# COSC 2436 lab 2: Linkedlist

## 1. Introduction

You will create a C++ program store and short a list of game data. Your program will read an input file contain an entry name, and their score. Output the data in descending score order. The purpose of this lab is for you to practice linkedlist and sorting algorithm.

## 2. Requirement

- A struct to store the name and score of an entry
- Linkedlist class to hold the game data
- Add and sort function for your linkedlist class

## 3. Input and Output

    a. Input file
- Valid input only if in <name>,<score> format.
- If <name> or <score> is missing -> invalid.
- If <name> or <score> contain comma -> invalid.
- Having spaces in <name> or <score> is valid.
- Invalid input should be ignored.
- Input might have \n or \r at the end of each line.

    b. Output file
- Output the name entry and their respective score in descending order according to the score.
- Spaces should be removed in the output.
- Output "No valid data in input" if input is empty or no valid input.

## 4. Examples

| input1.txt | ans1.txt |
|---|---|
| S,norlax,99 | No valid data in input |

| input2.txt | ans2.txt |
|---|---|
| Richard,10 | Zoe,15 |
| Zoe,15 | Richard,10 |

| input3.txt | ans3.txt |
|---|---|
| Pikachu   ,30 | Pikachu,30 |
| Ditto   ,20 | Charmander,25 |
| Charmander,25 | Ditto,20 |
| Squirtle,1 5 | Squirtle,15 |

5. **Turn in your lab assignment**

   Lab 2 needs to be turned in to our Linux server, follow the link here
   https://rizk.netlify.app/courses/cosc2430/2_resources/
   Make sure to create a folder under your root directory, name it lab2 (name need to be lower case), copy your main.cpp and ArgumentManager.h to this folder, no testcase or other files needed.

   PS: This document may have typos, if you think something illogical, please email TAs for confirmation.