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Individual Coursework

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I. Abstract

This report describes the development of the Python-based information system for IIT campus management. It facilitates the user in performing student enrollment, fetching of details by individual and branch, marking, and viewing of attendance. Algorithms and their code implementations are explained with test cases to prove reliability and efficiency. The system is a scalable solution tuned for campus needs with potential for further enhancements.

II. Acknowledgement

I would like to extend my deepest appreciation to my supervisor, Imasha Umayangi, for the valuable help and priceless guidance throughout the development of this project. I would also like to mention the Institute of Information and Technology University for providing me with the facilities and enabling environment for the development and testing of the system. I must thank friends and mentors for their valuable comments and encouragement. Last but not least, my thanks go to family and friends for their ever-motivating support.

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1.0 Understanding the Challenge

University has been an institution that is growing and still developing throughout the years, and accordingly, management of its information system has always grown more complex with time. In this respect, the existing system is inefficient in various tasks, such as student enrollment, attendance tracking, and updating information of students. Such inefficiencies and delays tend to create disorder in other areas by administrative staff and faculty and generally disrupt their smooth workflow. It is time an effective and efficient line of operation concerning the information system was devised to realistically help in keeping pace with the rapid growth in the student enrollment and administrative processes.

Figure 1/Overview

2.0 Proposed System Design

This project will more focus on automating enrollment of students, tracking attendance, and updating details. When compared to the manual system, this system will increase accuracy as there are limitations when adding details about students and also about their attendance. The system will save time for the staff because this interactive program includes most of the suitable options to select radio versions too. The system will save data and check the data with filters to provide data efficiently. For example, if someone requests data on the students in the Galle branch, the system will filter all the students' data and provide you with the details of the students in the Galle branch. This system will help the university manage the information system of the university in a user-friendly manner.

System Design Features

1. User Interaction

- Input Data – Student details, Present/Absent etc.
- Choice Selection – Menu option choices
- Receive Output – Displaying student details, Attendance Details etc.

2. Functionality

- Student enrollment – add information by input method, update details by input method, display student details.
- Attendance Tracking – tracking attendance, recording attendance, display attendance.
- Data filtering – Under the conditions such as location, Start date and end data etc.

3. Menu Structure

- Option 1 – student enrollment
- Option 2 – View details of a specific student
- Option 3 - View details of students of a specific location

- Option 4 – Update details
- Option 5 – Mark attendance
- Option 6 – View details of attendance
- Option 7 - Exist

4. Data Handling

- Input – the kind of data receive by students
- Process – how they are being processed
- Output – how is the data displayed

5. Error Handling

- Check the limits – example: Mobile number (10 digit characters)

6. Exist Options

- User can exist whenever user want by the ffmenu option 7.

3.0 Data Structure Design

1. Data Types

- Variables:

String - Student Name

Integer – Student ID

Boolean - Attendance

2. Data Structures

- Nested List – To store student's details one by one.
- Loops – To access details of all the students, To track and record attendance

3. Relationship among data structures

Loop inside a list

Example:

```
for student in students:
    if student[0] == student_id:
        print("\nNIC            - ", student[1])
        print("\nPhone Number      - ", student[6])
        print("\nFirst Name      - ", student[2])
        print("\nLast Name      - ", student[3])
        print("\nTutorial Group    - ", student[7])
        print("\nCentre          - ", student[8])
```

4. Accessing and modifying of data

It will check, during the marking of attendance, if the ID of that particular student is in the list and will then append that record to the list of that particular student.

```
save = input("\nDo you want to save the details (Yes/No)? ").strip().lower()
if save == "yes":
    attendance.extend(attendance_records)
    print("Attendance saved successfully.")
else:
    print("Attendance not saved.")
```

4.0 Algorithm

Initialize the lists

- To store details of students, To store attendance records
  - Examples: Students = [ ]
  - Attendance = [ ]

Function for the main menu

- Display Campus name and Function name
- Display Options of:
  - Enroll a new students
  - View details of a student
  - View details of all students
  - Update student details
  - Mark attendance
  - View attendance
  - Exit
- Prompt user to input the choice
- Based on the choice call the function:
  - 1 – enroll_new_student ()
  - 2 – View_ a_student ()
  - 3 – View_all_details ()
  - 4 – Update_details ()
  - 5 – mark_attendance ()
  - 6 – view_attendance ()
  - 7 – exit ()
- If choice is not a digit between 0-8
  - Display invalid choice and return to main_menu()

Validation Functions:

- correct_student_id():
  - Check if the student ID is exactly 9 digits.
- correct_nic():
  - Check if the NIC is exactly 10 characters.
- correct_first_name():
  - Check if the first name is alphabetic and has a length of 10 or fewer characters.
- correct_last_name():

Check if the last name is alphabetic and has a length of 15 or fewer characters.

- correct_bday():
  Check if the birth date is exactly 10 characters long.
- correct_nb():
  Check if the phone number is exactly 10 digits.
- correct_address():
  Check if the address is 15 or fewer characters.
- correct_group():
  Ensure the tutorial group is a single character (e.g., "A").
- correct_centre():
  Ensure the centre is one of the valid values (Galle, Colombo, Kurunagala).

Function for enrolling a new student

- Display campus name and function name
- Get input data from user
  - Student id
  - NIC
  - First name
  - Last name
  - Birth date
  - Address
  - Mobile address
  - Tutorial group
  - Centre
- Validate the inputs using the corresponding functions of
  - Correct_student_id
  - Correct_nic
  - Correct_first_name
  - Correct_last_name
  - Correct_bday
  - Correct_nb
  - Correct_address
  - Correct_group
  - Correct_centre
- Ask user to know whether to save details.
  - If the user said yes:
    - save the data in the students list
    - Display enrollment successful.
  - If the user said no:
    - Display enrollment cancelled.

Return to main menu function.

Function to view a detail of a student

- Display campus name and function name
- Get student id from user as an input
- Search student id in students list details

> If found:
>
> > Display nic, phone number, first name, last name, tutorial group, center
>
> If not:
>
> > Display student id not found

- Ask user whether user wants to view another student's details

> If yes:
>
> > Return to the function again
>
> Else:
>
> > Return to the main menu.

Function to view all the details

- Display campus name and the function name
- Check whether the students' details list is empty or not

> If it is empty:
>
> > Display no students found.
>
> If not:
>
> > Get branch name as an input from the user.

- Get branch name as an input (e.g., Galle, Colombo, Kurunegala).
- Filter students based on the branch entered.

> If students are found for the branch:
>
> > Display a list of students with their NIC, Student ID, First Name, Last Name, and Tutorial Group.
>
> If no:
>
> > Display error message
> >
> > Return to main menu

- Ask user to know whether user want to update details

> If yes:
>
> > Call update_details().
>
> If no:
>
> > Return to the main menu.

Function to update details of students

- Display campus name and function name
- Get student id as an input from the user
- Check the student in the students list.

    If found:

        Get inputs to update (NIC, First Name, Last Name, etc.).

    Else:

        Display no student found

        Return to main menu

- Validate each detail with respective validation functions.
- Ask the user if they want to save the updated details.
    If yes:

        Update the student details in the list.

    If no:

        Cancel the update.

Function for marking attendance

- Get Centre (Branch), Tutorial Group, and Attendance Date as inputs
- Check students based on the Centre and Tutorial Group entered.

    If students are found:

        Display each student's Student ID and attendance

- Save the attendance records.
- Ask user to know whether user wants to save the attendance.
    If yes:
        Store the records in the attendance list.
    If no:
        Display the error message
        Return to the main menu

View Attendance

- Get student id from the user
- Check whether student id is on the students list
- Ask user the starting date and ending date of the record view

- Check for attendance from the attendance list among the given range

  If found:

  Display the Centre, Tutorial Group, Date, and Status for each attendance record.

  If no:

  Display an error message and return to the main menu.

5.0 Assumptions

Data Integrity

- Data for all registering students must be valid. For example, NIC numbers, phone numbers, and email addresses will be valid, and functions have been implemented to validate the input to ensure correct format and accurate data entry.

Unique Student ID

- A student is assumed to have a unique 9-digit student ID. In case of same id, the system cannot permit the same ID to register two different students.

Fixed Tutorial Groups

- These are tutorial groups predefined in the system. Every student is assumed to be placed into a certain group during the process of registration, and the system does not allow changes in the tutorial groups after the registration is conducted.

Data Storage

- The program would store the information of all students, along with their attendance in memory-as for example, in a list of dictionaries or class objects-for as long as the program is running. This would not survive the termination of the program, unless explicitly written out to a file or into a database.

Attendance Entry Manually

- Attendance is entered manually by the instructor or administrator and assumes the correctness of the user in marking the attendance of each student present in the tutorial group.

Date Format

- The system date format should be in the DD/MM/YYYY format for consistency. Any other will give an error message.

Error Handling

- The program assumes that graceful handling of errors, such as providing appropriate error messages in case the user enters incorrect data for student IDs or chooses options that don't exist.

Performance Constraints

- It is assumed that the system will work with a reasonable number of students and attendance records, say up to a few hundred students. Larger sets may require further optimization.

User Interface Simplicity

- This system will assume a very simple text-based user interface-no extensive graphics and no web-based features. The system shall be designed to run in a console environment with no dependencies on external libraries or frameworks.

Security

- No security mechanisms like encryption or password protection have been implemented within this system, assuming that the environment is secure and that access to the system is restricted to authorized personnel only.

6.0 Test Cases

Main Menu

```
                    IIT Campus

                    Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                    Your Choice: |
```

Main menu 1/Figure 1

Positive and Negative Outputs

```
                          IIT Campus

                          Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                          Your Choice: 1

                    IIT Campus

                Enroll a new student

Student ID          - |
```

Test case 1/ Figure 1

Figure	Input	Expected Output	Actual Output	Result
Main Menu	1	Call Enroll a new student function	Call Enroll a new student function	PASS

Main menu / Figure 1/ Case 1

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit


                                        Your Choice: N
Invalid input, please enter a number.

                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit


                                        Your Choice: |
```

Test case 2/Figure 1

Figure	Input	Expected Output	Actual Output	Result
Main Menu	N	Display "Invalid input, please enter a number", return to main menu	Display "Invalid input, please enter a number", return to main menu	PASS

Main menu / Figure 1/ Case 2

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit


                                        Your Choice: 7

Exiting the program
```

Kill?   ×

?   Your program is still running!
Do you want to kill it?

OK   Cancel

Test case 3/Figure 1

Figure	Input	Expected Output	Actual Output	Result
Main Menu	7	Display "Exiting the program", exit the program	Display "Exiting the program", exit the program	PASS

Main menu / Figure 1/ Case 3

Enroll a new student

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: 1

                    IIT Campus

                Enroll a new student

Student ID          - |
```

Enroll a new student/ Figure 2

Positive and Negative Outputs

```
                              IIT Campus

                         Enroll a new student

   Student ID           - 202406900

   NIC                  - 1234567890

   First Name          - Novanya

   Last Name           - Mendis

   Birth Date          - 2007/02/12

   Permanent Address  - kalegana,galle

   Phone Number        - 0777123456

   Tutorial Group      - B

   Centre              - Galle


   Do you want to save the details (Yes/No)? Yes

   Enrollment successful.

                              IIT Campus

                              Main Menu

   1) Enroll a new student
   2) View details of a student
   3) View details of all students according to the branch
   4) Update student details
   5) Mark attendance
   6) View attendance
   7) Exit

                                       Your Choice: |
```

Test case 1 / Figure 2

Figure	Input	Expected Output	Actual Output	Result
Enroll a new student	All correct inputs	Display "Enrollment successful", return to main menu	Display "Enrollment Successful", return to main menu	PASS

Enroll a new student/ Figure 2 / Case 1

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```
                        IIT Campus

                   Enroll a new student

Student ID          - 202406900

NIC                 - 0123456789

First Name          - Novanya

Last Name           - Mendis

Birth Date          - 2007/02/12

Permanent Address   - kalegana,galle

Phone Number        - 0777123456

Tutorial Group      - B

Centre              - Galle


Do you want to save the details (Yes/No)? No

Enrollment cancelled.

                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit
```
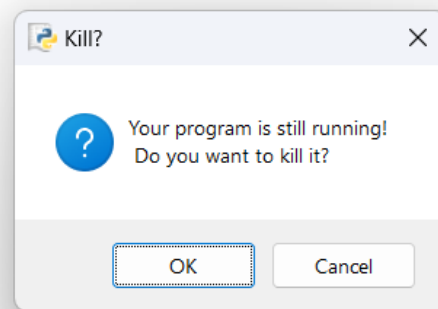
Test case 2 /Figure 2

Figure	Input	Expected Output	Actual Output	Result
Enroll a new student	Input "No" to save details	Display "Enrollment cancelled", return to main menu	Display "Enrollment cancelled", return to main menu	PASS

Enroll a new student/ Figure 2 / Case 2

```
Your Choice: 1

                    IIT Campus

              Enroll a new student

Student ID          - 125
Invalid student ID, please enter a correct student ID.
Student ID(9-digit number)- 202406900

NIC                 - 5862
Invalid NIC number, please enter the correct NIC number.

NIC-National Identity Card Number(Text with 10 characters- 1234567890

First Name          - 54
Invalid first name, re-enter your first name.
Student's First Name- Novanya

Last Name           - 85
Invalid last name, re-enter your last name.
Student's Last Name - Mendis

Birth Date          - 558
Invalid format, try again.
Birth Date (DD/MM/YYYY): 12/02/2007

Permanent Address   - qwertyuiopdfghjklxcvbnm,fghjk
Invalid address.
Permanent Address(text with 15 characters)- kalegana,galle

Phone Number        - 45625
Invalid number, enter the number again.
Phone Number(10 digits)- 0777123456

Tutorial Group      - ghjk
Invalid group, re-enter.
Tutorial Group      - B

Centre              - hambantota
Invalid centre. Please enter one of the following: Galle, Colombo, Kurunagala.
Centre(Galle/Colombo/Kurunagala)- Galle


Do you want to save the details (Yes/No)?
```

Test case 3/ Figure 2

Figure	Input	Expected Output	Actual Output	Result
Enroll a new student	Input wrong data	Display error statements and return to function back	Display error statements and return to function back	PASS

Enroll a new student/ Figure 2 / Case 3

View a detail

```
                              IIT Campus

                              Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                          Your Choice: 2

                       IIT Campus

                   View Details of a Student

Student ID          -  |
```

View a detail / Figure 3

Positive and Negative Outputs

```
                              IIT Campus

                              Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: 2

                        IIT Campus

                   View Details of a Student

Student ID        -  202406900

NIC               -  1234567890

Phone Number      -  0777123456

First Name        -  Novanya

Last Name         -  Mendis

Tutorial Group    -  B

Centre            -  Galle


Do you want to view another student's details (Yes/No)?
```

Test case 1/ Figure 3

Figure	Input	Expected Output	Actual Output	Result
View details of a student	Input correct student id which details are already stored	Display details of the student, ask user to view another student's details	Display details of the student, ask user to view another student's details	PASS

View a detail / Figure 3/ Case 1

```
Do you want to view another student's details (Yes/No)? yes

                         IIT Campus

                   View Details of a Student

Student ID           - 202406100

Student ID not found.

                         IIT Campus

                         Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: |
```

Test case 2/Figure 3

Figure	Input	Expected Output	Actual Output	Result
View details of a student	Input incorrect student id	Display Student ID not found, return to main menu	Display Student ID not found, return to main menu	PASS

View a detail / Figure 3/ Case 2

```
                                         Your Choice: 2

                        IIT Campus

                   View Details of a Student

Student ID            -

Student ID not found.

                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                         Your Choice: |
```

Test case 3/Figure 3

Figure	Input	Expected Output	Actual Output	Result
View details of a student	Space	Display Student ID not found, return to main menu	Display Student ID not found, return to main menu	PASS

View a detail / Figure 3/ Case 3

View details of all students by branch

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: 3

                    IIT Campus

                View Students by Branch

Branch name: |
```

View details/ Figure 4 1

Positive and Negative Inputs

```
                              IIT Campus

                              Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                          Your Choice: 3

                              IIT Campus

                     View Students by Branch

Branch name: matara

No students found in the branch 'matara'.

Do you want to update any student's details (Yes/No)? |
```

Test case 1/Figure 4

Figure	Input	Expected Output	Actual Output	Result
View details of all students by branch	Incorrect branch name	Display No students found in the branch "branch name"	Display no students found in the branch "matara"	PASS

View details / Figure 4/ Case 1

```
                        IIT Campus

                        Main Menu

  1) Enroll a new student
  2) View details of a student
  3) View details of all students according to the branch
  4) Update student details
  5) Mark attendance
  6) View attendance
  7) Exit

                                           Your Choice: 3

                        IIT Campus

              View Students by Branch

  Branch name: Galle

  Branch Name: Galle
  NIC             Student ID      First Name      Last Name       Tutorial Group


  1234567890      202406900       Novanya         Mendis          B


  9876543210      202406901       Lisa            Manoban         A


  7418529630      202406902       Jisoo           Fonseka         A


  9638527410      202406903       Jennie          Mendes          B


  Do you want to update any student's details (Yes/No)? |
```

Test case 2/Figure 4

Figure	Input	Expected Output	Actual Output	Result
View details of all students by branch	Input correct branch name	Display students' details by branch, ask to update details of a student	Display students' details by branch, ask to update details of a student	PASS

View details / Figure 4/Case 2

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```
                        IIT Campus

                  View Students by Branch

        No students found.

                        IIT Campus

                        Main Menu

        1) Enroll a new student
        2) View details of a student
        3) View details of all students according to the branch
        4) Update student details
        5) Mark attendance
        6) View attendance
        7) Exit

                                      Your Choice: |
```

Test case 3/Figure 4

Figure	Input	Expected Output	Actual Output	Result
View details of all students by branch	No student details stored (no input)	Display "No student found", return to main menu	Display "No student found", return to main menu	PASS

View details / Figure 4/ Case 3

Update students details

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                    Your Choice: 4

                    IIT Campus

                Update Student Details

Student ID          -
```

Update details /Figure 5

Positive and Negative Outputs

Your Choice: 4

IIT Campus

Update Student Details

Student ID   - 202406900

NIC   - 9876543210

First Name   - Novanya

Last Name   - Mendis

Birth Date   - 12/02/2007

Permanent Address   - kalegana,galle

Phone Number   - 0777123456

Do you want to save the updates (Yes/No)? yes
Details updated successfully.

IIT Campus

Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

Your Choice:

Test case 1/Figure 5

Figure	Input	Expected Output	Actual Output	Result
Update student details	Input details correctly to update	Display details updated successfully, return to main menu	Display details updated successfully, return to main menu	PASS

Update details / Figure 5/ Case 1

```
                                            Your Choice: 4

                           IIT Campus

                     Update Student Details

Student ID            - 2000
Student ID not found.

                           IIT Campus

                           Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                            Your Choice: |
```

Test case 2/Figure 5

Figure	Input	Expected Output	Actual Output	Result
Update student details	Input wrong student id	Display "student id not found", return to main menu	Display "student id not found", return to main menu	PASS

Update details / Figure 5/ Case 2

```
                                        Your Choice: 4

                            IIT Campus

                    Update Student Details

Student ID          - 202406900

NIC                 - 123
Invalid NIC number, please enter the correct NIC number.
NIC (10 digits)     - 1234567890

First Name          - wertyuiop

Last Name           - qwertyuiopasdfghjkl
Invalid last name, re-enter your last name.
Last Name           - mendis

Birth Date          - 2001
Invalid format, try again.
Birth Date (DD/MM/YYYY)- 12/02/2007

Permanent Address   - wakunagoda road, galle, sri lanka
Invalid address.
Permanent Address   - kalegana,galle

Phone Number        - 0777568
Invalid number, enter the number again.
Phone Number        - 0777123456


Do you want to save the updates (Yes/No)? |
```

Test case 3/Figure 5

Figure	Input	Expected Output	Actual Output	Result
Update student details	Input wrong details	Display error massage and get input again	Display error massage and get input again	PASS

Update details / Figure 5/ Case 3

Mark attendance

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit


                                    Your Choice: 5
                    IIT Campus
                 Mark Attendance

Centre              -
```

Mark attendance/ Figure 6

Positive and Negative Outputs

```
                                                    Your Choice: 5
                        IIT Campus
                      Mark Attendance

   Centre              -    Galle

   Tutorial Group      -    B

   Date                -    2024.01.01

   Student ID    Present/Absent
   202406900        Present
   202406903        Present                    Novanya 20240690 (novanya.20240690@

   Do you want to save the details (Yes/No)? yes
   Attendance saved successfully.

                        IIT Campus

                        Main Menu

   1) Enroll a new student
   2) View details of a student
   3) View details of all students according to the branch
   4) Update student details
   5) Mark attendance
   6) View attendance
   7) Exit

                                                    Your Choice: |
```

Test case 1/ Figure 6

Figure	Input	Expected Output	Actual Output	Result
Mark attendance	Correct inputs	Display "Attendance saved successfully", return to main menu	Display "Attendance saved successfully", return to main menu	PASS

Mark attendance / Figure 6/ Case 1

```
                        IIT Campus
                      Mark Attendance

Centre                -    Colombo

Tutorial Group        -

Date                  -
No students found for the selected branch and tutorial group.

                         IIT Campus

                         Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                         Your Choice: |
```

Test case 2/ Figure 2

Figure	Input	Expected Output	Actual Output	Result
Mark attendance	Spaces	Display "No students found for the selected branch and tutorial group", return to main menu	Display "No students found for the selected branch and tutorial group", return to main menu	PASS

Mark attendance / Figure 6/ Case 2

```
                    IIT Campus
                 Mark Attendance

Centre              -    Colombo

Tutorial Group      -    A

Date                -    2024.02.02

Student ID    Present/Absent
202406904         Present

Do you want to save the details (Yes/No)? No
Attendance not saved.


                    IIT Campus

                    Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice:
```

Test case 3/ Figure 6

Figure	Input	Expected Output	Actual Output	Result
Mark attendance	No for save details	Display "Attendance not saved", return to main menu	Display "Attendance not saved", return to main menu	PASS

Mark attendance / Figure 6/ Case 3

View attendance

```
                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: 6
                        IIT Campus
                   View Attendance Details

Student ID    - |
```

View details / Figure 7

Positive and Negative Outputs

```
                              IIT Campus
                         View Attendance Details


Student ID      - 000
Invalid Student ID.


                              IIT Campus

                              Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                         Your Choice: |
```

Test case 1/Figure 7

Figure	Input	Expected Output	Actual Output	Result
View attendance	Incorrect student id	Display "Invalid Student ID", return to main menu	Display "Invalid Student ID", return to main menu	PASS

View attendance / Figure 7/ Case 1

```
                        IIT Campus
                   View Attendance Details


Student ID      - 202406900
From            - 2024.01.01
To              - 2024.04.04

Date                Present/Absent
2024.01.01          Present
2024.01.02          Present
2024.03.03          Absent

Do you want to direct to the main menu (Yes/No)?
```

Test case 2/ Figure 7

Figure	Input	Expected Output	Actual Output	Result
View attendance	Correct student id	Display student attendance, ask to direct to the main menu	Display student attendance, ask to direct to the main menu	PASS

View attendance / Figure 7/ Case 2

```
                        IIT Campus
                   View Attendance Details


Student ID      -
Invalid Student ID.


                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: |
```

Test case 3/ Figure 7

Figure	Input	Expected Output	Actual Output	Result
View attendance	Space	Display "Invalid student id", return to main menu	Display "Invalid student id", return to main menu	PASS

View attendance / Figure 7/ Case 3

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Exit

```
                        IIT Campus
                 View Attendance Details

Student ID      -
Invalid Student ID.

                        IIT Campus

                        Main Menu

1) Enroll a new student
2) View details of a student
3) View details of all students according to the branch
4) Update student details
5) Mark attendance
6) View attendance
7) Exit

                                        Your Choice: 7

Exiting the program
```
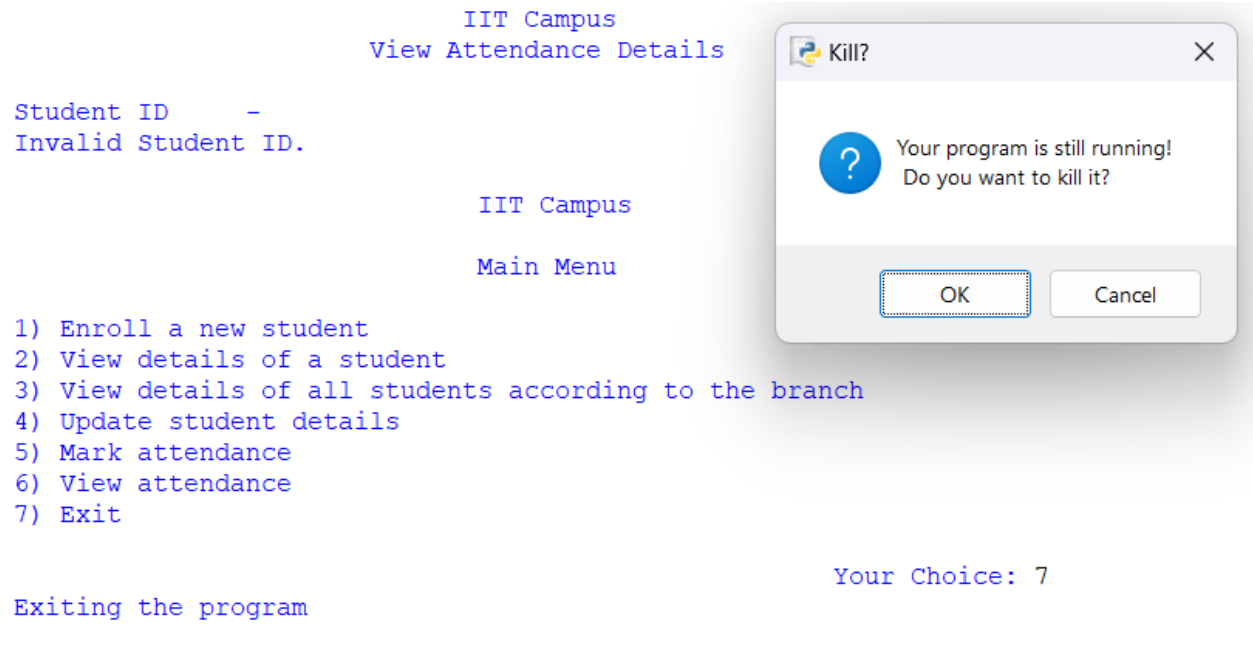
Kill?

? Your program is still running!
Do you want to kill it?

OK   Cancel

Exit/ Figure 8

Figure	Input	Expected Output	Actual Output	Result
Exit	OK	Display "Exiting the program", exit the program	Display "Exiting the program", exit the program	PASS

Exit/ Figure 8 1