

# Homework Sheet 5

## Author

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## Matriculation Number

7063561  
7069708  
7073030

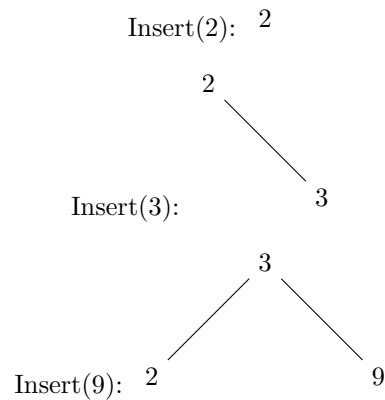
## Tutor

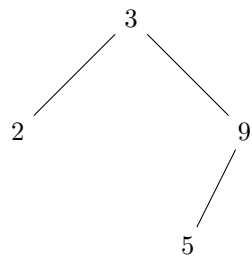
Maryna Dernovaia  
Jan-Hendrik Gindorf  
Thorben Johr

## Exercise 1

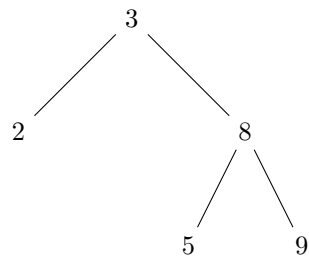
We begin with an empty AVL tree and perform the following operations step by step:

1. Insert(2)
2. Insert(3)
3. Insert(9)
4. Insert(5)
5. Insert(8)
6. Insert(6)
7. Remove(8)
8. Remove(5)
9. Insert(4)
10. Insert(5)
11. Remove(6)

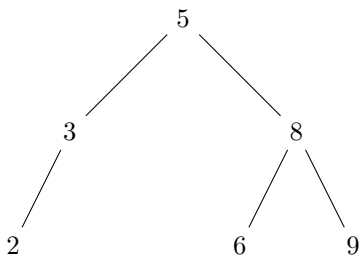




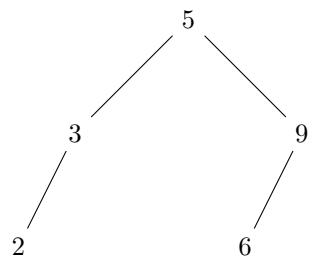
Insert(5):



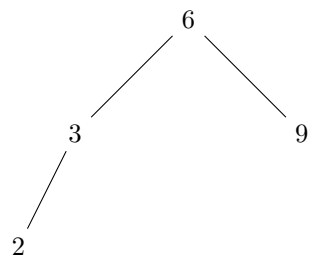
Insert(8):



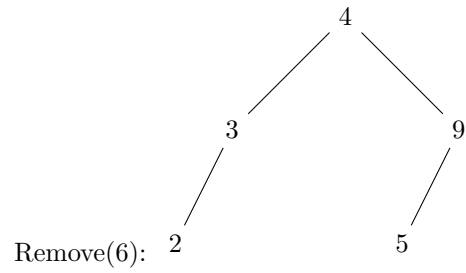
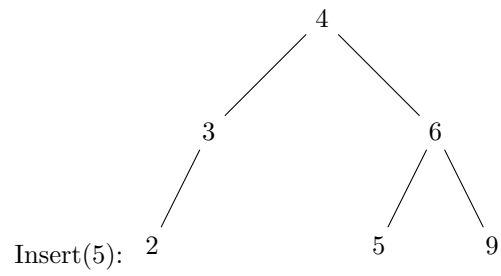
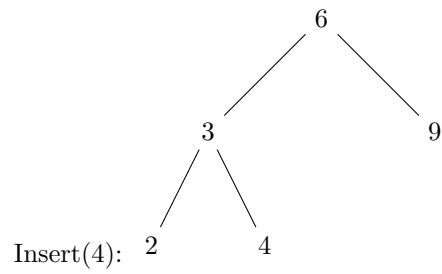
Insert(6):



Remove(8):



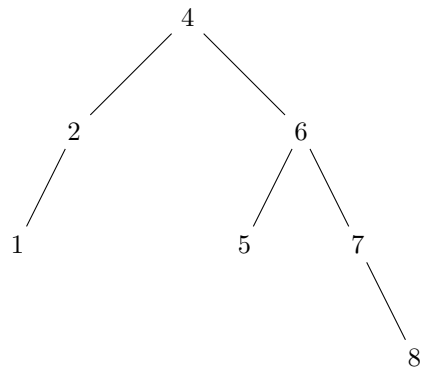
Remove(5):



## Exercise 2

(a)

An AVL tree of maximum height with 7 nodes:



An AVL tree of maximum height with 12 nodes:

