PSEC Assignment 1

Due: Monday 25th November 2019 8am (30%)

Assignment 1 Overview

This **individual** assignment should be coded in Python. A **demo** is required upon submission, hence must be able to run on the Visual Studio Code or any other Python compiler agreed upon between you and your tutor.

Aside from the demo, your **Python codes** must be submitted to your tutor through blackboard by the assignment due date. The standard SP late submission penalty will be applied.

- 50% marks reduction per day. 0 mark after 1 working day.

Warning: Plagiarism means passing off as one's own the ideas, works, writings, etc., which belong to another person. In accordance with this definition, you are committing plagiarism if you copy the work of another person and turning it in as your own, even if you would have the permission of that person. Plagiarism is a serious offence and disciplinary action will be taken against you. If you are guilty of plagiarism, you may fail all modules in the semester, or even be liable for expulsion.

Singapore Polytechnic Automated Menu

The basic requirement of this assignment requires you to

- Build upon what you have learnt in your practicals to implement a Singapore Polytechnic Automated Menu (SPAM) System
- Allow user to choose from a list of menu items, including their prices – can be hardcoded but marks will be deducted
- Allow users some way to search and add items to a cart
- Users should be allowed to modify items added in the cart
- Allow users to check out and tabulate the amount to pay
- Use Python Dictionaries, Lists and other programming constructs
- Ensure logical flow of events (put yourself in the user's shoes)
- Ensure checks are done on user inputs

Below shows a series of screens you may wish to reference when planning your assignment.

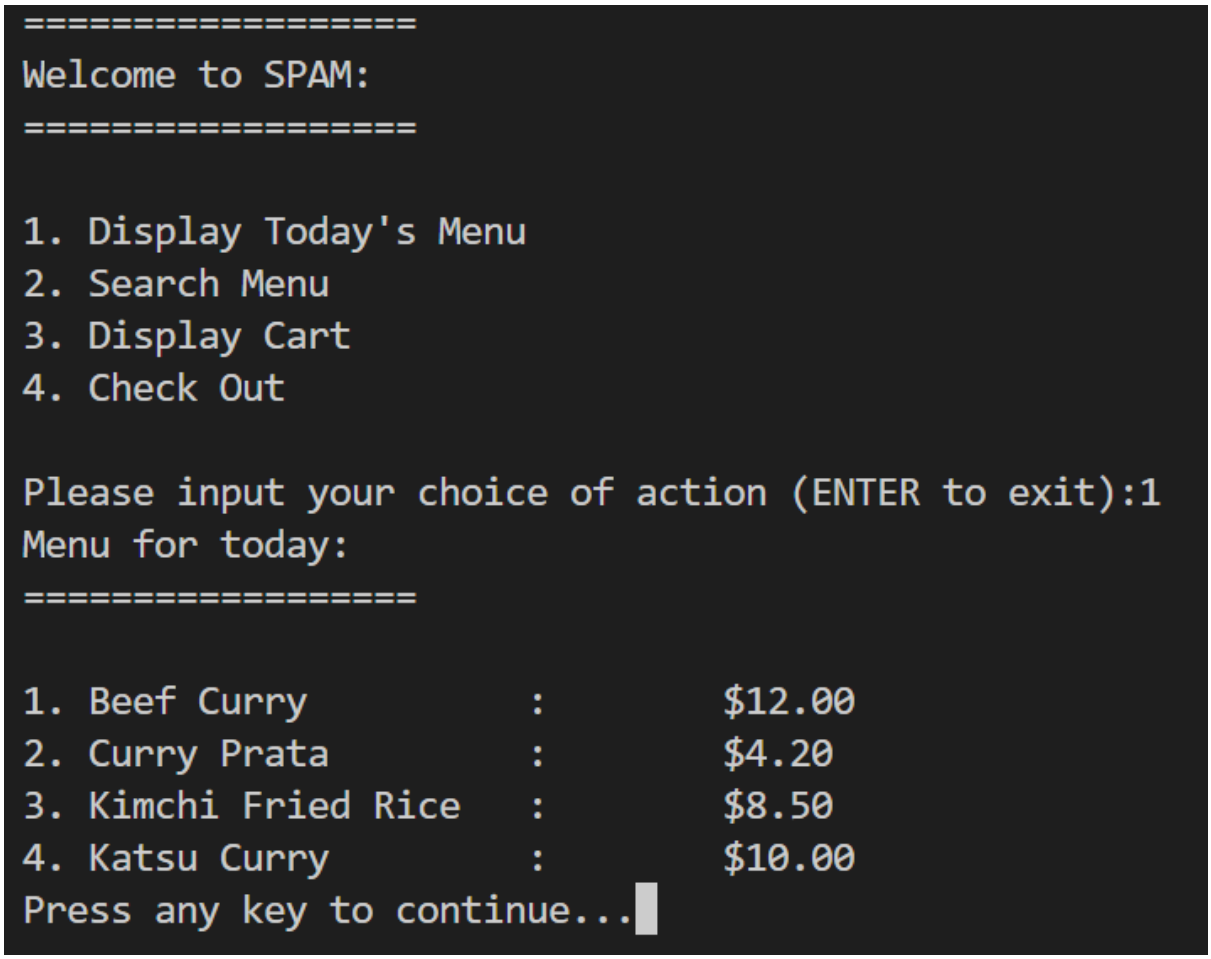

Figure 1: Display Menu

```
Welcome to SPAM:
================

1. Display Today's Menu
2. Search Menu
3. Display Cart
4. Check Out

Please input your choice of action (ENTER to exit):2


Please input food to search: Curry
Yes, we serve the following:
1. Beef Curry          :        $12.00
2. Curry Prata         :        $4.20
3. Katsu Curry         :        $10.00
Enter the dish 1-3 that you would like to order, or 0 to stop: 1
1 added
Enter the dish 1-3 that you would like to order, or 0 to stop: 2
2 added
Enter the dish 1-3 that you would like to order, or 0 to stop: 0
You have ordered ['Beef Curry', 'Curry Prata']
```

Figure 2: Search and place order

```
==================
Welcome to SPAM:
==================

1. Display Today's Menu
2. Search Menu
3. Display Cart
4. Check Out

Please input your choice of action (ENTER to exit):3
In your cart today is ['Beef Curry', 'Curry Prata']
```

Figure 3: Display cart –you can add more information and functions here

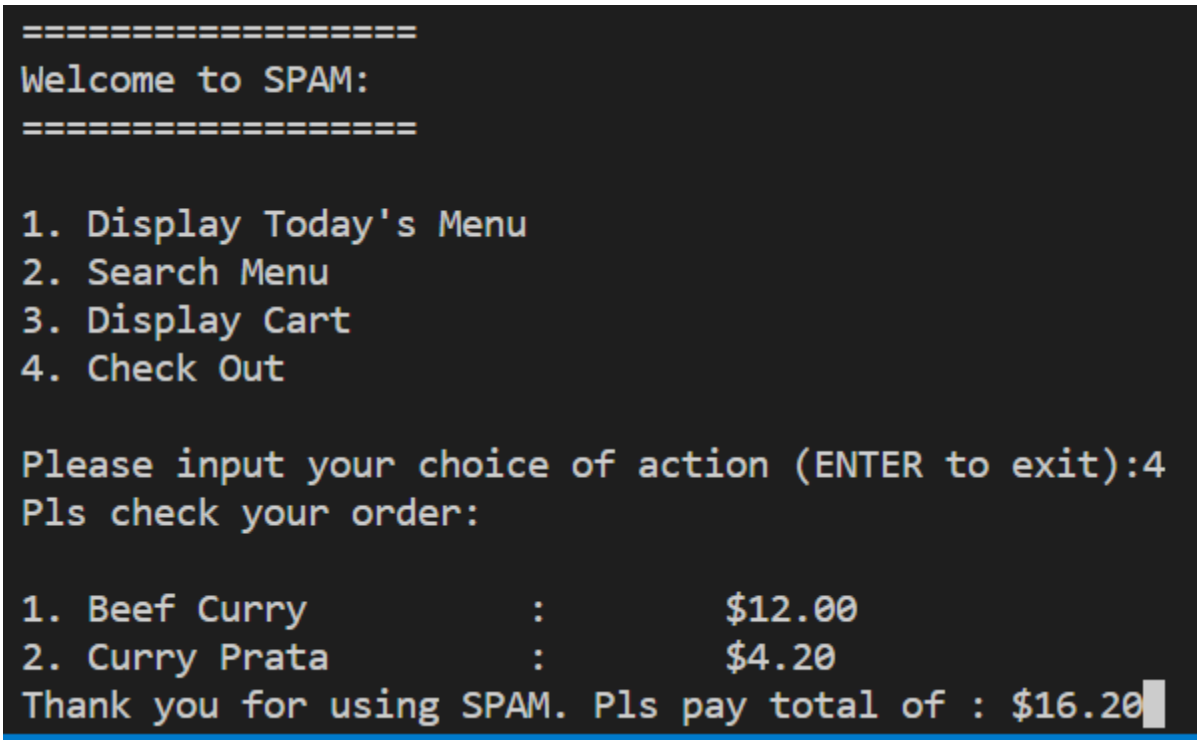

Figure 4: Compute Payment – can also add discounts

Advanced features can include, but not limited to the following;

- Adding new items into the menu either through files or a admin system
- Changing menu items depending on day or date or month (dictionary of dictionary)
- Implementing discount system for specified users
- Better output display than what is given in the examples
- Any innovative features students can think of

Marking Scheme

Category	Description	Weightage
Functional Requirements	Program Flow - Logical sequence of actions - Usability of system - Display output is presentable	15 marks
	Computation accuracy - Dynamic entry of menu items - Search results - Able to add and remove items to cart - Able to compute totals, discounts etc	20 marks
Programming techniques	- proper choice of programming constructs, lists, dictionary - proper choice of algorithms - proper string manipulation techniques - use of loops and conditionals for optimum program flow - proper breakdown of the program with appropriate functions - proper 'pythonic' programming techniques	35 marks
Demo	- ability to execute - ability to explain code - Q&A	10 marks
Advanced features **Students are recommended to complete the basic assignment before attempting any advanced features**	- Login and user tracking - Admin system for entering menu items - Reading and storing into files - Changing menu items depending on day or date or month (dictionary of dictionary) - Implementing discount system for specified users - Better output display than what is given in the examples - Any other innovative features	20 marks Each feature 1-5 mark max, depending on complexity