[CMSC 425/525] In-Class #3: Input-Space Partitioning
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Consider the method intersection() below, along with two characteristics:

```
public static Set intersection (Set s1, Set s2)
/**
* @param s1, s2 : sets to compute intersection of
* @return a (non null) Set equal to the intersection of Sets s1 and s2
* @throws NullPointerException if s1 or s2 is null
*/
```

Characteristic: Type of s1
- s1 = null
- s1 = { }
- s1 has at least one element

Characteristic: Relation between s1 and s2
- s1 and s2 represent the same set
- s1 is a subset of s2
- s2 is a subset of s1
- s1 and s2 do not have any elements in common

Does the partition ”Type of s1” satisfy the completeness property? If not, give a value for s1 that does not fit in any block.

Yes, the set can either contain no elements or some elements.

Does the partition ”Type of s1” satisfy the disjointness property? If not, give a value for s1 that fits in more than one block.

No, The null set is the empty set so they overlap.

If necessary, fix ”Type of s1”.

s1 = null
s1 = at least one element

Does the partition ”Relation between s1 and s2” satisfy the completeness property? If not, give a pair of values for s1 and s2 that does not fit in any block.

No, it does not include where there are elements in common.
s1 = { 1, 2, 3 }
s2 = { 1, 2, 4 }

Does the partition ”Relation between s1 and s2” satisfy the disjointness property? If not, give a pair of values for s1 and s2 that fits in more than one block.

Yes, the relationships do not repeat or overlap

If necessary, fix ”Relation between s1 and s2”.

- s1 and s2 represent the same set
- s1 is a subset of s2
- s2 is a subset of s1
- s1 and s2 do not have any elements in common
- s1 and s2 contain some of the same elements