CS3642-02 Programming Assignment #1 (Fall 2024)

Due: September 16, 2024 (11:30 PM)

To implement a model-based AI agent to carry out a simple task for you. Remember that we have learned four different types of AI Agents in Chapter 2. Please show your design and what tasks you try to solve by using the agent you implemented. **You must write your own codes for the agents. Make sure your submission meets all of the requirements and free of plagiarism. For example, 1) you may implement a Coca machine which costs 30 cents for a coke with 3 possible input of Quarter, Dime, and Nickel. Or 2) Two's complement in the number system. Or 3) Your own choice. It must be a model.**

You may write your code in a contemporary language of your choice; typical languages would include C/C++, Python, Java, Ada, Pascal, Smalltalk, Lisp, and Prolog. A GUI interface is preferred.

1. Submit a PDF file of your well-commented source program, your design and your printed outputs (screen shots). Please include your codes in your PDF file. It is plagiarism to take any codes from the website or others. Try to understand the algorithm and implement the algorithm by your own.
2. Provide a video presentation of the assignment in MP3 or YouTube.
3. Please upload items 1) and 2) separately to D2L. Restriction: No zipped files.

Adding the following information at the beginning of your PDF including your code and outputs.

I. Your personal information:

```
// Course:              _____
// Student name:        _____
// Student ID:          _____
// Assignment #:        _____
// Due Date:            _____
// Signature:           _____(Your signature assures that everything is your own work. Required)
// Score:               _____(Note: Score will be posted on D2L)
```

II. Design of your Agent. Your must show your finite state diagram:

III. Tasks that your agent will solve:

IV. Codes:

V. Outputs (if any):