**Data Structure [A]**

**Code Writing Assessment (Mid-Week)**

**Total Marks – 30**

**Time – 45 minutes**

**Instructions**

1. You will be given 45 minutes to complete your implementation
2. After completion copy your code and paste it in a text file (.txt).
3. The name of the text file must be your id only (1X-XXXXX-X.txt).
4. Upload the text file on the link that will be opened in VUES as soon as the assessment starts.
5. You will be given 5 minutes time to upload your text (.txt) file.
6. As the time to upload will expire no further submission will be accepted and for legitimate cause or causes you will be asked to attend a makeup assessment, but the submission time will not be extended.

Suppose you are planning to implement a digital token system for a restaurant. Each customer will be given a token as they order food. The foods will be prepared according to order of each token number. Remember there is no customer preference in the restaurant. All customers are ‘**equal’**. As the foods are prepared the customer will collect the food and the corresponding token number will be ‘**archived’**. The purpose of this archive mechanism is to see the last token that was served.

Implement a solution that shows how these tokens are stored and archived. For simplicity just show how the tokens are generated one by one and archived. You must use **‘predefined values’** to show that your token generation and archive processes are working properly on the output console. You are **‘not’** allowed to take any values through **‘user inputs’**. You are allowed to use basic data structures ignoring the ‘**existing limitations’** (if any).