GITHUB LINK:

https://github.com/kaile777/CS2910/tree/main/LAB%201

FEATURES SCREENSHOTS BELOW

1. Unsorted list of students

2. Sorted list of students by last name


```python
    def main():
        print("Update Student Information:\n")

        while True:
            try:
                sID = int(input("Enter Student ID: "))
                break
            except:
                print("Invalid Input!")

        found = False
        for student in s_list:
            if student.studentID == sID:
                Student.updateStudent(student, s_file, g_file)
                found = True

        if found == False:
            print("Student not found!")

        stay_6 = exit()

    elif option == 7:

        stay_7 = True
```

students.csv > data
```
1   1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
2   2;Smith;Jane;4374567812;j_smith@gmail.com
3   3;JONES;KAILE;7805120795;kailejones@gmail.com
4   4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
5   5;KRIE;SHAYMUS;13124124;shaybow@gmail.com
6   6;JONES;BOB;7806666666;aefefwefwefwe
7   7;WHITE;CHAD;8098123123;chad@chad.com
8   8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
9   9;B;SHANE;1234567;hsdfkjsdvjksdv
10
```

grades.csv > data
```
1   1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na
2   2;Smith;Jane;32;na;90;na;66;na;na;na;na
3   3;JONES;KAILE;66;97;82;na;77;na;na;na;na
4   4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na
5   5;KRIE;SHAYMUS;50;na;na;4;na;77;na;na;na;na
6   6;JONES;BOB;na;na;77;na;na;na;na;na;na
7   7;WHITE;CHAD;na;na;na;na;na;na;na;na;na
8   8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na
9   9;B;SHANE;na;na;na;na;na;na;na;na;na
10
```

courses.csv > data
```
1   CS2020;winter;1
2   CS2040;fall;2
3   CS2910;winter;3
4   CS3010;FALL;4
5   PH1250;WINTER;5
6   MA1200;WINTER;6
7   PE1111;WINTER;7
8   AM1234;FALL;8
9   HH1234;FALL;9
10
```

```
ID  |  LAST NAME  |  FIRST NAME  |   PHONE    |  EMAIL
-----------------------------------------------------------------------
8   |   ALAFA     , 1232341241   |  7809876541 |  akdfjsigfhioushf
9   |     B       ,    SHANE      |    1234567  |  hsdfkjsdvjksdv
6   |   JONES     ,    BOB        |  7806666666 |  aefefwefwefwe
3   |   JONES     ,    KAILE      |  7805120795 |  kailejones@gmail.com
5   |    KRIE     ,  SHAYMUS      |   13124124  |  shaybow@gmail.com
4   | MACKENZIE   ,  PEYTON       |  7805162446 |  peytondawnmackenzie@gmail.com
2   |   SMITH     ,    JANE       |  4374567812 |  j_smith@gmail.com
1   |  SMITHHH    ,   HANNAH      |  4376902123 |  a_smith@gmail.com
7   |   WHITE     ,    CHAD       |  8098123123 |  chad@chad.com
Exit (Y/N):
```
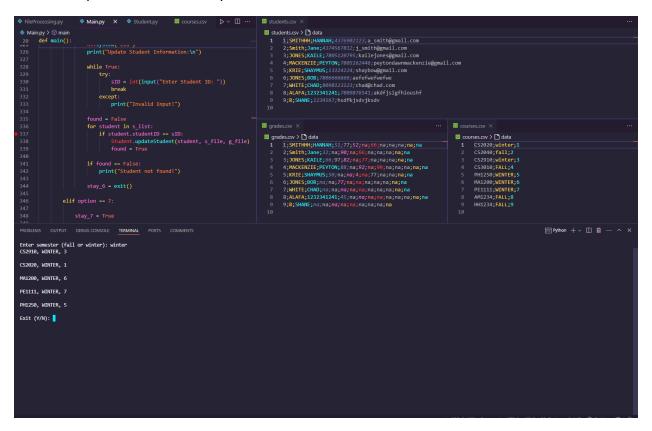
3. Output courses unsorted

4. Output courses sorted by name

5. Output courses sorted by name and semester

6. Add student


```
FileProcessing.py    Main.py ×    Student.py    courses.csv          students.csv M ×
Main.py > main                                                        students.csv > data
20    def main():                                                     1   1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
325          us.system( cis )                                         2   2;Smith;Jane;4374567812;j_smith@gmail.com
326              print("Update Student Information:\n")               3   3;JONES;KAILE;7805120795;kailejones@gmail.com
327                                                                   4   4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
328              while True:                                          5   5;KRIE;SHAYMUS;13124124;shaybow@gmail.com
329                  try:                                             6   6;JONES;BOB;7806666666;aefefwefwefwe
330                      sID = int(input("Enter Student ID: "))       7   7;WHITE;CHAD;8098123123;chad@chad.com
331                      break                                        8   8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
332                  except:                                          9   9;B;SHANE;1234567;hsdfkjsdvjksdv
333                      print("Invalid Input!")                     10   10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
334                                                                   11
335              found = False
336              for student in s_list:                               grades.csv M ×                      courses.csv ×
337                  if student.studentID == sID:                     grades.csv > data                   courses.csv > data
338                      Student.updateStudent(student, s_file, g_file) 1 1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na  1  CS2020;winter;1
339                      found = True                                  2  2;Smith;Jane;32;na;90;na;66;na;na;na;na;na       2  CS2040;fall;2
340                                                                    3  3;JONES;KAILE;66;97;82;na;77;na;na;na;na         3  CS2910;winter;3
341              if found == False:                                    4  4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na 4  CS3010;FALL;4
342                  print("Student not found!")                       5  5;KRIE;SHAYMUS;50;na;na;4;na;77;na;na;na;na      5  PH1250;WINTER;5
343                                                                    6  6;JONES;BOB;na;na;77;na;na;na;na;na;na;na        6  MA1200;WINTER;6
344              stay_6 = exit()                                       7  7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na       7  PE1111;WINTER;7
345                                                                    8  8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na 8  AM1234;FALL;8
346          elif option == 7:                                         9  9;B;SHANE;na;na;na;na;na;na;na;na                9  HH1234;FALL;9
347                                                                   10  10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na   10
348              stay_7 = True
```

```
Add Student:

Enter first name   : hannah
Enter last name    : mackenzie
Enter phone number : 7806198265
Enter email        : hannahmackenzie@gmail.com
Exit (Y/N):
```

7. Add course


```
FileProcessing.py    Main.py ×    Student.py    courses.csv M          students.csv M ×
Main.py > main                                                         students.csv > data
20    def main():                                                      1   1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
325          us.system( cis )                                          2   2;Smith;Jane;4374567812;j_smith@gmail.com
326              print("Update Student Information:\n")                3   3;JONES;KAILE;7805120795;kailejones@gmail.com
327                                                                    4   4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
328              while True:                                           5   5;KRIE;SHAYMUS;13124124;shaybow@gmail.com
329                  try:                                              6   6;JONES;BOB;7806666666;aefefwefwefwe
330                      sID = int(input("Enter Student ID: "))        7   7;WHITE;CHAD;8098123123;chad@chad.com
331                      break                                         8   8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
332                  except:                                           9   9;B;SHANE;1234567;hsdfkjsdvjksdv
333                      print("Invalid Input!")                      10   10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
334                                                                    11
335              found = False
336              for student in s_list:                                grades.csv M ×                      courses.csv M ×
337                  if student.studentID == sID:                      grades.csv > data                   courses.csv > data
338                      Student.updateStudent(student, s_file, g_file) 1 1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na  1  CS2020;winter;1
339                      found = True                                  2  2;Smith;Jane;32;na;90;na;66;na;na;na;na;na       2  CS2040;fall;2
340                                                                    3  3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na      3  CS2910;winter;3
341              if found == False:                                    4  4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na 4  CS3010;FALL;4
342                  print("Student not found!")                       5  5;KRIE;SHAYMUS;50;na;na;4;na;77;na;na;na;na;na   5  PH1250;WINTER;5
343                                                                    6  6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na     6  MA1200;WINTER;6
344              stay_6 = exit()                                       7  7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na    7  PE1111;WINTER;7
345                                                                    8  8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na 8  AM1234;FALL;8
346          elif option == 7:                                         9  9;B;SHANE;na;na;na;na;na;na;na;na                9  HH1234;FALL;9
347                                                                   10  10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na  10  PH7890;FALL;10
348              stay_7 = True                                         11
```

```
Add Course:

Enter name of course            : PH7890
Enter course semester (Fall or Winter) : fall

Course added:
 PH7890, FALL, 10
Exit (Y/N):
```

8. Add grade


```
      Main.py > main
 20   def main():
325       print("Update Student Information:\n")
326
327
328       while True:
329           try:
330               sID = int(input("Enter Student ID: "))
331               break
332           except:
333               print("Invalid Input!")
334
335       found = False
336       for student in s_list:
337           if student.studentID == sID:
338               Student.updateStudent(student, s_file, g_file)
339               found = True
340
341       if found == False:
342           print("Student not found!")
343
344       stay_6 = exit()
345
346   elif option == 7:
347
348       stay_7 = True
```

students.csv > data
```
 1  1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
 2  2;Smith;Jane;4374567812;j_smith@gmail.com
 3  3;JONES;KAILE;7805120795;kailejones@gmail.com
 4  4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
 5  5;KRIE;SHAYMUS;13124124;shaybow@gmail.com
 6  6;JONES;BOB;7806666666;aefefwefwefwe
 7  7;WHITE;CHAD;8098123123;chad@chad.com
 8  8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
 9  9;B;SHANE;1234567;hsdfkjsdvjksdv
 10 10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
 11
```

grades.csv M
grades.csv > data
```
 1  1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na;na
 2  2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na
 3  3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na
 4  4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na
 5  5;KRIE;SHAYMUS;50;na;4;na;77;na;na;na;na;na;na
 6  6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na
 7  7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na
 8  8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na
 9  9;B;SHANE;na;na;na;na;na;na;na;na;na
 10 10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na;80
 11
```

courses.csv M
courses.csv > data
```
 1  CS2020;winter;1
 2  CS2040;fall;2
 3  CS2910;winter;3
 4  CS3010;FALL;4
 5  PH1250;WINTER;5
 6  MA1200;WINTER;6
 7  PE1111;WINTER;7
 8  AM1234;FALL;8
 9  HH1234;FALL;9
 10 PH7890;FALL;10
 11
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   COMMENTS

```
Add Student Grade:

Enter students last name: mackenzie
Duplicate last names found!

4   MACKENZIE, PEYTON
10  MACKENZIE, HANNAH
Please Enter Student ID: 10
Enter course code: 10
Enter grade (0-100)% : 80
Grade added successfuly!
Exit (Y/N):
```

9. Update student


```
      Main.py > main
 20   def main():
325       print("Update Student Information:\n")
326
327
328       while True:
329           try:
330               sID = int(input("Enter Student ID: "))
331               break
332           except:
333               print("Invalid Input!")
334
335       found = False
336       for student in s_list:
337           if student.studentID == sID:
338               Student.updateStudent(student, s_file, g_file)
339               found = True
340
341       if found == False:
342           print("Student not found!")
343
344       stay_6 = exit()
345
346   elif option == 7:
347
348       stay_7 = True
```

students.csv M
students.csv > data
```
 1  1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
 2  2;Smith;Jane;4374567812;j_smith@gmail.com
 3  3;JONES;KAILE;7805120795;kailejones@gmail.com
 4  4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
 5  5;KRIEWALDT;SHAYMUS;13124124;shaybow@gmail.com
 6  6;JONES;BOB;7806666666;aefefwefwefwe
 7  7;WHITE;CHAD;8098123123;chad@chad.com
 8  8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
 9  9;B;SHANE;1234567;hsdfkjsdvjksdv
 10 10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
 11
```

grades.csv M
grades.csv > data
```
 1  1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na;na
 2  2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na
 3  3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na
 4  4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na
 5  5;KRIEWALDT;SHAYMUS;50;na;4;na;77;na;na;na;na;na;na
 6  6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na
 7  7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na
 8  8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na
 9  9;B;SHANE;na;na;na;na;na;na;na;na;na
 10 10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na;80
 11
```

courses.csv M
courses.csv > data
```
 1  CS2020;winter;1
 2  CS2040;fall;2
 3  CS2910;winter;3
 4  CS3010;FALL;4
 5  PH1250;WINTER;5
 6  MA1200;WINTER;6
 7  PE1111;WINTER;7
 8  AM1234;FALL;8
 9  HH1234;FALL;9
 10 PH7890;FALL;10
 11
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   COMMENTS

```
Update Student Information:

Enter Student ID: 5

    Choose Which to Update:
    1. First Name
    2. Last Name
    3. Phone Number
    4. Email

    0. Back


-> 2
Enter Last Name: kriewaldt
Continue updating this student? (Y/N)
```

10. Search course by name

11. Search course by code

12. Seach student by last name

13. Search student by phone number

14. Display list of courses taken by student

15. List courses and grades of student

16. Calculate avg grade for student (enters last name)


```
459            match = False
460            for student in s_list:
461                last4digits = str(student.phoneNum)
462                last4digits = last4digits[-4:]
463                if last4digits == number[-4:]:
464                    os.system('cls')
465                    print("\n",student,"\n")
466                    match = True
467            if match == False:
468                number = number[-4:]
469                print(f"Student with phone # ending with: {number}, not fou
470        elif option == 3:
471            stay_8 = False
472            os.system('cls')
473        else:
474            print("Invalid Input!")
475
476        stay_8 = exit()
477
478    if option == 9:
479        stay_9 = True
480
481        while stay_9 == True:
```

students.csv
```
1   1;SMITH##;HANNAH;4376902123;a_smith@gmail.com
2   2;Smith;Jane;4374567812;j_smith@gmail.com
3   3;JONES;KAILE;7805120795;kailejones@gmail.com
4   4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
5   5;KRIEWALDT;SHAYMUS;13124124;shaybow@gmail.com
6   6;JONES;BOB;7806666666;aefefwefwefwe
7   7;WHITE;CHAD;8098123123;chad@chad.com
8   8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
9   9;B;SHANE;1234567;hsdfkjsdvjksdv
10  10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
11
```

grades.csv
```
1   1;SMITH##;HANNAH;51;77;52;na;66;na;na;na;na;na;na
2   2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na;na
3   3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na;na
4   4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na;na
5   5;KRIEWALDT;SHAYMUS;50;na;na;4;na;77;na;na;na;na;na;na
6   6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na;na
7   7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na
8   8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na;na;na
9   9;B;SHANE;na;na;na;na;na;na;na;na;na;na
10  10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na;na;80
11
```

courses.csv
```
1   CS2020;winter;1
2   CS2040;fall;2
3   CS2910;winter;3
4   CS3010;FALL;4
5   PH1250;WINTER;5
6   MA1200;WINTER;6
7   PE1111;WINTER;7
8   AM1234;FALL;8
9   HH1234;FALL;9
10  PH7890;FALL;10
11
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   COMMENTS

```
View Student Averages

Enter Student Last Name: kriewaldt


            1. Display total average
            2. Display semester average
            3. Exit


->
```



```
View Student Averages

Enter Student Last Name: kriewaldt



            1. Display total average
            2. Display semester average
            3. Exit


->  1
Total Average: 43%
Exit (Y/N):
```

17. Calculate the avg grade for a student (enters last name and semester)


```
FileProcessing.py    Main.py M ×    Student.py    courses.csv
Main.py > main
 20    :
458
459            match = False
460            for student in s_list:
461                last4digits = str(student.phoneNum)
462                last4digits = last4digits[-4:]
463                if last4digits == number[-4:]:
464                    os.system('cls')
465                    print("\n",student,"\n")
466                    match = True
467            if match == False:
468                number = number[-4:]
469                print(f"Student with phone # ending with: {number}, not fou
470        elif option == 3:
471            stay_8 = False
472            os.system('cls')
473        else:
474            print("Invalid Input!")
475
476        stay_8 = exit()
477
478    if option == 9:
479        stay_9 = True
480
481        while stay_9 == True:
```

```
students.csv M ×
students.csv > data
 1    1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
 2    2;Smith;Jane;4374567812;j_smith@gmail.com
 3    3;JONES;KAILE;7805120795;kailejones@gmail.com
 4    4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
 5    5;KRIEWALDT;SHAYMUS;13124124;shaybow@gmail.com
 6    6;JONES;BOB;7806666666;aefefwefwefwe
 7    7;WHITE;CHAD;8098123123;chad@chad.com
 8    8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
 9    9;B;SHANE;1234567;hsdfkjsdvjksdv
10    10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
11
```

```
grades.csv M ×
grades.csv > data
 1    1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na;na
 2    2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na
 3    3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na
 4    4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na
 5    5;KRIEWALDT;SHAYMUS;50;na;4;na;77;na;na;na;na;na;na
 6    6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na;na
 7    7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na
 8    8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na;na
 9    9;B;SHANE;na;na;na;na;na;na;na;na;na
10    10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na;80
11
```

```
courses.csv M ×
courses.csv > data
 1    CS2020;winter;1
 2    CS2040;fall;2
 3    CS2910;winter;3
 4    CS3010;FALL;4
 5    PH1250;WINTER;5
 6    MA1200;WINTER;6
 7    PE1111;WINTER;7
 8    AM1234;FALL;8
 9    HH1234;FALL;9
10    PH7890;FALL;10
11
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    COMMENTS

View Student Averages

Enter Student Last Name: mackenzie
Duplicate last names found!

4    MACKENZIE, PEYTON
10   MACKENZIE, HANNAH
Please Enter Student ID: 4


        1. Display total average
        2. Display semester average
        3. Exit


-> 2
Enter Semester: fall
```



```
FileProcessing.py    Main.py M ×    Student.py    courses.csv
Main.py > main
 20    :
527        if option == 1:
528            # display student average
529            for grade in student.grades:
530                if grade.grade_val != "na":
531                    courseCount += 1
532                    total += int(grade.grade_val)
533        elif option == 2:
534            # display term average
535
536            while True:
537                try:
538                    sem = input("Enter Semester: ").upper()
539                    if sem != "FALL" and sem != "WINTER":
540                        raise Exception()
541                    break
542                except:
543                    print("Invalid Input")
544
545            for grade in student.grades:
546                if grade.grade_val != "na" and grade.course.semester == sem
547                    courseCount += 1
548                    total += int(grade.grade_val)
549        elif option == 3:
550            break
```

```
students.csv M ×
students.csv > data
 1    1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
 2    2;Smith;Jane;4374567812;j_smith@gmail.com
 3    3;JONES;KAILE;7805120795;kailejones@gmail.com
 4    4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
 5    5;KRIEWALDT;SHAYMUS;13124124;shaybow@gmail.com
 6    6;JONES;BOB;7806666666;aefefwefwefwe
 7    7;WHITE;CHAD;8098123123;chad@chad.com
 8    8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
 9    9;B;SHANE;1234567;hsdfkjsdvjksdv
10    10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
11
```

```
grades.csv M ×
grades.csv > data
 1    1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na;na
 2    2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na
 3    3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na
 4    4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na
 5    5;KRIEWALDT;SHAYMUS;50;na;4;na;77;na;na;na;na;na;na
 6    6;JONES;BOB;na;na;77;na;na;na;na;na;na;na;na;na
 7    7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na;na
 8    8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na;na
 9    9;B;SHANE;na;na;na;na;na;na;na;na;na
10    10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;na;80
11
```

```
courses.csv M ×
courses.csv > data
 1    CS2020;winter;1
 2    CS2040;fall;2
 3    CS2910;winter;3
 4    CS3010;FALL;4
 5    PH1250;WINTER;5
 6    MA1200;WINTER;6
 7    PE1111;WINTER;7
 8    AM1234;FALL;8
 9    HH1234;FALL;9
10    PH7890;FALL;10
11
```

```
PROBLEMS    OUTPUT    DEBUG CONSOLE    TERMINAL    PORTS    COMMENTS

View Student Averages

Enter Student Last Name: jones
Duplicate last names found!

3    JONES, KAILE
6    JONES, BOB
Please Enter Student ID: 3


        1. Display total average
        2. Display semester average
        3. Exit


-> 2
Enter Semester: fall
Total Average: 97%
Exit (Y/N):
```

18. Calculate avg grade for course (enters course name)

Main.py > ⊙ main

```python
527      if option == 1:
528          # display student average
529          for grade in student.grades:
530              if grade.grade_val != "na":
531                  courseCount += 1
532                  total += int(grade.grade_val)
533      elif option == 2:
534          # display term average
535
536          while True:
537              try:
538                  sem = input("Enter Semester: ").upper()
539                  if sem != "FALL" and sem != "WINTER":
540                      raise Exception()
541                  break
542              except:
543                  print("Invalid Input")
544
545          for grade in student.grades:
546              if grade.grade_val != "na" and grade.course.semester == sem
547                  courseCount += 1
548                  total += int(grade.grade_val)
549      elif option == 3:
550          break
```

students.csv > 📁 data

```
1    1;SMITHHH;HANNAH;4376902123;a_smith@gmail.com
2    2;Smith;Jane;4374567812;j_smith@gmail.com
3    3;JONES;KAILE;7805120795;kailejones@gmail.com
4    4;MACKENZIE;PEYTON;7805162446;peytondawnmackenzie@gmail.com
5    5;KRIEWALDT;SHAYMUS;13124124;shaybow@gmail.com
6    6;JONES;BOB;7806666666;aefefwefwefwe
7    7;WHITE;CHAD;8098123123;chad@chad.com
8    8;ALAFA;1232341241;7809876541;akdfjsigfhioushf
9    9;B;SHANE;1234567;hsdfkjsdvjksdv
10   10;MACKENZIE;HANNAH;7806198265;hannahmackenzie@gmail.com
11
```

grades.csv > 📁 data

```
1    1;SMITHHH;HANNAH;51;77;52;na;66;na;na;na;na;na
2    2;Smith;Jane;32;na;90;na;66;na;na;na;na;na;na
3    3;JONES;KAILE;66;97;82;na;77;na;na;na;na;na;na
4    4;MACKENZIE;PEYTON;88;na;92;na;99;na;na;na;na;na;na
5    5;KRIEWALDT;SHAYMUS;50;na;na;4;na;77;na;na;na;na;na
6    6;JONES;BOB;na;77;na;na;na;na;na;na;na;na
7    7;WHITE;CHAD;na;na;na;na;na;na;na;na;na;na
8    8;ALAFA;1232341241;45;na;na;na;na;na;na;na;na;na
9    9;B;SHANE;na;na;na;na;na;na;na;na
10   10;MACKENZIE;HANNAH;na;na;na;na;na;na;na;na;80
11
```

courses.csv > 📁 data

```
1    CS2020;winter;1
2    CS2040;fall;2
3    CS2910;winter;3
4    CS3010;FALL;4
5    PH1250;WINTER;5
6    MA1200;WINTER;6
7    PE1111;WINTER;7
8    AM1234;FALL;8
9    HH1234;FALL;9
10   PH7890;FALL;10
11
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL   PORTS   COMMENTS

```
Seach Course Average (%)

Enter Course Name: cs2020
Term Average for CS2020: 55%
Exit (Y/N):
```