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**COMPS258**

**Computer Programming and Problem Solving**

***Autumn 2021 Presentation***

***The Take-Home Assignment (Sample)***

***ANSWER BOOK SAMPLE***

**Declaration**

I certify that the work submitted for this assignment is original and solely my own work. I have read and accepted the rubrics given in the Question Book.

**Type in your name and Student ID below.**

|  |  |
| --- | --- |
| **Name:** |  |
| **Student ID:** |  |
| **Date:** |  |

**Important Notes about this answer book template**

* Type in or copy all your answers into the designated space (i.e., answer boxes) for each question in this document. Answers placed elsewhere may be ignored. You should use blue or black for your answers (avoid using red). Feel free to resize it to fit your needs.
* For question sub-parts with an additional level of sub-parts such as (i), (ii), etc, make it clear in the answer box with the sub-part labels.
* Be mindful of the formatting of your programs, in particular the indentation.

**NOTES ABOUT THIS ANSWER BOOK TEMPLATE**

The aim of this template is to give you an idea what will be the format of the Answer Book for filling in your answers for the Take-Home Assignment

Question 1

|  |  |
| --- | --- |
| (a) |  |
| (b) |  |
| (c) |  |
| (d) |  |
| (e) |  |
| (f) |  |
| (g) |  |
| (h) |  |
| (i) |  |
| (j) |  |
| (k) |  |
| (l) |  |
| (m) |  |
| (n) | (i)  (ii)  (iii) |
| (o) |  |
| (p) |  |

Question 2

|  |  |
| --- | --- |
| (a) |  |
| (b) |  |
| (c) |  |
| (d) |  |
| (e) |  |
| (f) |  |
| (g) | |  | | --- | | **def convert (meters, centimeters):** | |
| (h) |  |
| (i) | |  | | --- | | **def isNegative(numlist, startindex = 0, endindex = None):** | |

Question 3

|  |  |
| --- | --- |
| (a) |  |
| (b) | (i)  (ii)  (iii)  (iv) |
| (c) | Fill in the following table for the parts   |  |  |  | | --- | --- | --- | | 1. Is traversing a binary tree same as searching a binary tree? Explain your answer |  | | | 1. List the nodes visited in pre-order traversal | |  | | 1. List the nodes visited in in-order traversal | |  | | 1. List the nodes visited in post-order traversal | |  | | 1. Write down the nodes in the right branch of 32 | |  | | 1. Write down the height of the tree | |  | | 1. Is it a binary search tree? Justify your answer. | |  | |
| (d) | |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 11 | 22 | 30 | 33 | 40 | 44 | 55 | 60 | 66 | 77 | 80 | 88 | 99 |   Pass 1 Begin = 0 End = 12 Mid = 6 Not Found   |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | | 11 | 22 | 30 | 33 | 40 | 44 | **55** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  |  |  | |

THE REST OF THE ANSWER BOOK IS NOT SHOWN. FEEL FREE TO CREATE ANSWER BOXES FOR YOUR PRACTICING

[END OF ANSWER BOOK]