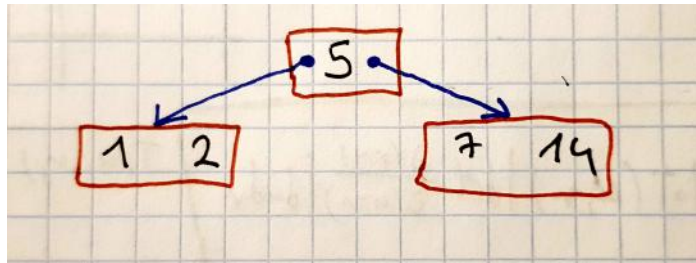


Data Management SS 2020: Exercise 03, task 3.2

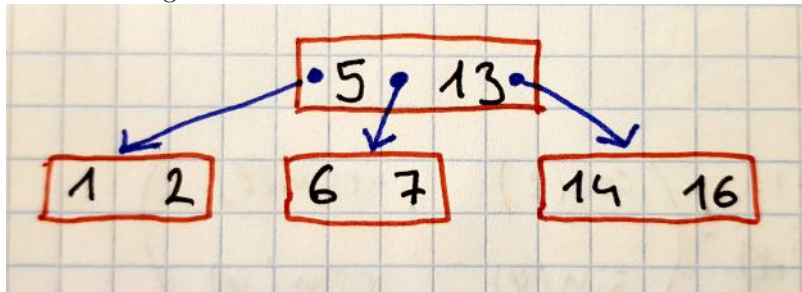
The sequence I generated was:

7, 14, 2, 5, 1, 13, 6, 16, 9, 11, 19, 15, 18, 3, 10, 20, 4, 8, 12, 17

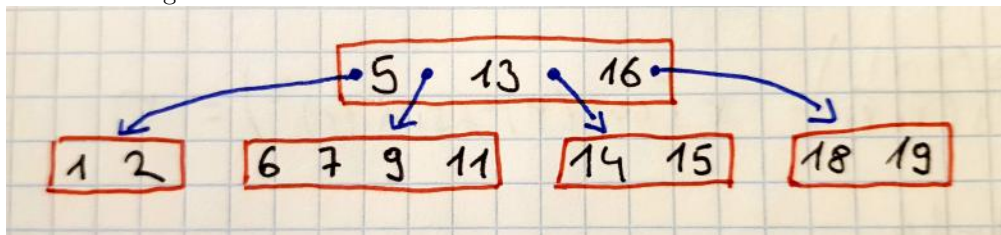
I inserted the sequence into a B-Tree. I will present a few intermediate steps before the final result. Node splitting is first necessary when inserting '1':



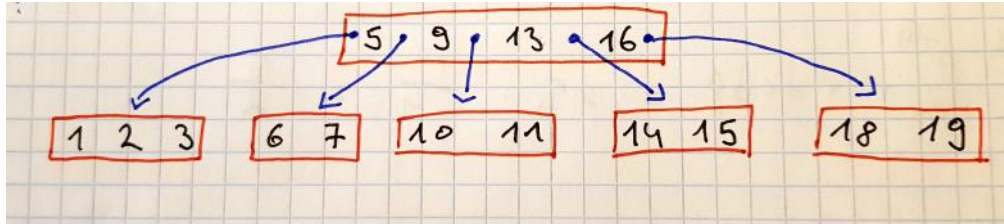
After inserting '16':



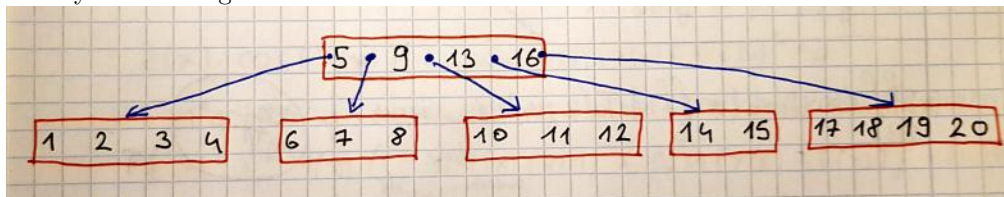
After inserting '18':



After inserting '10':



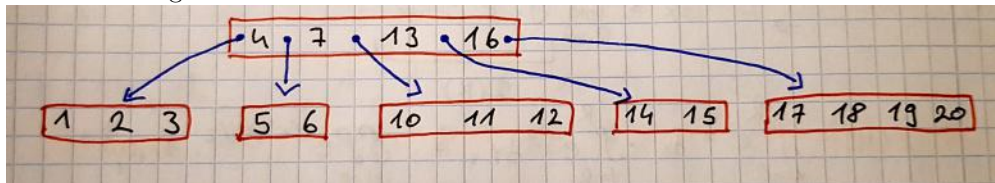
Finally at end we get:



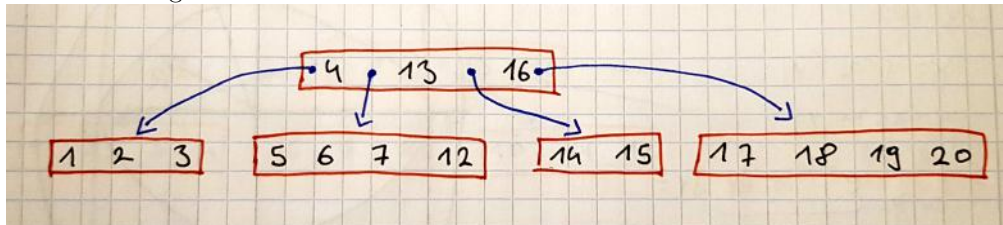
For the second part of the task I then removed the keys in the range [8, 14).

Here I will also present some intermediate steps:

After removing '9':



After removing '11':



Finally after removing '13':

