**CIS 3260 – Introduction to Programming**

**Group Assignment 2**

Due 11:59 pm on Nov. 4, 2021

**Submission:**

* Add all your group members’ full name sand email addresses as comments on top of each python program. Add appropriate comments at other locations of your python programs for readability.
* In part 3, name your python program as GA2PQ#.py. For example, for question #1) in part 3, your program should have a name GA2PQ1.py
* Put your answers for questions 1 and 3 into a word document **GA2.doc**
* Submit following items into iCollege -> Assessment -> Group Assignment 2
  + GA2.doc
  + GA2PQ1.py
  + GA2PQ2.py
  + Meeting\_minute1.doc
  + Meeting\_minute2.doc

**1. Let’s strength the group collaboration**

1) Let us choose a way to share the documents/program files with team members. Ask one of your team member to create a shared folder at Dropbox or Google Drive. Remember to grant edit permission to every team member in your group. Then share with me the information below.

A. [5 points] Which cloud service you are using, Dropbox or Google Drive?

B. [5 points] A link to the shared folder

2) [5 points] Send an appreciating email to each of your team member. Please start the body of email with “Dear Team Member Name, ….”. Then list the time when each of you send out the email.

**2. Conversations in your meetings**

You are welcome to discuss with your team members the questions in group assignments, doubts from course content, understanding of questions’ descriptions of your individual assignment. But you are NOT allowed to discuss about the solutions of your individual assignment questions.

Before each meeting starts, please ask one team member(facilitator) to write the agenda of next meeting. During the meeting, facilitator should also take notes. Please rotate facilitator role in your meetings.

Before the due date of this group assignment, you are expected to meet at least twice with your group members. Share with us your meeting minutes. For the formats, please refer to the attachment.

A. [15 points] Meeting 1 minutes

B. [15 points] Meeting 2 minutes

**[More details are highly recommended in your meeting minutes]**

**3. Programming tasks with your group members**

1) Let us continue our password problem from last group assignment. For security issue, most websites will ask the user to create a password with multiple constraints. Please develop a program to allow user create a new password and verify if user enters a valid password or not. Your program should meet a list of requirements below.

1. Ask user to enter a password
2. Verify if the length of password is between 10-15
3. Verify if the password contains and only contains both letters and digits
4. Ask user to type a valid password a second time and verify if it is the same as previous one.
5. Continue asking a new password if it is not created successfully.

A. [5 points] What is(are) the input(s) and output(s)?

B. [5 points] System Design: Describe your steps in English.

C. [5 points] Write your program and attach your source code here.

D. [5 points] Share FIVE sample runs.

2) It is so cool that you have the ability now to develop a basic Text Preprocessing tool. Please develop a software with features below:

1. Ask user to enter a line
2. Offer an option to remove the punctuations in a line
3. Offer an option to display the number of given words
4. Offer an option to check if a given word exists or not
5. Offer an option to replace the word with a new word
6. Offer an option to quit the software

A. [5 points] What is(are) the input(s) and output(s)?

B. [5 points] System Design: Describe your steps in English.

C. [5 points] Write your program and attach your source code here.

D. [5 points] Share FIVE sample runs.

4**. Think About Your Group Project Topic**

[15 points] Let’s make more fun in learning the python skills. It is your turn now to apply your course knowledge into a real project with your dear team members. Please read the instructions in “Group Project Proposal”. Then write your first version of proposal here.

Note: If you are not satisfied with your project topic, you can modify it after we learn more advanced programming skills from later chapters. If you prefer, you can also continue the programming questions above by adding more innovative features.

*Sample project proposals:*

**Sentiment Analysis of Local Walmart Yelp Reviews**

As students that have limited budgets and a low willingness to travel far to shop for groceries, home goods, and bath essentials, we were curious as to how the local community felt about the local Walmart. We plan on conducting sentiment analysis on our local Walmart, located at 835 M.L.K. Jr Dr. NW, Atlanta, GA 30314.

Our data source will be Yelp, a popular site that’s used to review both small and large businesses.

The features of our program will include:

1. Define dictionaries of words that signify a good or bad experience
2. Count number of positive words from reviews
3. Count number of negative words from reviews
4. Measure if a review is positive or not
5. Summarize the percentage of positive reviews to local Walmart

The tasks will be split as follows:

* Team member 1 Name: manually collect most recent 100 yelp reviews of local Walmart; System design of Feature 1); Implementation of Feature 1); System design of overall framework of software
* Team member 2 Name: System design of Feature 2) & 3): Implementation of Feature 2) & 3); Test Feature 1)-5)
* Team member 3 Name: System design of Feature 4) & 5); Implementation of Feature 4) &5); help writing comments in the programs

**Contact Book**

*1. Goal*

Our team's end goal is to design a fully-functioning, text-based contact book. All team members will benefit from this Python project because it is digestible for beginners, but also has some elements that will challenge us to apply the knowledge we have gained from this class.

*2. List of Features*

1. Read and initialize the contact book from a file or program
2. Display options to user ( features from 3) to 8) )
3. Display all contacts
4. Add a new contact (name, phone)
5. Search for a contact by name
6. Search for a contact by phone number
7. Remove contact by name
8. Clear contact book
9. Edit an existing contact

*3. Task Assignment*

1. Team member 1 Name: Create a contact book and store it in a csv file; System design of overall framework of software; System design and implementation of Feature 1) and 2); Test features from 1) to 9)
2. Team member 2 Name: System design and implementation of Feature 3) , 4), 7) and 8)
3. Team member 3 Name: System design and implementation of Feature 5), 6) & 9); write comments in the programs