

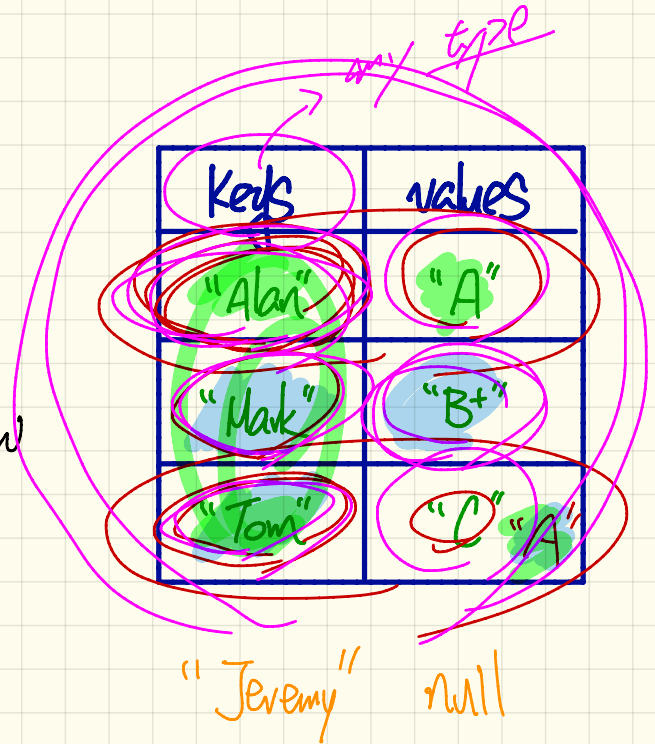
Wednesday April 3
Lecture 24

- Quiz 5 → 6

- Lab Test 3

Hashable

- 2-column table
- keys contain no duplicates
- values may contain duplicates
- a key is used to identify a row



int

size()

Returns the number of keys in this hashtable.

boolean

containsKey(Object key)

Tests if the specified object is a key in this hashtable.

boolean

containsValue(Object value)

Returns true if this hashtable maps one or more keys to this value.

V

→ **get(Object key)**

Returns the value to which the specified key is mapped, or null if this map contains no mapping for the key.

V

→ **put(K key, V value)**

Maps the specified key to the specified value in this hashtable.

V

→ **remove(Object key)**

Removes the key (and its corresponding value) from this hashtable.

API: Hashtable

Exam

CAS A

CAS B

CAS C



You will be
assigned to a
room based on
LAST NAMES.

Use of Hashtable → key value

```

Hashtable<String, String> grades = new Hashtable<String, String>();
System.out.println("Size of table: " + grades.size()); 0
System.out.println("Key Alan exists: " + grades.containsKey("Alan")); F
System.out.println("Value B+ exists: " + grades.containsValue("B+")); F
grades.put("Alan", "A"); ←
grades.put("Mark", "B+");
grades.put("Tom", "C");
System.out.println("Size of table: " + grades.size()); 3
System.out.println("Key Alan exists: " + grades.containsKey("Alan")); T
System.out.println("Key Mark exists: " + grades.containsKey("Mark")); T
System.out.println("Key Tom exists: " + grades.containsKey("Tom")); T
System.out.println("Key Simon exists: " + grades.containsKey("Simon")); F
System.out.println("Value A exists: " + grades.containsValue("A")); T
System.out.println("Value B+ exists: " + grades.containsValue("B+")); T
System.out.println("Value C exists: " + grades.containsValue("C")); T
System.out.println("Value A+ exists: " + grades.containsValue("A+")); F
System.out.println("Value of existing key Alan: " + grades.get("Alan")); "A"
System.out.println("Value of existing key Mark: " + grades.get("Mark")); "B+"
System.out.println("Value of existing key Tom: " + grades.get("Tom")); "C" null
System.out.println("Value of non-existing key Simon: " + grades.get("Simon")); null
grades.put("Mark", "F"); ←
System.out.println("Value of existing key Mark: " + grades.get("Mark")); "F"
grades.remove("Alan");
System.out.println("Key Alan exists: " + grades.containsKey("Alan")); F
System.out.println("Value of non-existing key Alan: " + grades.get("Alan")); null
    
```

