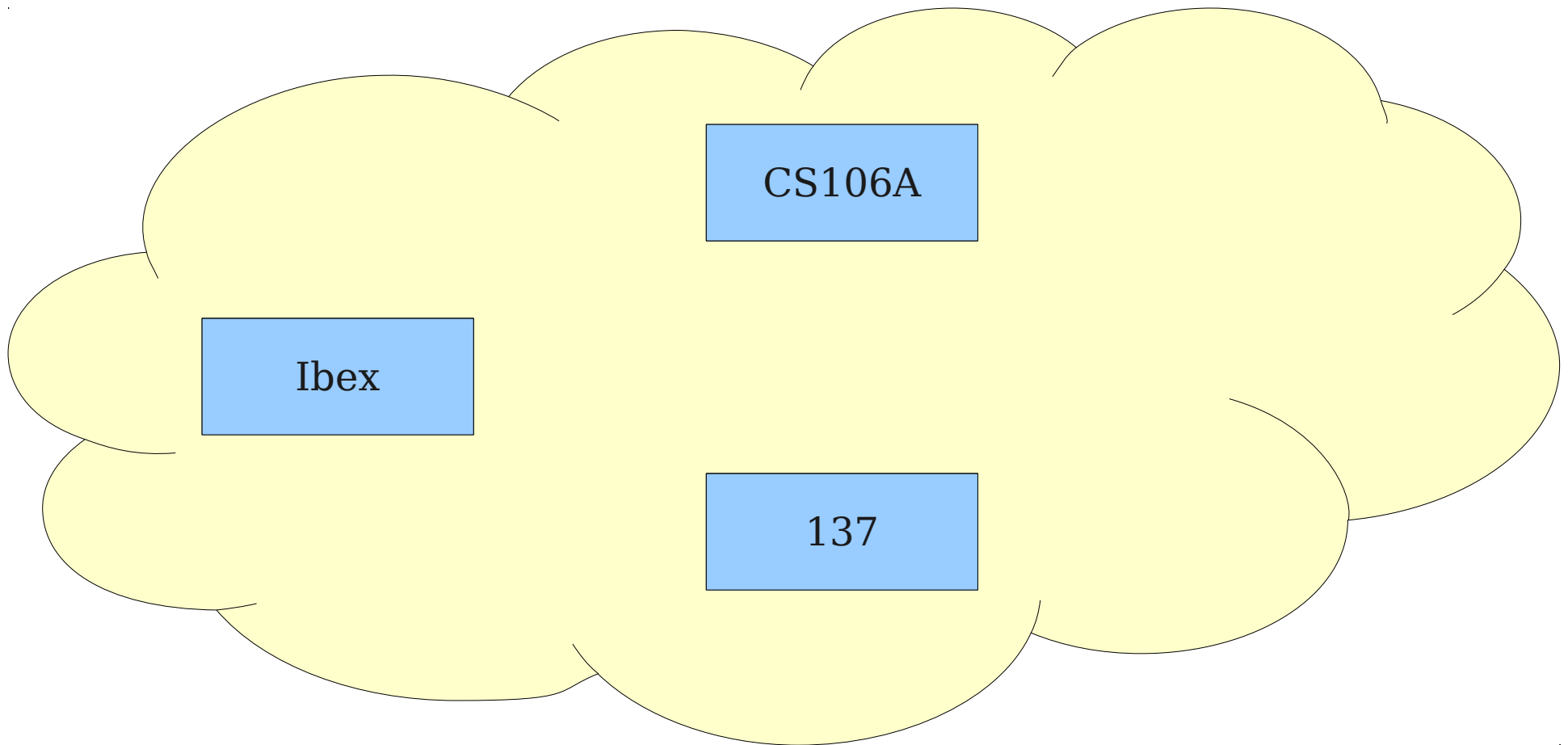


```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A");  
  
mySet.contains("Ibex");  
mySet.contains("CS106A");
```



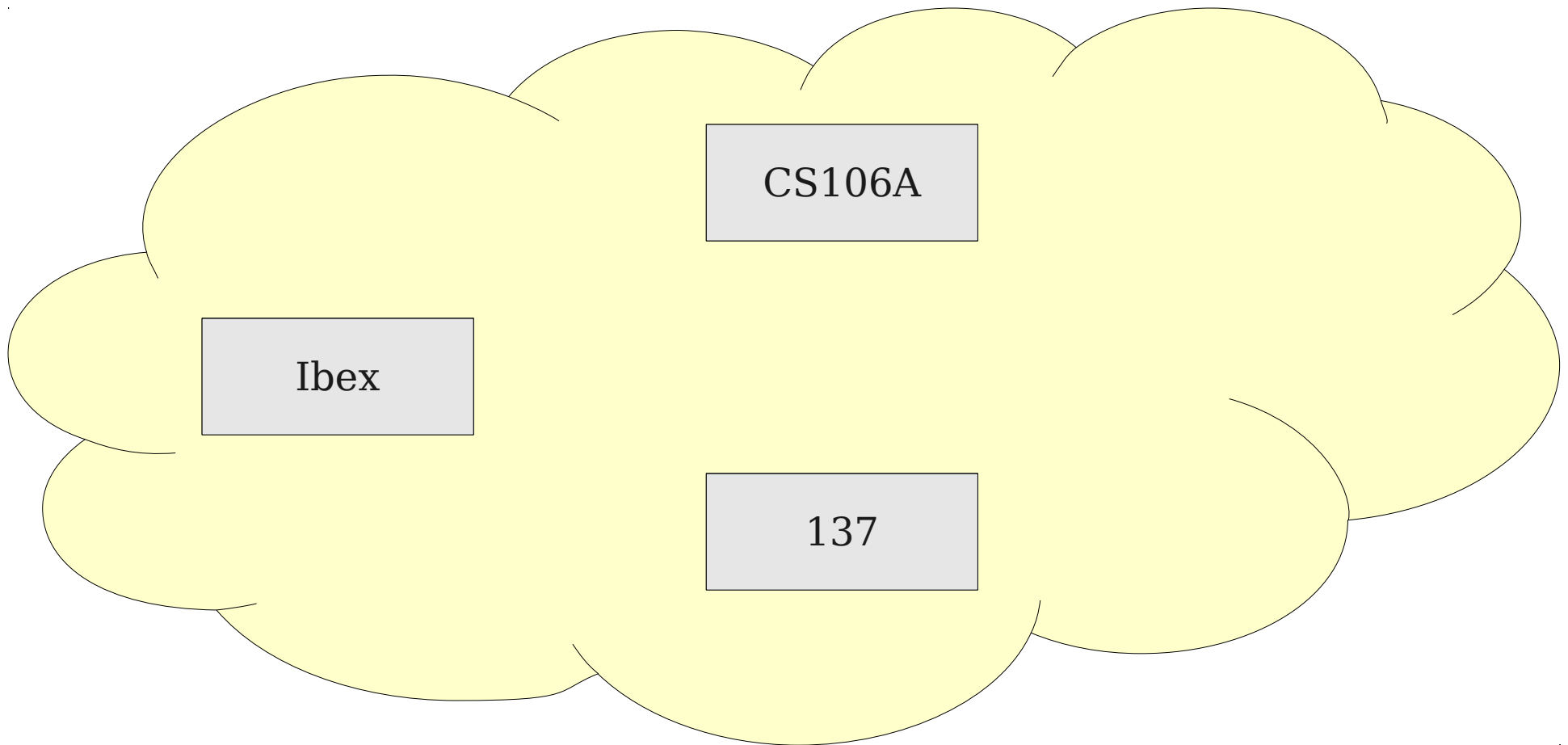
```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A")
```

```
mySet.contains("Ibex");  
mySet.contains("CS106A");
```



```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A")
```

```
mySet.contains("Ibex");  
mySet.contains("CS106A");  
mySet.contains("<(^_^)>");
```



```
HashSet<String> mySet = new HashSet<String>();  
mySet.add("CS106A");  
mySet.add("Ibex");  
mySet.add("137");  
mySet.add("CS106A")
```

```
mySet.contains("Ibex");  
mySet.contains("CS106A");  
mySet.contains("<(^_^)>");
```

Basic **Set** Operations

- To insert an element:

set.add(***value***)

- To check whether a value exists:

set.contains(***value***)

- To remove an element:

set.remove(***value***)