A3

Abstract Data Types: Sets

The Set ADT

A Set Interface

The Set ADT

The **set** ADT corresponds to a mathematical *set*. A set has these fundamental properties:

- duplicates *are not* allowed
- order is *not* preserved

A set may support operations such as these:

- *create*: construct an empty set
- *add*: add an element to the set
- *contains*: does the set contain a given element
- *remove*: remove an element from the set

Our Set Interface

We will explore sets using a simple interface :

```java
public interface Set<T> {
    boolean add(T value);
    boolean contains(T value);
    int size();
    boolean remove(T value);
}
```