FIT3155: Week 8 tutorial
Covering concepts from Week 7

Objectives: The tutorials, in general, give practice in problem solving, in analysis of algorithms and data-structures, and in logic useful in the above.

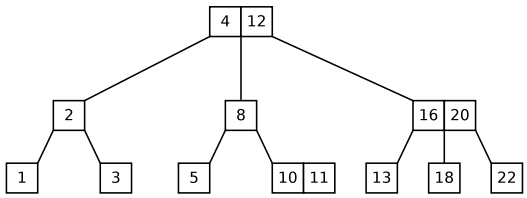
Instructions to the class: Prepare your answers to the questions **before** the tutorial. It will probably not be possible to cover all questions unless the class has prepared them all in advance.

Instructions to Tutors:

i. The purpose of the tutorials is not to solve the practical exercises.

ii. The purpose is to check answers, and to discuss particular sticking points, not to simply make answers available.

1. Revise the following operations on a B-tree:
   - `insert`
   - `delete`
   - `search`
2. For any B-tree with the (branching) parameter t and containing n elements overall, work out the **minimum** possible height of the B-tree.
3. Now work out the **maximum** possible height of the B-tree.
4. For a branching factor of $t = 3$, show the resultant B-tree upon inserting the following sequence of letters: $\{S, Z, G, Y, B, N, D, E, F, U, I, V, M, X, H\}$.
5. Below is the current state of a B-tree with parameter $t = 2$. Delete (in the following sequence of operations) $\{1, 22, 16\}$, and draw the tree after each operation.



-=o0o=-

END

-=o0o=-