There are sets of node ids which contain partly-contiguous ranges of node ids. The first part of the exercise is to (in a language of your choice) model the ranges in a space efficient manner.

An example set:
a/1, a/2, a/3, a/4, a/128, a/129, b/65, b/66, c/1, c/10, c/42

Secondly, given the model already developed, write an algorithm that will add two sets, merging any overlapping ranges.
For example
Set A (same as example for part 1):
a/1, a/2, a/3, a/4, a/128, a/129, b/65, b/66, c/1, c/10, c/42
Set B:
a/1, a/2, a/3, a/4 a/5, a/126, a/127, b/100, c/2, c/3, d/1

Set A + Set B should contain:
a/1, a/2, a/3, a/4, a/5, a/126, a/127, a/128, a/129, b/65, b/66, b/100, c/1, c/2, c/3, c/10, c/42, d/1