

HASHMAP

↓
key ↔ value pairs

rollno	name
64	"Shradha"
65	"Rajat"
65	"Aman"
78	"Khushi"
79	"Priya"

Keys

(Unique)

Values

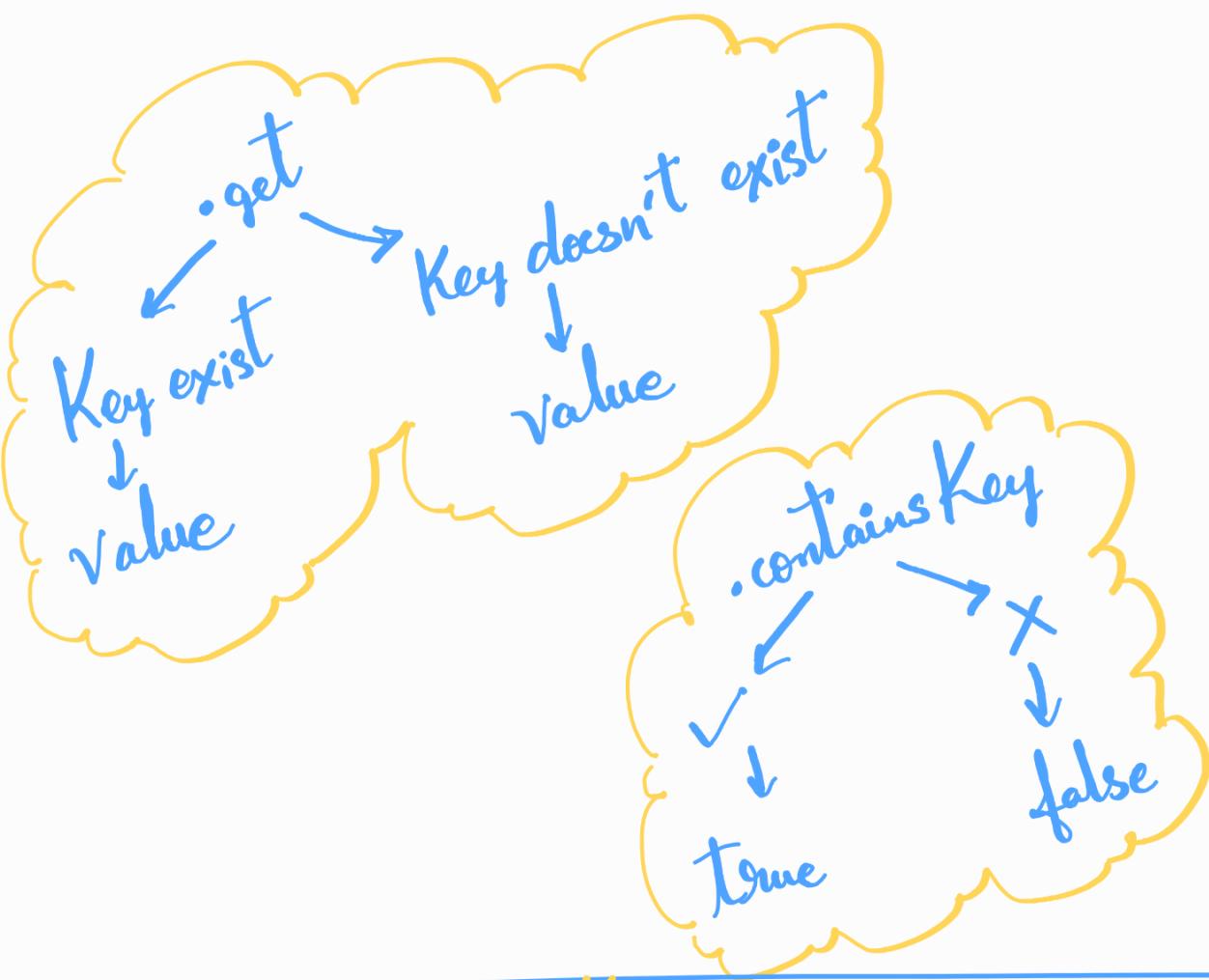
fuel	price
CNG	70
Diesel	80
Petrol	90

Keys

Values

A t | P t

Country	Population
India	120Cr
China	150Cr
US	30Cr
⋮	⋮



Iteration in Array

```
for (int i=0; i<10; i++)  
    ↓  
    iterator
```

for([] val : collection)



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

for(int val : arr)

Iteration in HashMap

for(Map.Entry< Integer, Integer > e : Map.entrySet())

↑ ↓ ↓
Key value element

String

e = ["India", 120]

↓ ↓
getkey() getValue

Pair

```
class Hashing {
    public static void main(String[] args) {
        // country(key), population(value)
        HashMap<String, Integer> map = new HashMap<>();

        // Insertion
        map.put("India", 120);
        map.put("US", 30);
        map.put("China", 150);

        System.out.println(map);

        map.put("China", 180); // Updates (If already exists)
        System.out.println(map);

        // Search
        if (map.containsKey("China")) {
            System.out.println("key is present in the map");
        } else {
            System.out.println("key is not present in the map");
        }

        System.out.println(map.get("China")); // Key exists
        System.out.println(map.get("Indonesia")); // Key doesn't exist

        System.out.println();
        System.out.println();
    }
}
```

```
int arr[] = { 12, 15, 18 };
for (int i = 0; i < 3; i++) {
    System.out.println(arr[i] + " ");
}
System.out.println();

for (int val : arr) {
    System.out.println(val + " ");
}
System.out.println();

System.out.println();
System.out.println();

for (Map.Entry<String, Integer> e : map.entrySet()) {
    System.out.println(e.getKey());
    System.out.println(e.getValue());
}

System.out.println();
```

```
System.out.println();

Set<String> keys = map.keySet();
for (String key : keys) {
    System.out.println(key + " " + map.get(key));
}

System.out.println();
System.out.println();
```

```
map.remove("China");
System.out.println(map);

}
```

