**CSIS2101**

**Assignment 1. (Question 1 and Question 2)**

***Question 1: (50 Points)***

For the following problem please write an **ALGORITHM IN PLAIN ENGLISH** .i.e give details as to how you will solve the problem.

1. A deck of 52 playing cards (as used for playing bridge) has to be sorted. At the end of the attempt, the sorted deck of cards should be on the table with the backside up.
2. The order within a suite is 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10 – Jack – Queen – King - Ace. The very first card in the sorted deck is the 2 of Spades, the next ones are the 3 of Spades, the 4 of Spades, the 5 of Spades, the 6 of Spades ... up to the Jack of spades, Queen of Spades, King of Spades and Ace of Spades. The next card is 2 of Diamonds, followed by the 3 of Diamonds etc. The hearts and clubs cards follow in the same order.
3. The deck of cards must be well-shuffled immediately prior to the challenge.

Please write the algorithm in steps like you write a recipe for a dish.

The algorithm should have the input to start with (I), the process to be followed which is the algorithm (P) and the final Output (O).

If you need to repeat steps please state repeat steps m through n to make it easier.

Please try to not use any programming language.

**I am not expecting a program, but just use pseudocode or plain English to write your algorithm for solving the problem.** This file format can be in a Word doc or Wordpad or notepad.

I: Shuffled, unsorted deck of cards

P:

Step 1: Pick up a card

Step 2: Determine which suite the card belongs to then place it in 1 of 4 piles (First pile for Spades, Second pile for Diamonds, Third pile for Hearts, and Fourth pile for Clubs)

Step 3: Repeat steps 1 and 2 until all cards are in 1 of the 4 piles

Step 4: Pick up two cards in the Spades pile

Step 5: Compare these two cards and put the smaller one on the left-hand side after considering the correct order: 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10 – Jack – Queen – King - Ace

Step 6: Pick up another card from the pile

Step 7: Compare the card that was just picked up with the two cards already sorted on the table

Step 8: Insert the card to the left, middle, or right of previously sorted cards depending on the value of the card

Step 9: Repeat steps 6-8 until all cards in the suite are sorted

Step 10: Repeat steps 4-9 for each of the three other suites (Diamonds, Hearts, and Clubs) until all 4 suite piles are sorted in ascending order

Step 11: Make sure all cards are facing backside up

O: A deck of cards sorted in ascending order and by suite, placed on the table with the backside up

***Question 2: (50 Points)***

This assignment is to demonstrate that you have access to a development environment and are able to create programs. We also use this assignment to have you give some information about yourself for the instructor. This assignment follows the example of FirstProgram, except that the lines with print will be used to print different information. Create a python file named PersonalDataYourName.py (For example, PersonalDataAjoyKumar.py). Write a Python program that does nothing but output some personal information about yourself. You should have a single source file (the .py file having the name as specified above). The code in the program will consist primarily of the use of the "print" command. The data that is printed will be the following (or if your prefer “That information is classified.”).

# 1) Name:

# 2) Email address:

# 3) Major:

# 4) Minor: ( if any, if none put N/A )

# 5) Campus dorm or town where you now live:

# 6) Hometown or country where you grew up:

# 7) Any Programming languages with which you have even a little experience:

# 8) Favorite Movie or TV show you like to watch:

# 9) Favorite Anime:

# 10) Favorite Sport or Hobby:

# 11) Favorite Restaurant:

Make sure that the print outs give enough details. For example if your name is John Smith it shouldn’t just say John Smith, it should say

Name: John Smith

**Copy and paste the above lines to use as comments in your code as any line starting with a # in Python is a comment and is ignored by the compiler.**

**A comment is a line in the code followed by # and anything that comes after this sign in a Python program is ignored by the compiler.**

**Then put the print code statements after each comment line.**

**Here is a sample of the beginning of my code. Notice the file comments. You are to adopt this header style for use for every assignment in this class and the file needs to start with this header.**

**# File: akumarPersonalData.py**

**# Project: CSIS2101 Assignment 1**

**# Author: Ajoy Kumar**

**# History: Version 1.1 August 26, 2023**

**# Program: Printing my personal data.**

For this assignment, Put the .py file and the worddoc (Question 1) in a zip folder. (Search Google for “how to zip” if you don’t know how.) Name the zip file yourlastnameAsst01.zip. Then upload your zip file under the assignment’s label in Canvas.