CMSC 420 - 0201 – Fall 2019
Homework 2 - Solution Template

Instructions: You can either type your answers in to the text boxes provided or print this document (single sided) and handwrite your answers into the spaces provided. If you type in your answers, please save it as a pdf file and submit it through Gradescope. If you write your answers, please scan your document please use an image enhancing app such as CamScanner or GeniusScanner since raw scanned images are difficult to read.

If your answer does not fit in the space provided, please leave a message as to where to find it (e.g., “Answer continued on page 5”). If you type your answers in, please do not change the layout on the page, because Gradescope uses the exact position on the page to locate answers.

Name:

Student ID:
Problem 1:
(a) Show corresponding AA tree for a given 2-3 tree:

(b) Insert key 7 into 2-3 tree. (Final result only here. To show intermediate steps, add pages at the end.)
**Problem 2:** Right-rotation with additional data:

```java
BinaryNode rotateRight (BinaryNode p):
```
Problem 3: TreapNode expose(\text{Key } x, \text{ TreapNode } p) \{