## Project 1 Programmer Manual

## 1. Problem Description

This program will simulate the behavior of the lock when five characters are entered. The actions are unlock ( if correct sequence entered ) and an alarm ( if the incorrect sequence is entered ).

## 2. Data Types and Classes:

The data types used in this program fall into two categories: predefined data types and programmer-defined datatypes. The following subsections address the data types used.

**2.1 Table** (programmer-defined type)

This Classis used to store the transition table and action table of the finite state machine (FSM) which models the behavior of the lock.

The Class has:

Date members: tableCapacity, tableSize, the\_table.

Member functions: Table, ~Table, insert, remove, lookup, isIn, empty, size, full.

Member operator: = (assignment operator)

See the Programmer Manual for the Table Class for details.

**2.2 enum** (predefined type)  
Variables:

actionT — This enumerated type is used to represent the seven lock states.

eventT — This enumerated type is used to represent the four user actions.

stateT — This enumerated type is used to represent the four user actions .

## 3. High Level Program Solution

## Diagram Description automatically generated

## 4. Limitations and Suggestions:

## One of the biggest limitations is that program is limited to only work for 4-letter combination.