

American International University-Bangladesh

Faculty of Science and Technology

Department of Computer Science

CSC 2106: Data Structure

Mid Assignment

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| **Name:** | **ID:** | **Section:** |

**Instruction:**

1. Write your name ID and section.
2. Read the question below and answer in the given space below.
3. Save this file and upload it to the portal account.
4. Upload Deadline: 06/07/2022.

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| **Problem Description:**  Some highly confidential documents need to be kept in a super secured vault.  The vault has 5 steps of security checkpoints without any human security personnel. Only an authorized person gets 5 different passwords to open and close 5 different security gates. Each password is effective to open and close the very same gate once.  You have to enter 5 different authorized passwords to open 5 different gates. You have to keep track of which password was used to open one gate so that you can close the gate with the same password after finishing your job in the vault. You will finish your job in the vault and lock the series of gates using the correct sequence (which one you used to enter) of passwords. The passwords will be of string type. |
| **Question 1:** Which data structure would you choose to keep track of the sequence of passwords to access the vault?  **Answer:** |
| **Question 2:** Write the Pseudocode of the insertion operation of this data structure.  **Answer:** |
| **Question 3:** Write the Pseudocode of the deletion operation of this data structure.  **Answer:** |