# Assignment #5 - Programming with sets
# Discrete Mathematics

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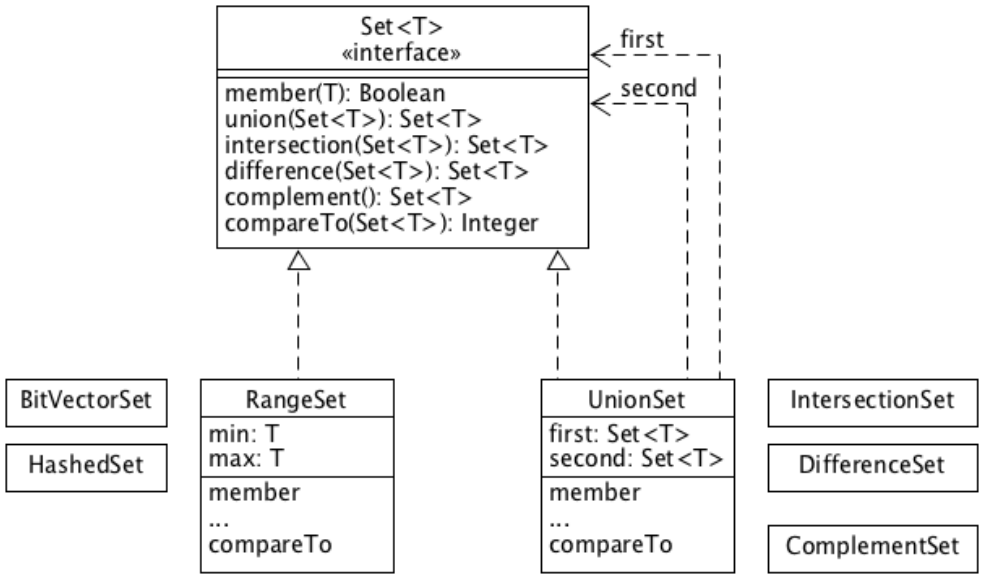
## 1 A set API

In your favorite language, or in a language you want to explore, create an API for handling sets. Sets can either be finite as $\{7, 9, 13\}$ or infinite as $\mathbb{Z}$ or $\{5, \dots\}$.

Create methods for handling

- Membership
- Intersection
- Union
- Difference
- Complement

**Tip** create a class for each operation




Also create methods for handling subsets and equality as in exercise. Bevare, that infinite sets might not be determined whether to be subsets or not, so we end up with five cases:

- $A \subset B$: -1
- $A = B$: 0
- $A \supset B$: 1
- Undeterminable: 2
- $A \nsubseteq B \wedge B \nsubseteq A$: -2

**Tip** let 2 be the default value

# Hand in

A link to the github repository. In groups on Peergrade by TBD