**Program prototype:**

Finished the year 7-10's program

Initial program structure:

import csv# Import the end of term year 9's marks import math

class Student:

Def \_\_**init\_\_**(self,studentcode,studentname,englishmarks,hassmarks,mathmarks,sciencemarks,englishmarks2,hassmarks2,mathsmarks2,sciencemarks2):

self.studentcode = studentcode

self.studentname = studentname

self.englishmarks = int(englishmarks)

self.hassmarks = int(hassmarks)

self.mathmarks = int(mathmarks)

self.sciencemarks = int(sciencemarks)

self.englishmarks2 = int(englishmarks2)

self.hassmarks2 = int(hassmarks2)

self.mathsmarks2 = int(mathsmarks2)

self.sciencemarks2 = int(sciencemarks2)

def calculate\_gpa(self):  
 """Calculate the gpa of every student."""  
 gpa = (self.englishmarks + self.hassmarks + self.mathmarks + self.sciencemarks + self.englishmarks2 + self.hassmarks2 + self.mathsmarks2 + self.sciencemarks2)/4  
 return round(gpa)

students = []

with open('eot1 yr9.csv', mode = 'r') as file: csv\_reader = csv.reader(file) index = 0

for row in csv\_reader:  
 index = index + 1  
 print(row)  
 if index ==1 or index == 2 or index == 3 or index == 4:  
 continue  
 for i in range(2,10):  
 if row[i] == "":  
 row[i] = 0  
   
   
 student = Student(row[0],row[1],row[2],row[3],row[4],row[5],row[6],row[7],row[8],row[9])  
 students.append(student)  
   
 if index == 50:  
 break

all\_names = []

storing\_gpa = [] max\_marks\_sorted = []

def calculate\_top\_25(): "calculate the top 25 gpas of students"

for i in range(25):

Ap = max(storing\_gpa)

max\_marks\_sorted.append(Ap)

storing\_gpa.pop(storing\_gpa.index(Ap))

print("number of students", len(students))

for student in students:

print("Student name and their code: ",student.studentname, end=" ") print(student.studentcode)

all\_names.append(student.studentname)

current\_gpa = student.calculate\_gpa()

storing\_gpa.append(current\_gpa)

print("Students GPA: ",student.calculate\_gpa())

print("English: ",student.englishmarks)

print("Hass: ",student.hassmarks)

print("Maths: ",student.mathmarks)

print("Science: ",student.sciencemarks)

print("English Ap: ",student.englishmarks2)

print("Hass Ap: ",student.hassmarks2)

print("Maths Ap: ",student.mathsmarks2)

print("Science Ap: ",student.sciencemarks2)

print(all\_names) print("Here are all of the gpa's combined", storing\_gpa)

calculate\_top\_25()

# **for i in range(25):**

# **top = max\_marks\_sorted[i]**

# **print(top)**

# **position = all\_names.index(all\_names[storing\_gpa.index(top)])**

# **top\_name = all\_names[position]**

# **print(top\_name)**

Started the Atar year 11 and 12 program

Here is the initial program

import csv

# **Open the output file for writing**

with open(output\_file, 'w', newline='') as outfile: writer = csv.writer(outfile) writer.writerows(rows\_without\_header) # Write the remaining rows to the output file

index = 0

for row in csv\_reader: index += 1 print(row)

import csv# Import the end of term year 12’s subject marks

class Student:

def \_\_init\_\_(self,studentcode,studentname,acc,acf,app,ara,bme,bme2,cae,che,che2,com,eng,eng2,hea,hea2,hum,hum2,mat,mat2,mat3,mat4,oed,pes,phy,psy,var):  
  
 self.studentcode = studentcode   
 self.studentname = studentname   
 self.acc = int(acc)   
 self.acf = int(acf)   
 self.app = int(app)   
 self.ara = int(ara)   
 self.ara = int(ara)   
 self.bme = int(bme)   
 self.bme2 = int(bme2)   
 self.cae = int(cae)   
 self.che = int(che)   
 self.che2 = int(che2)   
 self.com = int(com)   
 self.eng = int(eng)  
 self.eng2 = int(eng2)  
 self.hea = int(hea)   
 self.hea2 = int(hea2)   
 self.hum = int(hum)   
 self.hum2 = int(hum2)   
 self.mat = int(mat)   
 self.mat2 = int(mat2)   
 self.mat3 = int(mat3)   
 self.mat4 = int(mat4)   
 self.oed = int(oed)   
 self.pes = int(pes)   
 self.phy = int(phy)   
 self.psy = int(psy)   
 self.var = int(var)   
 student = []

for row in csv\_reader: index = index + 1 print(row) if index ==1 or index == 2 or index == 3 or index == 4: continue for i in range(2,27): if row[i] == "": row[i] = 0

student = Student(row[0],row[1],row[2],row[3],row[4],row[5],row[6],row[7],row[8],row[9],row[10], row[11],row[12],row[13],row[14],row[15],row[16],row[17],row[18],row[19],row[20],row[21],row[22],row[23],row[24],row[25],row[26],row[27]) students.append(student)

if index == 30:   
 break

subject\_marks = []

# **Constants**

C\_threshold = 50 # Minimum average score to achieve a "C"

year\_11\_yearC = 8

year\_12\_yearC = 6

scaling\_bonus\_subjects = ["Math Methods", "Math Specialists", "ATAR Arabic"] Scaling\_bonus = 10

def calculate\_top4\_subjects()

#Code to be done

def calculate\_tea():

#Code to be done

def calculate\_atar():

#Code to be done

def count\_cs():

#Code to be done

**Immediate Client feedback session:**

Miss Anita said that my program was good, and she liked the way it was functioning and creating outcomes, but she was concerned the way I input and output the files, so she wanted the program to ask for the file to be input because that makes her life easier because she can’t go in the code and change it she said that “You should assume the person knows nothing about the code”. So same with the year 11-12 atar code she said that I needed to input the file and then have an excel sheet output the data in there.