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1.0 Introduction

This is a documentation regarding the computerized system that needs developing for the Real Champions Sport Academy(RCSAS). It has come to my attention that RCSAS wants their computerized system to be fast and organized. The computerized system should also be able to at least perform basic that replaces or is on par with the capability of their current manual filing system.

2.0 Assumptions

1. There are currently a total of 10 sports.
2. There are a total of 3 sport centres.
3. Coach's rating will be calculated based on his students.
4. Registered students can rate their own coaches.
5. Each registered student may only rate their coach once.
6. Each admin and registered student will have their own ID and password.
7. Some details are restricted depending on user.
8. Each Registered student only has one sport class.
9. All data will be taken from one file and be saved to the same file.

2.1 Admin

- Requires ID and password to login
- Can add records
- Can display records
- Can search specific records by ID or rating.
- Can sort records
- Can modify records

2.2 Not Registered Student

- Does not need to login
- Can view details of sport
- Can View Sport Schedule of his sport centre.
- Can register.

2.3 Registered Student

- Requires ID and password to login
- Can view details of their coach.
- Can view self-records.
- Can modify self-records.
- Can view self-schedule.
- can rate self-coach.

3.0 Pseudo code design

3.1 Admin codes

3.1.1 Add Records

Begin

```
Declare status,file,coach_name,coach_id,coach_pay,coach_rating,
        sport_name,sport_id,sport_code,sport_time
print (" Whose records do you want to add? (coach/sport/sport schedule)")
read status
if status == coach
    open file "coach_record.txt" in append mode
    print("coach name will be ...: ")
    read coach_name
    print("coach id will be ...: ")
    read coach_id
    print("coach hourly pay rate will be ...: ")
    read coach_pay
    coach_rating = 0
    write coach_name,"\t",coach_id, "\t",coach_pay, "\t",coach_rating to file
    close file
else if status == sport
    open file "sport_record.txt" in append mode
    print("sport name will be ...: ")
    read sport_name
    print("sport id will be ...: ")
    read sport_id
    write sport_name,"\t",sport_id to file
    close file
else if status == sport schedule
    open file
    open "schedule_record.txt" in append mode
    print("sport code will be ...: ")
    read sport_code
    print("sport_time")
```

```
        read sport_time
        write sport_code,"\t",sport_time to file
        close file
    end if
End
```

3.1.2 Display All Records

Begin

```
Declare status,line
print("Whose records do you wish to see? (Coach,Sport,Student) ")
read status
if status == Coach
    open file "coach_record.txt" in read mode
    print ("Coach Name\tCoach ID\tCoach Pay\t Coach Rating")
    loop line from file
        print (line)
    end loop
    close file

else if status == Student
    open file "student_record.txt" in read mode
    print ("Student Name\tStudent ID\tStudent Code")
    loop line from file
        print (line)
    end loop
    close file

else if status == Sport
    open file "sport_record.txt" in read mode
    print ("Sport Name\tSport ID")
    loop line from file
        print (line)
```

```
    end loop
    close file
```

End

3.1.3 Search Specific Records

Start

```
Declare action_number,line,ID,rating,file
print("What specific records do you want to search about?")
print("Coach by coach ID = 1, Coach by overall performance = 2")
print("Sport by Sport ID = 3, Student by Student ID = 4")
read action_number
if action_number = 1
    open file "coach_record.txt" in read mode
    print("Please write down the coach ID: ")
    read ID
    loop line from file
        if ID in line
            print (line)
        end if
    end loop
    close file
else if action_number = 2
    open file "coach_record.txt" in read mode
    print("Please write down integer of 1-5.")
    read rating
    loop line from file
        if rating in line
            print (line)
        end if
    end loop
    close file
else if action_number == 3
```

```
        open file "sport_record.txt" in read mode
        print("Please write down the sport ID")
        read ID
        loop line from file
            if ID in line
                print(line)
            end if
        end loop
        close file
    else if action_number = 4
        open file "student_record.txt" in read mode
        print("Please write down the student ID")
        read ID
        loop line from file
            if ID in line
                print(line)
            end if
        end loop
        close file
    End if
End
```

3.1.4 Sort and Display Records

Start

```
    Declare
length,x,y,z,l,action_number,separate,line,coach_data,coach_pay,coach_rating,extra
    coach_data = []
    length = -1
    print("Coaches in ascending orders by name = 1")
    print("Coaches hourly pay rate in ascending order = 2")
    print("Coaches overall performance in ascending order = 3")
    read action_number
```

```
if action_number == 1
    open file "coach_record.txt" in read mode
    loop line from file
        add line into coach_data
    end loop
    loop l from coach_data
        length += 1
    end loop
    close file
    loop y from length
        count = -1
        loop z from length
            count +=1
            if coach_data[count] > coach_data[count+1]
                extra = coach_data[count]
                coach_data[count] = coach_data[count+1]
                coach_data[count+1] = extra
            End if
        End loop
    End loop
End loop

else if action_number == 2
    open file "coach_record.txt" in read mode
    loop line from file
        add line into coach_data
        separate = split"\t" from line
        add separate[2] into coach_pay
    end loop
    close file
    loop y from length
        count = -1
        loop z from length
```

```
        count += 1
        if coach_pay[count] > coach_pay[count+1]
            extra = coach_data[count]
            coach_data[count]= coach_data[count+1]
            coach_data[count+1] = extra
        end if
    end loop
end loop

else if action_number == 3
    open file "coach_record.txt" in read mode
    loop line from file
        add line into coach_data
        separate = split"\t" from line
        add separate[3] into coach_rating
    end loop
    close file
    loop y from length
        count = -1
        loop z from length
            count += 1
            if coach_rating[count] > coach_rating[count+1]
                extra = coach_data[count]
                coach_data[count]= coach_data[count+1]
                coach_data[count+1] = extra
            end if
        end loop
    end loop
end if
print ("Coach Name\tCoach ID\tCoach Pay\t Coach Rating")
loop x in coach_data
    print(x)
end loop
```


End

3.1.5 Modify Records

Start

```
Declare line,listing,count,x,y,answer,coach_data,sport_data,
    schedule_data,file,element.
print("Whose records do you want to modify? (coach/sport/sport schedule)")
read category
coach_data = []
if category == coach
    open file "coach_record.txt" in read mode
    loop line from file
        add line into coach_data
    end loop
    close file
    print("Please type in what you wish to change.")
    print("Please refrain from making mistakes.")
    read element
    listing = -1
    loop x from coach_data
        listing += 1
        count = -1
        loop y from x
            count += 1
            if element == y
                print("What do you wish to change",element,"into?")
                read answer
                coach_data[listing][count] = answer
            end if
        end loop
    end loop
    open file"coach_record.txt" in write mode
```

```
        loop line from coach_data
            write line into file
        end loop
    close file

else if category == sport
    open file "sport_record.txt" in read mode
    loop line from file
        add line into sport_data
    end loop
    close file
    print("Please type in what you wish to change.")
    print("Please refrain from making mistakes.")
    read element
    listing = -1
    loop x from sport_data
        listing += 1
        count = -1
        loop y from x
            count += 1
            if element == y
                print("What do you wish to change",element,"into?")
                read answer
                sport_data[listing][count] = answer
            end if
        end loop
    end loop
    open file "sport_record.txt" in write mode
    loop line from sport_data
        write line into file
    end loop
    close file
```

```
    else if category == sport schedule
        open file "schedule_record.txt" in read mode
        loop line from file
            add line into schedule_data
        end loop
        close file
        print("Please type in what you wish to change.")
        print("Please refrain from making mistakes.")
        read element
        listing = -1
        loop x from schedule_data
            listing += 1
            count = -1
            loop y from x
                count += 1
                if element == y
                    print("What do you wish to change",element,"into?")
                    read answer
                    schedule_data[listing][count] = answer
                end if
            end loop
        end loop
        open file "schedule_record.txt" in write mode
        loop line from schedule_data
            write line into file
        end loop
        close file
    end if
End
```

3.2 All Student

3.2.1 View Sport Details

Start

```
Declare line,file
open file "sport_record.txt" in read mode
print ("Sport Name\tSport ID")
loop line from file
    print (line)
end loop
close file
```

End

3.2.2 View Sport Schedule

Start

```
Declare line, file
open file "schedule_record.txt" in read mode
print("Sport Code\tSport Time")
loop line from file
    print(line)
end loop
close file
```

End

3.2.3 Register

Start

```
Declare name,file
print("Please write down your name")
read name
open file "student_record.txt" in append mode
write name,"\tN/A\tN/A" into file
close file
```

```
print("Your ID is N/A")
```

End

3.3 Registered Student

3.3.1 Login

Start

```
Declare name,ID,file,line,x,ID
print("Please write down your name and ID")
read name
read ID
open file "student_record.txt"
loop line from file
    if x in line
        if ID in line
            print("welcome in")
            return 10,ID
        end if
    end if
end loop
```

End

3.3.2 View details of coach

Start

```
Declare line,file
open file "coach_record.txt" in read mode
print ("Coach Name\tCoach ID\tCoach Pay\t Coach Rating")
loop line from file
    print (line)
end loop
close file
```

End

3.3.3 View Details of Self-Record

(student_id <- comes from global variable, from login's return)

Start

```
Declare file,line
open file "student_record.txt" in read mode
print("Student Name\tStudent ID\tStudent Code")
loop line in file
    if student_id in line
        print(line)
    end if
end loop
```

End

3.3.4 Modify Self-Record

(student_id <- comes from global variable, from login's return)

Start

```
Declare file,line,element,count,listing,answer,x,y
student_data = []
open file "student_record.txt" in read mode
loop line in file
    add line into student_data
end loop
close file
print("Please type in what you wish to change.")
print("Please refrain from making mistakes.")
read element
listing = -1
loop x from student_data
    listing += 1
    count = -1
    loop y from x
        count += 1
```

```
        if element == y
            print("What do you wish to change",element,"into?")
            read answer
            student_data[listing][count] = answer
        End if
    End loop
End loop
open file "student_record.txt" in write mode
loop x from student_data
    write x into file
end loop
End
```

3.3.5 View Self-Schedule

(student_id <- comes from global variable, from login's return)

Start

```
Declare student_data,line,x,code
student_data = []
open file "student_record.txt" in read mode
loop line from file
    add line into student_data
end loop
close file
loop x from student_data
    if student_id in x
        code = x[2]
    end if
end loop
open file "schedule_record.txt" in read mode
loop line from file
    if code in line
        print(line)
```

```
        end if
    end loop
End
```

3.3.6 Give Feedback and Rating to Coach

Start

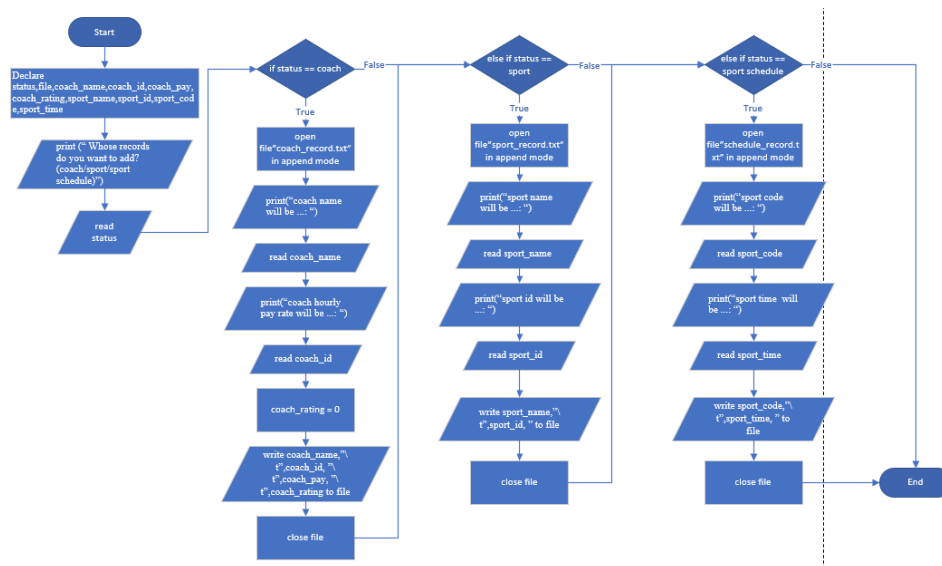
```
Declare file,name,feedback,rating
open file "feedback.txt" in append mode
print("Please write your lecturer's name.")
read name
print("Please write down your feedback")
read feedback
print("Please give your lecturer a rating, 1-5")
read rating
write name,"\t",feedback,"\t",rating into file
```

End

4.0 Flowchart Design

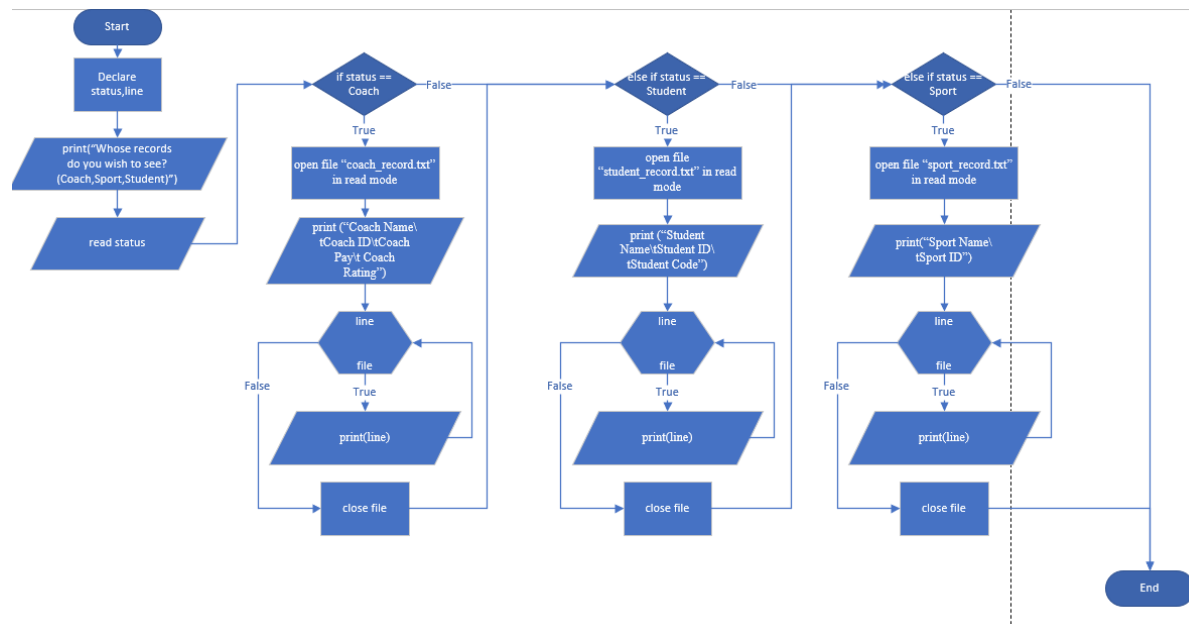
4.1 Admin

4.1.1 Add Records



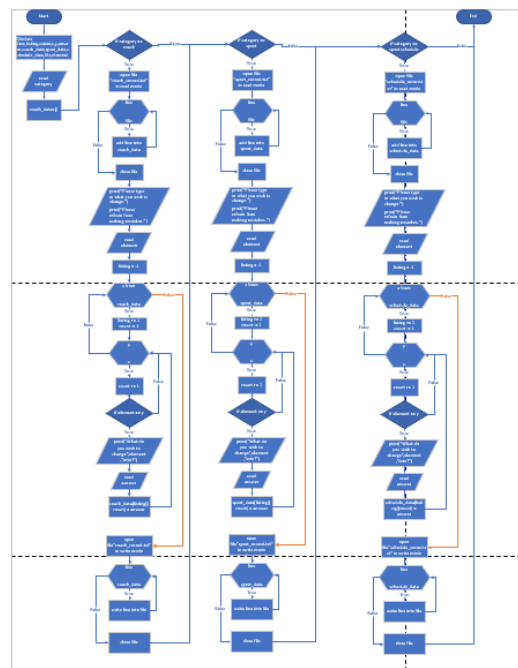
(Figure 4.1.1 : Add Records Flowchart)

4.1.2 Display All Records



(Figure 4.1.2 : Display All Records)

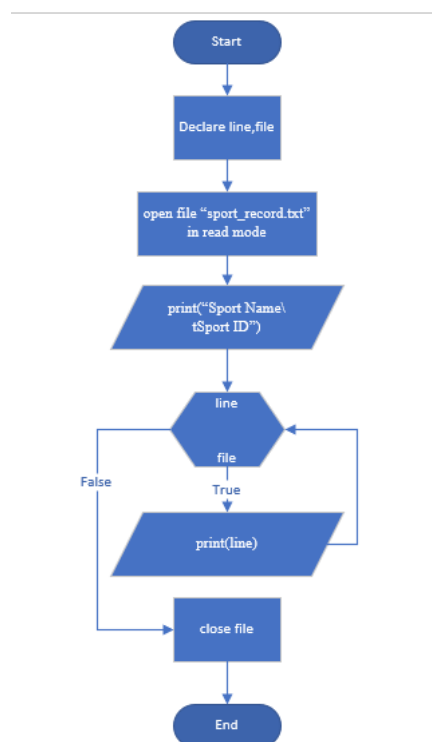
4.1.5 Modify Records



(Figure 4.1.5 : Modify Records Flowchart)

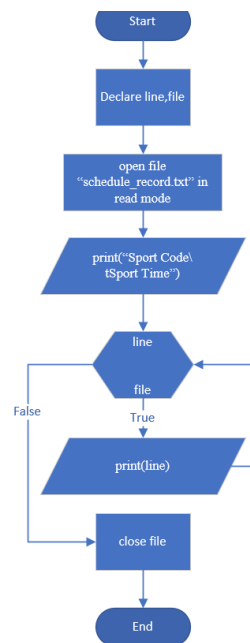
4.2 All Student

4.2.1 View Sport Details



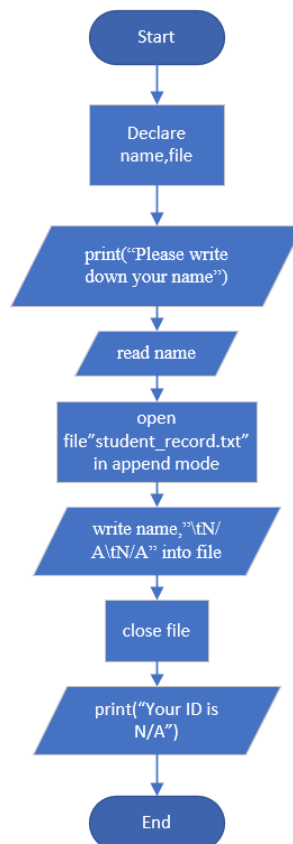
(Figure 4.2.1 : View Sport Details)

4.2.2 View Sport Schedule



(Figure 4.2.2 : View Sport Schedule)

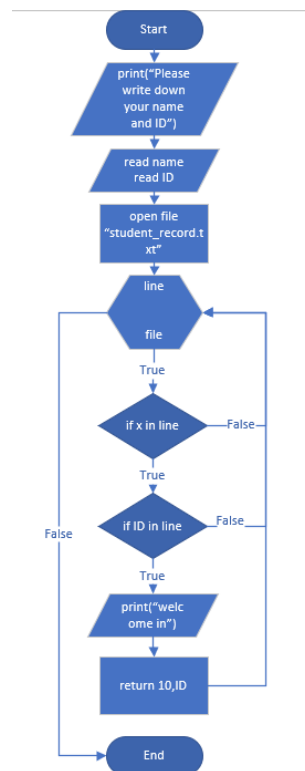
4.2.3 Register



(Figure 4.2.3 : Register)

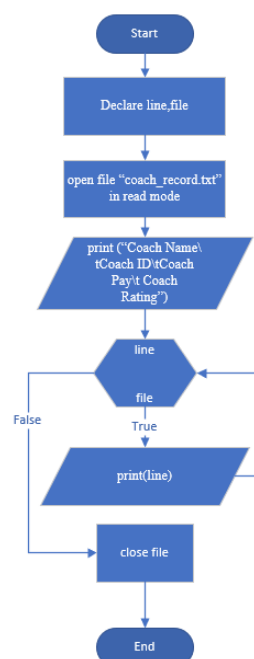
4.3 Registered Student

4.3.1 Login



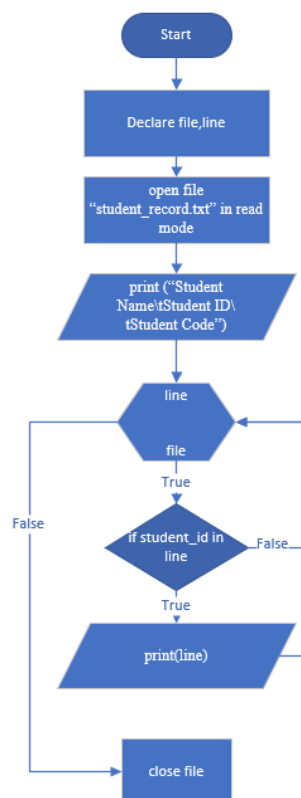
(Figure 4.3.1 : Login Flowchart)

4.3.2 View Details of Coach



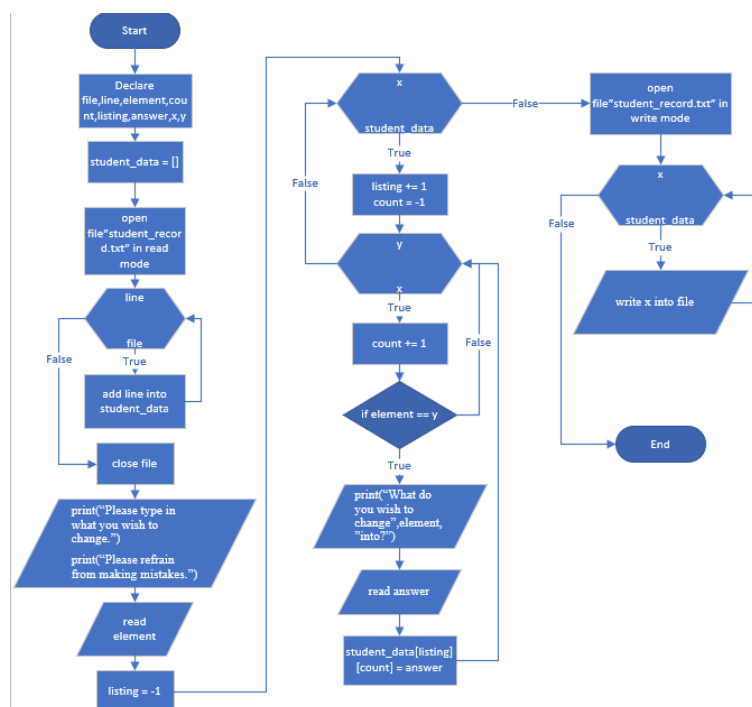
(Figure 4.3.2 : View Details of Coach)

4.3.3 View Details of Self-Record



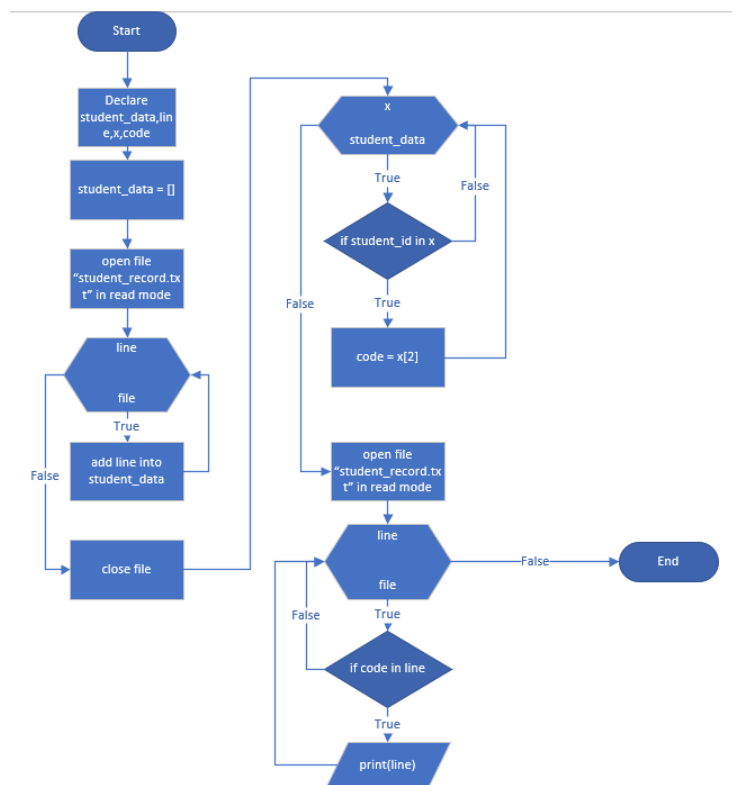
(Figure 4.3.3 : View Details of Self-Record)

4.3.4 Modify Self-Record



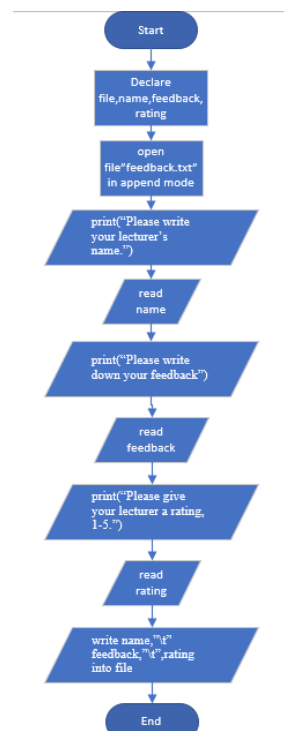
(Figure 4.3.4 : Modify Self-Record)

4.3.5 View Self-Schedule



(Figure 4.3.5 : View Self-Schedule)

4.3.6 Give Feedback and Rating to Coach



(Figure 4.3.6 : Give Feedback and Rating to Coach Flowchart)

5.0 Sample Python Code

5.1 Variable

```
User_ID = input("ID: ")
Password = input("Password: ")
```

(Figure 5.1 : Variables)

A variable is basically a permanent reserved location to store data. The data can be of many kind, such as a string like in Figure 5.1 or an integer or even a float. The variable represents the data it contains, hence variables are widely used thanks to its capability of organizing data and even have names to define the data within the variable.

5.1.1 List Variables

```
my_list = []
listing = 0
for x in Coach_Details:
    if x[0] in my_list:
        continue
    my_list.append(x[0])
```

(Figure 5.1.1 : List Variable Undergoing Append)

Apparently, variables are able to contain lists as well. The list itself is the data, and the variable or in this case, my_list represents the list. List variables are more complicated than simple variables as a list is a combination of data. In other words, the list variable may sometimes represent the list as a whole, and sometimes represent the list separately, depending on how it is used.

5.2 Control Structure

5.2.1 If Statement

```
if count == 2:
    continue
```

(Figure 5.2.1 : If Statement)

Following Figure 5.2.1, if the variable count is equal to 2, the keyword continue will initiate. If the variable count is not equal to 2, the keyword continue will not initiate. This is a conditional statement, if the condition is fulfilled, the code written within the if statement will initiate, else it will jump to the next set of codes.

5.2.2 If – Else Statement

```

if found == 1:
    print("    %-14s %-12s %-12s %-12s %-12s %-12s %-12s" % ("Sport Centre", "S
for x in Sport_Schedule:
    if x[1] == sport:
        print("%4s." % str(listing), end = "")
        listing += 1
        for y in x:
            print("%-12.12s" % y, end = " ")
        print("")
    else:
        print("Error, Sport ID not found.")

```

(Figure 5.2.2 : If – Else Statement)

If the if statement is fulfilled, the code will function as usual. While if the if statement is not fulfilled, the else statement functions instead. In an If – Else Statement, a set of code will definitely be initiated, while the other will be ignored.

5.2.3 Else – If Statement

```

if confirm == "Y":
    pass
elif confirm == "N":
    #deletes the last list
    del Coach_Details[len(Coach_Details)-1]
    print("The changes has been reverted.")

```

(Figure 5.2.3 : Else – If Statement)

Else – If Statement possesses a condition of their own. It is similar to If – Else Statements but the difference is that, if no conditions are fulfilled, both will not initiate. Either one set of code functions, or none of them functions.

5.3 Loop Structure

5.3.1 While Loop Statement

```

while (confirm != "Y" and confirm != "N"):
    confirm = input("Wrong value entered, please enter Y or N: ")

```

(Figure 5.3.1 : While Loop Statement)

While Loop Statement is a conditional statement as well. As long as the condition is fulfilled, the set of codes within the while loop statement will continuously function. The loop will stop if the condition is not fulfilled when the set of code within the while loop statement finishes.

5.3.2 For Loop Statement

```
for x in Coach_Details:
    if x[1] == ID :
        found += 1
        break
count += 1
```

(Figure 5.3.2 : For Loop Statement)

For Loop Statement can be referred to as a repetition statement. As the example in Figure 5.3.2, the x is the variable and the Coach_Details is a list. In this case, variable x will contain the element in the list and the variable x change to the next element on the list when the set of code finishes, until there's no more element available for variable x to represent.

Coach_Details may also be replaced with a range of numbers. The For Loop Statement truly ends when there's no element for the variable x represent.

5.4 Function

```
def Login():
    print ("Please write down your Status.")
    Status = input("Status: ")

    if (Status == "Student"):
        print("")
        return 10

    User_ID = input("ID: ")
    Password = input("Password: ")

    if (Status == "Admin"):
        for x in Admin_Details:
            if x[1] == User_ID:
                for y in Admin_Details:
                    if y[2] == Password:
                        return 0
                break
    print("\nError, wrong details.\n")
    return -2
```

(Figure 5.4 : Login() Function)

Functions are basically a set of code that only initiates when it is called upon. Functions are capable of accepting parameters and return data. When a data is returned from a function, the function immediately terminates. Functions are mostly used to separate codes of different roles.

5.5 File

5.5.1 Open File

```
file = open("text.txt", "r+")
count = 0
for line in file:
    if line == "\n":
        continue
```

(Figure 5.5.1 : File Open and Read File)

The open() function accepts two arguments, the first argument is the file's name or the directory to the file. While the second argument accepts the mode in which the file is going to open with. The file does not necessary need to exist if the mode that follows create a file independently.

5.5.2 Read File

Referring to Figure 5.5.1, it reads the file using the for loop statement. This particular set of code extracts the file line by line. The file can also be read with functions such as read(), depending on how you wish to extract the file.

5.5.2 Write to File

```
for x in data:
    file.write(x)
    file.write("\n")
    count += 1
```

(Figure 5.5.3 : Write to file)

You can write to a file using the write() function. It would write into the file depending on where the pointer currently is in the file. The write function will replace current data in the file if the pointer overlaps with the data in the file.

6.0 Sample Input and Output

6.1 Admin

```
Please write down your Status.(Admin/Student)
Status:
```

(Figure 6.1.1)

This is the beginning output as soon as the program starts.

```
Please write down your Status.(Admin/Student)
Status: Error check
ID: Error check
Password: Error check
```

```
Error, wrong details.
```

```
Please write down your Status.(Admin/Student)
Status:
```

(Figure 6.1.2)

Error checking when details written is not registered within the data.

```
Please write down your Status.(Admin/Student)
Status: Admin
ID: AD7839
Password: Adminhah
What do you wish to do? Key in an action number.
10 = Coach , 20 = Student
30 = Sport , 40 = Sport Schedules, Exit = -1
Display = +0 / Configure = +1 / Search by Specific Category = +2 / Sort Display = +3 / Add Record = +4.

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: |
```

(Figure 6.1.3)

This is the main commands of Admin. It will show itself every time a function ends. As well as when you first log into the system.

```
Please enter an action number: -9

Error! Please enter a valid number.

New Action...

What do you wish to do? Key in an action number.
10 = Coach , 20 = Student
30 = Sport , 40 = Sport Schedules, Exit = -1
Display = +0 / Configure = +1 / Search by Specific Category = +2 / Sort Display = +3 / Add Record = +4.

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number:
```

(Figure 6.1.4)

Another set of error check. Action number written not available.

```

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: 10

Coach Name    Coach ID    Pay/hr    Phone No    Sport Centre Sport Name    Rating    Address    Date Joined    Date Left
1.Jack        TT1940      RM200     0193889409  Klang        Table Tennis  4.35      Taman Klang  5/1/2020      N/A
2.Mark        SW4365      RM150     0238592364  Tebrau       Swimming      4.3       Taman Sutera 10/9/2020     N/A
3.Masayoshi   AR8490      RM200     0119937740  Tebrau       Archery       4.5       Taman Sutera 12/4/2020     N/A
4.Sury        CK3653      RM250     0228845693  Strat        Cricket       4.0       Taman salt   3/4/2019     N/A
5.Sykkuno     SW4478      RM250     0118399914  Strat        Swimming     4.9       Taman Sing   1/12/2020    N/A
6.Valkyrae    AR9580      RM270     0123948857  Klang        Archery      N/A       Taman Putera 10/3/2020    N/A

New Action...

```

(Figure 6.1.5)

Action number 10 is Display Coach, Coach details are displayed except password.

```

Please enter an action number: 11

Which number was it?
Number: |

```

(Figure 6.1.7)

Action number 11 is Configure Coach. The commands specifically advise to display before configuration as the number referred here is the data's position in the list.

```

Which number was it?
Number: -9
Please enter a valid number between 1 - 4
Valid number: |

```

(Figure 6.1.8)

Another set of error check. Number entered is not between 1 - 4.

```

Which number was it?
Number: 2

Coach Name    Coach ID    Password    Pay/hr    Phone No    Sport Centre Sport Name    Rating    Address    Date Joined    Date Left
1.Mark        SW4365      coachy      RM150     0238592364  Tebrau       Swimming      4.3       Taman Sutera 10/9/2020     N/A

What do you wish to configure?
Coach Name = 1, Coach ID = 2, Password =3 ...etc
Rating = 8 can't be configured.
What will the number be?: |

```

(Figure 6.1.9)

The coach positioned second on the list is displayed. As well as the following commands.

```

What do you wish to configure?
Coach Name = 1, Coach ID = 2, Password =3 ...etc
Rating = 8 can't be configured.
What will the number be?: -9
Number must be within 1 and 11: |

```

(Figure 6.1.10)

Another set of error check. Number is not within 1 – 11.

```

What will the number be?: 1
Changing Name Mark to ...: Catherine
Is this the result you wanted? Y/N: |

```

(Figure 6.1.11)

Changing Name from Mark to Catherine.

```

Changing Name Mark to ...: Catherine
Is this the result you wanted? Y/N: Error check
Wrong value entered, please enter Y or N: |

```

(Figure 6.1.12)

Another set of error check.

```

Wrong value entered, please enter Y or N: N
The changes has been reverted.

```

New Action...

```

What do you wish to do? Key in an action number.
10 = Coach , 20 = Student
30 = Sport , 40 = Sport Schedules, Exit = -1
Display = +0 / Configure = +1 / Search by Specific Category = +2 / Sort Display = +3 / Add Record = +4.

```

```

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: 10

```

Coach Name	Coach ID	Pay/hr	Phone No	Sport Centre	Sport Name	Rating	Address	Date Joined	Date Left
1.Jack	TT1940	RM200	0193889409	Klang	Table Tennis	4.35	Taman Klang	5/1/2020	N/A
2.Mark	SW4365	RM150	0238592364	Tebrau	Swimming	4.3	Taman Sutera	10/9/2020	N/A
3.Masayoshi	AR8490	RM200	0119937740	Tebrau	Archery	4.5	Taman Sutera	12/4/2020	N/A
4.Sury	CK3653	RM250	0228845693	Strat	Cricket	4.0	Taman salt	3/4/2019	N/A
5.Sykkuno	SW4478	RM250	0118399914	Strat	Swimming	4.9	Taman Sing	1/12/2020	N/A
6.Valkyrae	AR9580	RM270	0123948857	Klang	Archery	N/A	Taman Putera	10/3/2020	N/A

New Action...

(Figure 6.1.13)

Since “N” is entered, changes are reverted.

```

Is this the result you wanted? Y/N: Y
Coach Name    Coach ID    Password    Pay/hr    Phone No    Sport Centre    Sport Name    Rating    Address    Date Joined    Date Left
1.Catherine   SW4365    coachy     RM150     0238592364    Tebrau        Swimming     4.3      Taman Sutera 10/9/2020    N/A

New Action...

What do you wish to do? Key in an action number.
10 = Coach , 20 = Student
30 = Sport , 40 = Sport Schedules, Exit = -1
Display = +0 / Configure = +1 / Search by Specific Category = +2 / Sort Display = +3 / Add Record = +4.

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: 10

Coach Name    Coach ID    Pay/hr    Phone No    Sport Centre    Sport Name    Rating    Address    Date Joined    Date Left
1.Jack        TT1940     RM200     0193889409    Klang          Table Tennis  4.35     Taman Klang  5/1/2020     N/A
2.Catherine   SW4365     RM150     0238592364    Tebrau        Swimming     4.3      Taman Sutera 10/9/2020    N/A
3.Masayoshi   AR8490     RM200     0119937740    Tebrau        Archery      4.5      Taman Sutera 12/4/2020    N/A
4.Surya       CK3653     RM250     0228845693    Strat         Cricket      4.0      Taman salt   3/4/2019     N/A
5.Sykkuno     SW4478     RM250     0118399914    Strat         Swimming     4.9      Taman Sing   1/12/2020    N/A
6.Valkyrae    AR9580     RM270     0123948857    Klang          Archery      N/A      Taman Putera 10/3/2020    N/A

New Action...

```

(Figure 6.1.14)

When “Y” is entered, changes are saved.

```

What do you wish to do? Key in an action number.
10 = Coach , 20 = Student
30 = Sport , 40 = Sport Schedules, Exit = -1
Display = +0 / Configure = +1 / Search by Specific Category = +2 / Sort Display = +3 / Add Record = +4.

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: 12

Search Coach by Coach ID or Search Coach by rating or Search Coach ratings?
By Coach ID = 1 , Coach by Rating = 2 , Coach Ratings = 3
Enter a number: |

```

(Figure 6.1.15)

Action number 12 = 10 + 2 which is search by specific coach category.

```

Search Coach by Coach ID or Search Coach by rating or Search Coach ratings?
By Coach ID = 1 , Coach by Rating = 2 , Coach Ratings = 3
Enter a number: 2
Type in the Rating, integer of 0 - 5: |

```

(Figure 6.1.16)

Searching Coach by rating.

```

Search Coach by Coach ID or Search Coach by rating or Search Coach ratings?
By Coach ID = 1 , Coach by Rating = 2 , Coach Ratings = 3
Enter a number: 2
Type in the Rating, integer of 0 - 5: 2

Error, element not found.
New Action...

```

(Figure 6.1.17)

What happens if there's not coach rating that relate to the rating inputted.

Type in the Rating, integer of 0 - 5: 4

Coach Name	Coach ID	Pay/hr	Phone No	Sport Centre	Sport Name	Rating	Address	Date Joined	Date Left
1.Jack	TT1940	RM200	0193889409	Klang	Table Tennis	4.35	Taman Klang	5/1/2020	N/A
2.Catherine	SW4365	RM150	0238592364	Tebrau	Swimming	4.3	Taman Sutera	10/9/2020	N/A
3.Masayoshi	AR8490	RM200	0119937740	Tebrau	Archery	4.5	Taman Sutera	12/4/2020	N/A
4.Sury	CK3653	RM250	0228845693	Strat	Cricket	4.0	Taman salt	3/4/2019	N/A
5.Sykkuno	SW4478	RM250	0118399914	Strat	Swimming	4.9	Taman Sing	1/12/2020	N/A

New Action...

(Figure 6.1.18)

Displays details of coach that has >4 and 5< rating. Valkyrae is not included as her rating is N/A.

Please display before configuration.
 Action numbers not available = 33, 42
 Please enter an action number: 13

Do you wish to sort Coaches in ascending order by Name , Pay/hr , Sport Centre , Sport Name or Rating?.
 Name = 1, Pay/hr = 2 , Sport Centre = 3, Sport Name = 4 , Rating = 5: |

(Figure 6.1.19)

Action number = 13. 13 is sort coach display.

Do you wish to sort Coaches in ascending order by Name , Pay/hr , Sport Centre , Sport Name or Rating?.
 Name = 1, Pay/hr = 2 , Sport Centre = 3, Sport Name = 4 , Rating = 5: 1
 Name has been configured to ascending order.

Coach Name	Coach ID	Pay/hr	Phone No	Sport Centre	Sport Name	Rating	Address	Date Joined	Date Left
1.Catherine	SW4365	RM150	0238592364	Tebrau	Swimming	4.3	Taman Sutera	10/9/2020	N/A
2.Jack	TT1940	RM200	0193889409	Klang	Table Tennis	4.35	Taman Klang	5/1/2020	N/A
3.Masayoshi	AR8490	RM200	0119937740	Tebrau	Archery	4.5	Taman Sutera	12/4/2020	N/A
4.Sury	CK3653	RM250	0228845693	Strat	Cricket	4.0	Taman salt	3/4/2019	N/A
5.Sykkuno	SW4478	RM250	0118399914	Strat	Swimming	4.9	Taman Sing	1/12/2020	N/A
6.Valkyrae	AR9580	RM270	0123948857	Klang	Archery	N/A	Taman Putera	10/3/2020	N/A

New Action...

(Figure 6.1.20)

Coach Details is sort by rating.

Please display before configuration.
 Action numbers not available = 33, 42
 Please enter an action number: 14

Attempting to add records...
 For Name is...|

(Figure 6.1.21)

Action number 14 is add coach records.


```

Please enter an action number: 14

Attempting to add records...
For Name is...:Abe
For ID is...:TT9940
For Password is...:Aberion
For Pay/hr is...:RM102
For Phone No is...:0293394850
For Sport Centre is...:Tebrau
For Sport Name is...:Table Tennis
For Rating is...:N/A
For Address is...:Taman Bunga
For Date Joined is...:10/10/2020
For Date Left is...:N/A
This is what you have added.
Coach Name    Coach ID    Password    Pay/hr    Phone No    Sport Centre Sport Name    Rating    Address    Date Joined    Date Left
1.Abe         TT9940      Aberion     RM102     0293394850 Tebrau      Table Tennis N/A      Taman Bunga 10/10/2020    N/A

Is this the result you wanted? Y/N: Y
New Action...

```

(Figure 6.1.22)

Adding data to coach records.

```

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: 10

Coach Name    Coach ID    Pay/hr    Phone No    Sport Centre Sport Name    Rating    Address    Date Joined    Date Left
1.Catherine   SW4365     RM150     0238592364 Tebrau      Swimming     4.3      Taman Sutera 10/9/2020    N/A
2.Jack        TT1940     RM200     0193889409 Klang       Table Tennis 4.35     Taman Klang  5/1/2020    N/A
3.Masayoshi   AR8490     RM200     0119937740 Tebrau      Archery      4.5      Taman Sutera 12/4/2020    N/A
4.Sury        CK3653     RM250     0228845693 Strat       Cricket      4.0      Taman salt   3/4/2019    N/A
5.Sykkuno     SW4478     RM250     0118399914 Strat       Swimming     4.9      Taman Sing   1/12/2020    N/A
6.Valkyrae    AR9580     RM270     0123948857 Klang       Archery      N/A      Taman Putera 10/3/2020    N/A
7.Abe         TT9940     RM102     0293394850 Tebrau      Table Tennis N/A      Taman Bunga 10/10/2020    N/A

New Action...

```

(Figure 6.1.23)

What the coach records becomes.

```

Please display before configuration.
Action numbers not available = 33, 42
Please enter an action number: -1

Logging out...

Please write down your Status. (Admin/Student)
Status: |

```

(Figure 6.1.24)

Log out.

6.2 All Students

```
Please write down your Status.(Admin/Student)
Status:    Student

What do you wish to do? Key in an action number.

1 = View Details of Sport , 2 = View Sport Schedule
3 = Register , 4 = Login, -1 = Exit

Please enter an action number:
```

(Figure 6.2.1)

Accessing functions available for all students.

```
What do you wish to do? Key in an action number.

1 = View Details of Sport , 2 = View Sport Schedule
3 = Register , 4 = Login, -1 = Exit

Please enter an action number: -9

Error! Please enter a valid number.

New Action...
```

(Figure 6.2.2)

Another set of error check.

```
Please enter an action number: 1

Sport Name      Sport ID      Sport Fee
1.Swimming      SW            RM70
2.Badminton     BT            RM70
3.Football      FB            RM50
4.Archery       AR            RM90
5.Gymnastic     GM            RM120
6.Volleyball    VB            RM80
7.Basketball    BB            RM55
8.Cricket       CK            RM70
9.Tennis        TN            RM90
10.Table Tennis TT            RM80
New Action...
```

(Figure 6.2.3)

Action number 1 displays sport details.

```

What do you wish to do? Key in an action number.

1 = View Details of Sport , 2 = View Sport Schedule
3 = Register , 4 = Login, -1 = Exit

Please enter an action number: 2

1.Klang 2.Strat 3.Tebrau

Which Sport Centre are you interested in?
Please enter a number: 2

```

Sport Centre	Sport Name	Start Time	End Time	Coach Name	Code	Day
1.Strat	Swimming	08:00	09:30	Sykkuno	STSWSO1	Monday
2.Strat	Swimming	10:00	12:00	Sykkuno	STSWSO2	Monday
3.Strat	Tennis	13:30	15:30	Sury	STCKSY1	Monday
4.Strat	Tennis	13:30	15:30	Sury	STCKSY2	Wednesday

```

New Action...

```

(Figure 6.2.4)

Action number 2 displays sport schedule based on sport centre and it is arranged by time.

```

Please enter an action number: 3

Student Name is...: Carie
Confirm? (No typo or mistakes?) Y/N: Y
Password is...: curry
Confirm? (No typo or mistakes?) Y/N: Y
Phone No is...: 0192039940
Confirm? (No typo or mistakes?) Y/N: Y
Sport Centre is...: Klang
Confirm? (No typo or mistakes?) Y/N: N
Sport Centre is...: Strat
Confirm? (No typo or mistakes?) Y/N: Y
Emergency No is...: 1234567891011223132
Input has not been saved. Input has to be within the length of 1 to 12.
Please enter an element.0192203940
Confirm? (No typo or mistakes?) Y/N: Y
This is what you have added

```

Student Name	Student ID	Password	Phone No	Sport Centre	Date Joined	Date Left	Emergency No	Code	Rating
1.Carie	N/A	curry	0192039940	Strat	N/A	N/A	0192203940	N/A	N/A

```

Is this the correct information? Y/N: |

```

(Figure 6.2.5)

Action number 3 is register. Including Error checks.

```

1 = View Details of Sport , 2 = View Sport Schedule
3 = Register , 4 = Login, -1 = Exit

Please enter an action number: 4

Please enter your ID and Password. (Admin / Student)
ID: |

```

(Figure 6.2.6)

Action number 4 is login to access functions allowed to registered students.

```
1 = View Details of Sport , 2 = View Sport Schedule
3 = Register , 4 = Login, -1 = Exit

Please enter an action number: 4

Please enter your ID and Password. (Admin / Student)
ID:      N/A
Password: To
Loggin in...

What do you wish to do? Key in an action number.

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: |
```

(Figure 6.2.7)

Shows that newly registered students can login.

6.3 Registered Student

```
Please enter your ID and Password. (Admin / Student)
ID:      SW2243
Password: welcome
Loggin in...

What do you wish to do? Key in an action number.

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: |
```

(Figure 6.3.1)

Student logging in. Accessing to functions only available for registered students.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 1

1.Catherine 2.Jack 3.Masayoshi 4.Sury 5.Sykkuno 6.Valkyrae 7.Abe

Please choose a Coach to view his/her details.
Please enter a number: 5
    Coach Name      Coach ID      Sport Centre Sport Name      Rating      Date Joined
    1.Sykkuno       SW4478      Strat        Swimming      4.9         1/12/2020

Displayed below are feedbacks and ratings from students.

1.Simping for him!!!    4.8
2.A 5 is such an understatement.    5.0
End of feedback

New Action...

```

(Figure 6.3.2)

Action number is view coach details. User can see basic details of every coach and feedbacks given by their students as well as ratings.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 2

Student Name   : Brian

ID             : SW2243

Password       : welcome

Phone No       : 0139984758

Sport Centre   : Strat

Date Joined    : 10/6/2020

Date Left      : N/A

Emergency No    : 0119487756

Code           : STSWSO1

Coach Rating    : N/A

New Action...

```

(Figure 6.3.3)

Action number 2 is view user's record.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 3

What do you wish to modify?

1 .Student Name
2 .ID
3 .Password
4 .Phone No
5 .Sport Centre
6 .Date Joined
7 .Date Left
8 .Emergency No
9 .Code
10.Coach Rating

2, 6, 7, 9, 10 can't be configured.
Please enter a number: 1
Changing Student Name from Brian to :Bryan

Student Name : Bryan

ID : SW2243

Password : welcome

Phone No : 0139984758

Sport Centre : Strat

Date Joined : 10/6/2020

Date Left : N/A

Emergency No : 0119487756

Code : STSWS01

Coach Rating : N/A

Is this what you wanted? Y/N : Y
Changes has been done.
New Action...

```

(Figure 6.3.4)

Action number 3 is modify user's records.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 4

Sport Centre   Sport Name   Start Time   End Time     Coach Name   Code         Day
1.Strat        Swimming    08:00        09:30        Sykkuno      STSWS01      Monday

New Action...

```

(Figure 6.3.5)

Action number 4 is view user's schedule.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 5

The following is your current feedback and rating.

['Sykkuno', 'A 5 is such an understatement.', '5.0', 'SW2243']

What feedback would you like to give to your coach? , Sykkuno?
Write down your feedback here: What if the rating become 2.5?

What rating do you want to give to your coach? ,Sykkuno.
Write down the rating here, rating must be 5 and less: (Only 2 decimals max): 2.5
Your rating and feedback have been updated.

New Action...

```

(Figure 6.3.6)

Action number 5 is rate user's coach and provide feedback. Display feedback and rating if the user has already rate the coach.

```

What feedback would you like to give to your coach? , Sykkuno?
Write down your feedback here: 
Please limit your feedback to 200 characters.
Please write down your feedback: |

```

(Figure 6.3.7)

Another set of error check. Feedback has a 200 characters limit.

```

1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit

Please enter an action number: 1

1.Catherine 2.Jack 3.Masayoshi 4.Sury 5.Sykkuno 6.Valkyrae 7.Abe

Please choose a Coach to view his/her details.
Please enter a number: 5

```

Coach Name	Coach ID	Sport Centre	Sport Name	Rating	Date Joined
1.Sykkuno	SW4478	Strat	Swimming	3.65	1/12/2020

```

Displayed below are feedbacks and ratings from students.

1.Simping for him!!! 4.8
2.What if the rating become 2.5? 2.5
End of feedback

New Action...

```

(Figure 6.3.8)

Feedback has been changed, as well as the rating in the coach's rating record.

```
1 = View Details of Coach , 2 = View Self Record , 3 = Modify Self Record
4 = View Self Schedule , 5 = Rating self Coach, -1 = Exit
```

```
Please enter an action number: -1
```

```
Logging out...
```

```
Please write down your Status. (Admin/Student)
Status:
```

(Figure 6.3.9)

Logging out...

7.0 Additional Features

1. List in List (array)

```
mylist = line.split(",")
for i in mylist:
    if i == "":
        mylist.remove(i)
if count == 1:
    Admin_Details.append(mylist)
elif count == 2:
    for x in mylist:
        Coach_Category.append(x)
elif count == 3:
    Coach_Details.append(mylist)
elif count == 4:
    for x in mylist:
        Student_Category.append(x)
elif count == 5:
    Student_Details.append(mylist)
elif count == 6:
    for x in mylist:
        Sport_Category.append(x)
elif count == 7:
    Sport_Details.append(mylist)
elif count == 8:
    for x in mylist:
        Sport_Table.append(x)
elif count == 9:
    Sport_Schedule.append(mylist)
elif count == 10:
    Feedback.append(mylist)
```

(Figure 7.1)

As you can see, Figure 7.1 represents a list being appended into a variable. The variable itself is a empty list, meaning it is appending a list into another list.

```
if Coach_Details[count][0] > Coach_Details[count+1][0]:
    Coach_Details[count],Coach_Details[count+1] = \
    Coach_Details[count+1],Coach_Details[count]
```

(Figure 7.2)

- To call upon the data within a list that is within another list, instead of one square bracket ([]), two [] is used. The first [] is to represents a list of data within the array, while the second [] represents the element within the list.

2. Len() Function

```
for x in range(len(Coach_Details)- 1):
    count = 0
```

(Figure 7.3)

Len() function collects the number of element within a list or the number of character within a string. Respective to pseudo code and flowchart, loop is used instead.

3. Keyword continue

```
for x in Coach_Details:
    if x[7] == "N/A":
        continue
```

(Figure 7.4)

When the keyword continue executes, the program immediately starts again from the for loop statement. It is considered as a repetition, but it is not, as the value of x will change as keyword continue signals ends the for loop statement prematurely, continuing to the next x.

4. split() function

```
mylist = line.split(",")
```

(Figure 7.5)

The split() function accepts an argument. In Figure 7.5, it accepts “,” as its argument, the split() function would remove “,” from line, which is a string and from where “,” is removed from, the string is separated. Meaning, for every “,” in the string, a separation occurs, resulting in the creating of a list from a string.

5. del function

```
del insurance
```

(Figure 7.6)

The del function is used to delete something that is not needed anymore. Such as a variable, a list, an element.

Conclusion

Admins are capable of doing most of the administrating works such as data manipulation and oversee most of the data. Admins may only review most of the data recorded in the file, but the admins are able to configure every single records. For convenience, sorting function and search by specific function is instilled within the system. These functions are there to arrange the records to make it more eye-appealing or search the records based on the range in which the admins are searching for. Admins may also add data into the records as an admin should.

All students are able to access the system. The functions limited to unregistered students are viewing sport details, viewing sport schedule and registration. As for viewing sport schedule, it will be organised and displayed based on the sport centre of the user's choosing. Unregistered students are allowed to register on their own and directly log in into the section available for registered students, yet some function might be unavailable to them as they are still not assigned to a class.

Registered students are able to view basic details of coaches, and even other student's feedback and ratings. Registered students may also view and modify self-records. Moreover, they may view their own sport schedule and rate their own coach.

Last but not least, I believe that the system that I have created satisfies RCSAS's requirements. I have also added many features to accommodate the user's probable demands, as this system also focuses on pleasing the eye.

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