University of Central Punjab

Faculty of Information Technology

Data Structures and Algorithms
Spring 2021

Lab 11	
Topic	• Recursion and BST
Objective	• The basic purpose of this lab is to learn and implement recursion

Instructions:

- Indent your code.
- Comment your code.
- Use meaningful variable names.
- Plan your code carefully on a piece of paper before you implement it.
- Name of the program should be same as the task name. i.e. the first program should be Task_1.cpp
- **void main() is not allowed. Use int main()**
- **You have to work in multiple files. i.e separate .h and .cpp files**
- **You are not allowed to use system("pause")**
- **You are not allowed to use any built-in functions**
- **You are required to follow the naming conventions as follow:**
    - **Variables:** firstName; (no underscores allowed)
    - **Function:** getName(); (no underscores allowed)
    - **ClassName:** BankAccount (no underscores allowed)

Students are required to complete the following tasks in lab timings.

Lab Task 1

Write a function which takes head pointer of singly linked list as parameter and prints the singly linked list in reverse order. Restriction: You are not allowed to use anyother data structure in the function.

Lab Task 2

Write a function which takes object of stack as parameter and prints the stack in reverse order. Restriction: You are not allowed to use any other data structure in the function.

Lab Task 3

Write the recursive code of insertion into a BST. Using your code, create the binary tree (given below).