**Q1: B+ Tree Operations**

You may use the following B+ structures to help complete your diagram.

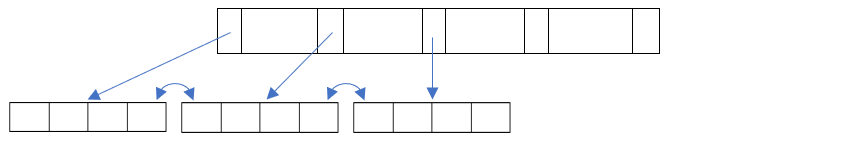
Notice the first structure has two Text Boxes with preset values (use indentation and blanks to easily fill-in) Feel free to change the content, or remove Textbox if you decide to print & fill.

Some of the diagrams may not be used, and some may be used more than once.

**You can draw your trees from scratch.** (Meaning you don’t have to use any templates)

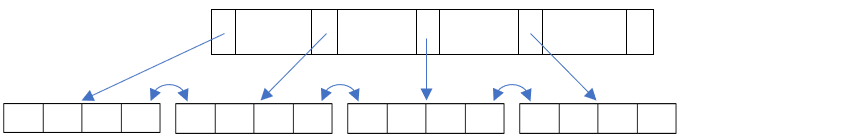
Template1

Num1 Num2 Num3

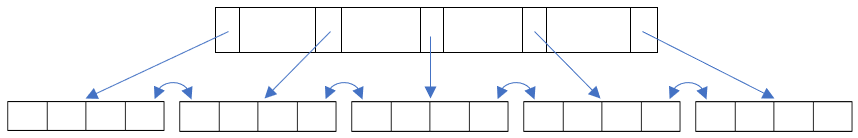


N1\* N2\* N3\* N4\* N5\* N6\* N7\* N8\*

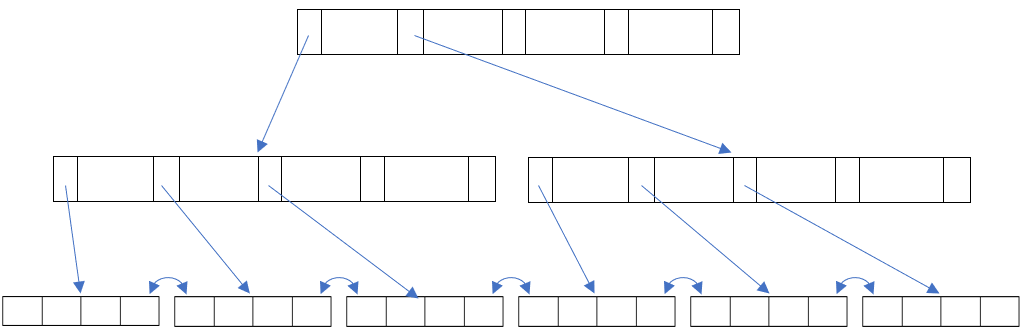
Template2



Template3



Template4

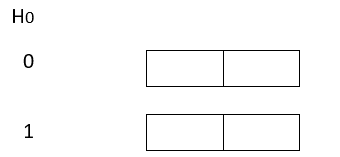


**Q3. Linear Hashing**

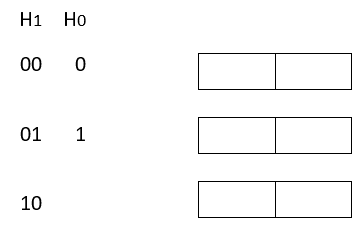
You may use the following hashing buckets to help complete your diagram.

“Level ?, N=?” is editable.

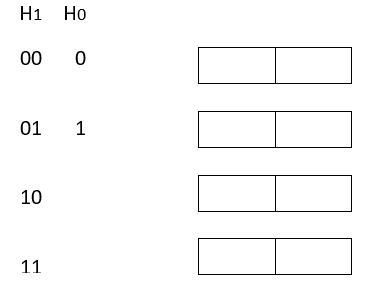
**Again, you can draw your diagram from scratch.**



Level ?, N=?



Level ?, N=?



Level ?, N=?

Components may be used:

Pending bucket (can overlap templates above)

Next = ?

Edit Next value and overlap templates at proper location.

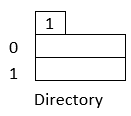
**Q4. Extendible Hashing**

You may use the following directory and data pages to help complete your diagram.

Usage: Data Page are editable tables. Edit bucket content on each update and screenshot proper number of Data Pages. Remember to connect Directory to Data page using arrows.

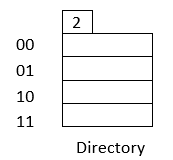
**Again, you can draw your diagram from scratch.**

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Data Page

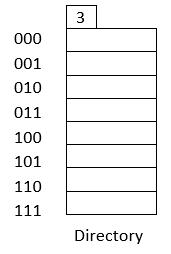
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