PATANJALI RISHIKUL

Teliarganj, Prayagraj

A Project Report

on

Students Information Management System

For

AISSCE 2021-22 Examination

[As a part of the Computer Science (083)]

SUBMITTED BY

Devam Pandey XII-A

Roll no.:23710175

Under the Guidance of:

Mr. Hari Krishna Lal

PGT (Computer Science)

CERTIFICATE

Information Management System is a bonafide work done by DEVAM PANDEY of class XII Session 2021-22 in partial fulfillment of CBSE's AISSCE Examination 2022 and has been carried out under my direct supervision and guidance. This report or a similar report on the topic has not been submitted for any other examination and does not form a part of any other course undergone by the candidate.

Signature of Teacher/Guide
Name: Hari Krishna Lal
Designation: PGT (CS)

ACKNOWLEDGEMENT

undertook this Project work, as the part of my XII-IComputer Science course. I had tried to apply my best of knowledge and experience, gained during the study and class work experience. However, developing software system is generally a quite complex and time-consuming process. It requires a systematic study, insight vision and professional approach during the design and development. Moreover, the developer always feels the need, the help and good wishes of the people near you, who have considerable experience and idea.

I would like to extend my sincere thanks and gratitude to my teacher Mr. Hari Krishna Lal sir

We would like to take the opportunity to extend my sincere thanks and gratitude to our parentsfor being a source of inspiration and providing time and freedom to develop this software project.

1. Introduction

This project on "Students Information Management System" is very useful for easy user interface. The system utilizes the powerful database management, data retrieval and data manipulation. This project provides more ease for managing the data than manually maintaining in the documents. The project is useful for saving valuable time and reduces the huge paper work.

It will help educational institutions like schools and colleges will keep track of their student records like personal details, contact details, etc. The internet is rapidly becoming a part of the everyday lives of a majority of people in the world. People perform various activities on the internet and one of them is storing their data in database where they are interested in. Obviously, there is a need of Students Information Management System to manage student's data.

2. Objective & Scope of the Project

The objective of this system is to develop a computerized Students Information Management System to decrease the burden of data entry of students information and to make it easier. This system also makes the data retrieval and manipulation like modification and deletion, etc easier to perform.

This system is expected to perform the following functionalities:-

- To provide a user friendly interface to perform all the tasks.
- The proposed system should maintain all the records and transactions, and should generate the required reports and information when required.
- ➤ To identify the critical operation procedure and possibilities of simplification using modern IT tools and practices.
- Take the feedback and ratings by the user for further updates in the system.

In its current scope, the system enables user to retrieve and update the information very easily. This software does not require much training time of the users due to easy to understand interface and simplicity.

Despite of the best effort of the developer, the following limitations and functional boundaries are visible, which limits the scope of this system.

5 Page

- 1. This system can store records and produce reports in pre-designed format in soft copy. There is no facility yet to produce customized reports. Only specified reports are covered.
- 2. The data in this system is not stored in database format (rows and columns).

However all these limitations can be resolved in further updates of the system.

So far as future scope of the project is concerned, firstly it is open to any modular expansion i.e. other modules or functions can be designed and embedded to handle the user need in future. Any part of the system and reports can be modified independently without much effort.

3. System Implementation

5.1 The Hardware used:

While developing the system, the used hardware are:

PC with Intel Core i3 processor and other required devices.

5.2 The Softwares used:

- ➤ Microsoft Windows® 10 as Operating System.
- ➤ Python 3.9
- ➤ MS-Word 2007 for documentation.

4. System Design and Development

HYPOTHALAMUS(MAIN)

This is the main commanding part of the system. It consists of a loop which runs the system until the user successfully exits it.

- 1) New Registrations
- 2) Search
- 3) Update
- 4) Display
- 5) Exit

11 11 11

This is the Hypothalamus of the system

It Commands the system

The Main Commanding Officer

11 11 11

```
from Hindbrain import *
from Hippocampus import *
from Motor_Cortex import *
```

```
clean()
h_line()
space_2()
```

```
print(
```

```
"Welcome to the student's information management portal \nHow can I help you....."
```

```
space_2()
while True:
  h_line()
  print("\n\n1) New Registrations \n2) Search \n3)
Update \n4) Display \n5) Exit")
  option = int(input("Enter the option no. here : "))
  if option == 1:
    new_registration()
    space_2()
    response = input(
       "Press Enter to get back to the main menu
and any other key to go to the Exit screen"
    h_line()
    if response == "":
```

```
continue
     else:
       result = exit()
       if result == 1:
          break
       else:
          continue
  elif option == 2:
     search()
    space_2()
     response = input(
       "Press Enter to get back to the main menu
and any other key to go to the Exit screen"
     )
     h_line()
    if response == "":
       continue
     else:
       result = exit()
```

```
if result == 1:
          break
       else:
          continue
  elif option == 3:
     update()
    space_2()
     response = input(
       "Press Enter to get back to the main menu
and any other key to go to the Exit screen"
     h_line()
    if response == "":
       continue
    else:
       result = exit()
       if result == 1:
  break
       else:
          continue
```

```
elif option == 4:
     display()
     space_2()
     response = input(
       "Press Enter to get back to the main menu
and any other key to go to the Exit screen"
     h_line()
    if response == "":
       continue
     else:
       result = exit()
       if result == 1:
          break
       else:
          continue
  elif option == 5:
     result = exit()
    if result == 1:
```

```
break
```

else:

continue

```
else:
```

```
space_2()
```

print("Wrong option Selected... \nPlease try
again...\n")

continue

```
涛 *IDLE Shell 3.10.2*
                                                                          \times
File Edit Shell Debug Options Window Help
   The required detail is not present.
   Press Enter to get back to the main menu and any other key to go to the Exit screen
   1) New Registrations
   2) Search
   3) Update
   4) Display
5) Exit
   Enter the option no. here: 5678
   Wrong option Selected...
   Please try again...

    New Registrations
    Search

   3) Update
   4) Display
   Enter the option no. here :
                                                                         Ln: 150 Col: 28
```

HINDBRAIN

This is the part of the system which consists of the main functions (containing the other functions of the system) of the system which is responsible for cleanliness and smooth functioning of the system.

- 1) new_registration(): handles the entering of data by the user
- 2) search(): searches and displays the data on the users command
- 3) update(): modifies or deletes the data on the user command
- 4) display(): displays the desired data on the user command
- 5) exits(): takes the user out of the system and also takes feedback and ratings

111111

This is the Hindbrain of the system

It tells the system how to execute the functions

```
from Motor_Cortex import *
from Hippocampus import *
def new_registration():
  clean()
  h_line()
  space_3()
  111111
  To check for the no.of entries to be made
  11 11 11
  loop = int(input("How many entries are to be made :
"))
  x = 1
```

```
while x < loop or x == loop:
    details()

if x == 1:
    space_3()
    print(" One entry successfully made !!!!!")

elif x == 0:
    space_3()
    print("\n \n \n One more entry successfully made !!!!!")

x = x + 1</pre>
```

```
def search():
  clean()
  h_line()
  space_3()
  111111
  This function is used to search for a required data
asked by the user
  111111
  adm_no = int(
    input("Enter the admission no. of the student whose
info is to be searched: ")
  )
  if inlist(adm_no):
    space_3()
```

```
print("The required data is present.\n Do you want to
display it ?")
    space_2()
    display_confirmation = int(input("Press 1 for yes and
0 for no:"))
    if display_confirmation == 1:
       result = display_data(adm_no)
   space_2()
       print("The search result : \n", result)
    elif display_confirmation == 0:
      space_2()
       print("Ok")
       return
    else:
      space_2()
       print("Invalid Input !!!")
  else:
    space_3()
    print("The required detail is not present.")
```

def update():

111111

This function is used the update the database

It can delete the data from the database

it can modify the existing details of the students

11 11 11

```
adm_no = int(
input(
```

```
"Enter the admission number of the student
whose data is to be modified: "
  if inlist(adm_no):
    print(
       "1) Delete the existing data from the database
\n2) Modify the existing data of the student "
    answer = int(input("Enter your option number here :
"))
    if answer == 1:
      delete(adm_no)
      print("\nSUCCESS ......\nThe data is deleted from
the database")
    elif answer == 2:
      modify(adm_no)
      print("\nSUCCESS ......\nThe details are modified
")
    else:
      print("Invalid Input!!!")
  else:
```

print("The admission no. does not exists in the database\nPlease try again")

```
▶ *IDLE Shell 3.10.2*
                                                                                                    ×
File Edit Shell Debug Options Window Help
    2) Search
    3) Update
    4) Display
    5) Exit
    Enter the option no. here: 3
    Enter the admission number of the student whose data is to be modified: 8888

    Delete the existing data from the database
    Modify the existing data of the student

    Enter your option number here : 2
    Enter the name of the student : abbb
    Enter the Phone no. : 7654323456
    Enter the address : bvftyhbt
    Enter the email Address : ijuh@hfgh.com
    Old details :
     ('Addmision no.': 8888, 'Name': 'hgfd sawq', 'Phone no.': '7685345790', 'Address': 'kjbghbvgh
    j', 'Email id': 'ssdfgh@jk,.fgb'}
    Modified details: {'Addmision no.': 8888, 'Name': 'abbb', 'Phone no.': '7654323456', 'Address': 'bvftyhbt', 'Em
    ail id': 'ijuh@hfgh.com'}
    The details are modified
    Press Enter to get back to the main menu and any other key to go to the Exit screen
                                                                                                   Ln: 224 Col: 0
```

def display():

clean()

h_line()

```
space_3()
  111111
  This function is used to display data
  111111
  print(
    "Do you want to display the whole database or the
data of some specific student ?"
  )
  space_2()
  answer = int(input("Press 1 for whole database and 0
for specific student: "))
  if answer == 1:
    space_2()
    print("The database: \n")
    with open("Data.txt", "r") as d:
       print(d.read())
  elif answer == 0:
```

```
space_3()
  adm_no = int(input("Enter the admission no. to
display data : "))
  result = display_data(adm_no)
  space_2()
  print(result)
  space_3()

else:
  space_3()
  print("Invalid Input !!!")
```

```
*IDLE Shell 3.10.2*
                                                                                                                       ×
File Edit Shell Debug Options Window Help
     Do you want to display the whole database or the data of some specific student ?
     Press 1 for whole database and 0 for specific student : 1
     The database:
     ('Addmision no.': 8888, 'Name': 'abbb', 'Phone no.': '7654323456', 'Address': 'bvftyhbt', 'Ema
     il id': 'ijuh@hfgh.com'}{'Addmision no.': 3321, 'Name': 'abcd efgh', 'Phone no.': '1234567890'
, 'Address': 'qwerty uiop', 'Email id': 'email@address.com'}
     {'Addmision no.': 4321, 'Name': 'ijkl mnop', 'Phone no.': '0987654321', 'Address': 'asdfgh jkl', 'Email id': 'address@email.com'}
     {'Addmision no.': 5432, 'Name': 'qrst uvwx', 'Phone no.': '9876545679', 'Address': 'bvdfdrfgh'
       'Email id': 'bghbvjggv@mnbgyuj.vgg'}
     {'Addmision no.': 1234, 'Name': 'Tarushi Singh Rajput', 'Phone no.': '0987654321', 'Address': 'BJP , karyalay India', 'Email id': 'tsr@modiji.com'}
{'Addmision no.': 5678, 'Name': 'Tony Stark', 'Phone no.': '1234567890', 'Address': 'Patanjali
     Rishikul, India', 'Email id': 'tony@avengers.com'}
     Press Enter to get back to the main menu and any other key to go to the Exit screen
                                                                                                                    Ln: 285 Col: 83
```

```
def exit():
  clean()
  h_line()
  space_3()
  111111
  It controls the exit part of the system
  It also manages the feedback function presentation
  111111
  while True:
    print(" Are you sure you want to exit ?")
    space_2()
    exit_confirmation = int(input("Press 1 for yes and 0
for no : "))
    if exit_confirmation == 1:
```

```
space_2
      randf_name = input("Enter your name : ")
      while True:
        space_3()
         print("Would you like to mention some
feedback?")
        space_2()
        feedback_confirmation = int(input("Press 1 for
yes and 0 for no: "))
        if feedback_confirmation == 1:
           f_d = feedback()
           while True:
             print("would you like to give ratings ?")
             ratings_confirmation = int(
               input("Press 1 for yes and 0 for no: ")
             if ratings_confirmation == 1:
               r_d = ratings()
```

```
randf_data = {
    "Name": randf name,
    "Ratings": r_d,
    "Feedback": f_d,
  }
  randf_storage(randf_data)
  break
elif ratings_confirmation == 0:
  space_2()
  print("Ok no problem...")
  randf_data = {
"Name": randf_name,
    "Ratings": "Not given",
    "Feedback": f_d,
  }
  randf_storage(randf_data)
  break
else:
  space_2()
  print("Invalid Input!!")
  continue
```

break

```
elif feedback_confirmation == 0:
          while True:
             print("would you like to give ratings ?")
             print("would you like to give ratings ?")
             ratings confirmation = int(
         input("Press 1 for yes and 0 for no : ")
             )
             if ratings_confirmation == 1:
               r_d = ratings()
               randf_data = {
"Name": randf_name,
                 "Ratings": r_d,
                 "Feedback": "No feedback given",
               }
               randf_storage(randf_data)
               break
             elif ratings_confirmation == 0:
               space_2()
               print("Ok no problem...")
               break
             else:
```

```
space_2()
           print("Invalid Input!!")
              continue
          break
       else:
          space_3()
          print("\n Invalid Input !!!")
          space_2()
   print("\n Try Again....")
          continue
     return 1
   elif exit_confirmation == 0:
     space_3()
     print("\n \n Let's get back to the system then...")
     return 0
   else:
space_3()
     print("\n \n Invalid Input !!!")
```

```
space_2()
print("\n \n Please try Again....")
continue
```

MOTOR_CORTEX

This part of the system consists of the several functions which are responsible for the functioning of the system. It has all the basic functions which are the building blocks of the system.

- 1) clean(): It cleans the terminal
- 2) h line(): it creates a line
- 3) space_2(): creates a space of 2 lines
- 4) space_3(): creates a space of 3 lines
- 5) sub_details(): asks for the user to enter the basic data about the student
- 6) details(): takes the complete data of the student and stores in a file
- 7) display_data(): it displays the required data according to the user
- 8) modify(): it modifies the data according to the user
- 9) feedback(): it takes feedback from the user and saves it
- 10) ratings(): it takes ratings from the user and replies them according to their rating

1111111

This is the Motor Cortex Of the System
It executes the functions of the system

111111

from Hippocampus import *

def clean():

111111

cleans the terminal for a clear running of the system

11 11 11

print("\n" * 20)

def h_line():

111111 It makes a line 111111 print("-x-" * 15) def space_2(): 1111111 It gives a space of 2 lines 1111111 $print("\n\n")$ def space_3():

```
111111
  It gives a space of 3 lines
  111111
  print("\n\n\n")
Fields = ["Addmision no.", "Name", "Phone no.",
"Address", "Email id"]
def sub_details(adm_no):
  name = input("\nEnter the name of the student : ")
  phone_no = input("\nEnter the Phone no. : ")
  address = input("\nEnter the address : ")
  email_id = input("\nEnter the email Address : ")
  student_details = {
    "Addmision no.": adm_no,
    "Name": name,
    "Phone no.": phone_no,
    "Address": address,
```

```
"Email id": email_id,
  }
  return student_details
def details():
  clean()
  h_line()
  space_3()
  111111
  Entering the data of the students
  111111
  adm_no = int(input("Enter the admission no.:"))
  try:
    uniqueness = inlist(adm_no)
  except FileNotFoundError:
```

```
uniqueness = 0
 if uniqueness == 1:
    space_2
    print("This data is already present in the list !!!!")
    space_2
    print("Try again...")
    return
else:
    name = input("\nEnter the name of the student : ")
    phone_no = input("\nEnter the Phone no. : ")
    address = input("\nEnter the address : ")
    email_id = input("\nEnter the email Address : ")
 111111
 Storing the data of the students
 111111
 student_details = {
    "Addmision no.": adm_no,
    "Name": name,
    "Phone no.": phone no,
```

```
"Address": address,
    "Email id": email_id,
  }
  storage(student_details)
def display_data(adm_no):
  111111
  This gives the data of user if present in database.
  :param int adm_no : Admission no of the student
  :return dict: dictionary containing the user data (if
present)
  :return bool: 0: Not present
          1: Present
  1111111
```

```
if inlist(adm_no):
    with open("Data.txt", "r") as d:
        text = d.read()
        start_index = text.find("{'Addmision no.': " +
        str(adm_no))
        end_index = text.find("}", start_index)
        student = eval(text[start_index : end_index + 1])
        return student
```

else:

message = "The data you are asking for is not present...."

return message

```
def modify(adm no):
  new_data = sub_details(adm_no)
  with open("Data.txt", "r") as d:
    data = d.read()
    start index = data.find("{'Addmision no.': " +
str(adm_no))
    end_index = data.find("}", start_index)
    old data = eval(data[start index : end index + 1])
  print("Old details : \n", old_data)
  print("\n Modified details : \n", new_data)
  with open("Data.txt", "r") as d:
    all_data = d.readlines()
  with open("Data.txt", "w") as d:
    for line in all_data:
      start_i = line.find(":") + 1
      end_i = line.find(",", start_i)
      if int(line[start_i:end_i]) == adm_no:
         d.write(str(new_data))
```

```
continue
       else:
         d.write(line)
def feedback():
  111111
  Takes feedback from user
  It saves the feedback in a new file
  111111
  feed_back = input("Write your feed back here : ")
  print(
    "\n \n Thank you for your feedback.... \n We will
surely work upon it ( If required ....). \n \n"
  )
  return feed_back
```

```
def ratings():
  space_2()
  while True:
    print("You can rate this system on the scale of 1 to
5")
    rate = int(input("Rate this system Here : "))
    space_2()
    if rate > 5:
      print(
         " We are very happy to see you this much
Happy.... \nBut remember we should never forget our
limits however happy we are ;) ..... \n so please rate us
from 1 to 5 :)"
      continue
    elif rate == 5:
      print(
         " OMG this is great that you loved this system so
much......\n This makes the hardwork done by the
systemmer/coder successfull.... \n After seeing this
rating the systemmer/coder will cry out of happiness"
      break
```

```
elif rate == 4:
print(
```

"Thanks for your rating...... \n We know there might be some problem which is stopping you from giving full ratings...... \n The systemmer/coder will surely try to solve the problem so that next time you dont have any excuse for not giving full ratings.... \n Do give your feedback when asked to do so.... "

```
break
elif rate == 3:
print(
```

"Ohhhh!! There might be some serious issue which kept you 2 points away from full rating.......\n
Please dont forget to mention that serious issue when the feedback is asked.....\n the systemmer/coder of this system/code is very hard working and passionate and will surely try to solve the problem....."

```
)
break
elif rate == 2:
print(
```

"We respect your thoughts about this system..... But dont you think its too less for this wonderfull system and the precious efforts and hard

```
work put together to make this system..... \n this will
surely hurt the systemmer/coder:( ....."
      break
    elif rate == 1:
      print(
        " Ohh God!!!!! ...... \n Now this is too much.... \n
Haven't you seen the system before rating? ..... \n you
surely dont have a taste for good things .... \n this is a
wonderfull system..... \n The systemmer get into a severe
drepression state after seeing this :.(.. ..."
      break
    else:
      print(
        " Was it a mistake or are you mad..... \n It is
clearly mentioned that you have to rate from 1 to 5....."
      continue
  print("\n")
return rate
```

HIPPOCAMPUS

This part of the system contains functions which are responsible for the interactions between the system and storage files.

- 1) Storage(user): it stores the data of the students in the file Data.txt
- 2) Inlist(adm_no): it checks if the admission no. entered by the user is present in the file Data.txt or not
- 3) randf_storage(fb_data): it stores the data of the feedback and ratings given by the user in the file Ratings_and_feedbacks.txt
- 4) deletion_storage(d_data): it stores the deleted details of the students in the file Deleted_files.txt
- 5) delete(adm_no): it deletes the details of the students according to the admission no. given by the user

11 11 11

It is the Hippocampus of the system

It stores and manages the storage system of the system

111111

def storage(user):

111111

11 11 11

This stores the user's data in database

:param dict user: dictionary containing user data

with open("Data.txt", "a") as d:

d.write(str(user) + "\n")

def inlist(adm_no):

111111

This checks the presence of user data in database.

:param int adm_no. : admission no. of the student

:return bool: 0: Not present

1: Present

111111

```
with open("Data.txt", "r") as d:
    detail = d.read()
    start_index = detail.find("{'Addmision no.': " +
str(adm_no))

if start_index == -1:
    return 0

else:
    return 1
```



def randf_storage(fb_data):

111111

It stores and manages the feedback data :param dict fb_data : dictionary containing feedback and ratings

111111

with open("Ratings_and_feedback.txt", "a") as fd:
 fd.write(str(fb_data) + "\n")

def deletion_storage(d_data):

11 11 11

It stores and manages the deleted data : param dict d_data : dictionary containing deleted data

111111

with open("Deleted_files.txt", "a") as df:
 df.write(str(d_data) + "\n")

```
def delete(adm_no):
  111111
  This deletes the student's data from database.
  :param int adm no: admission no. of student
  111111
  with open("Data.txt", "r") as d:
    data = d.read()
    start_index = data.find("{'Addmision no.': " +
str(adm_no))
    end_index = data.find("}", start_index)
    delete_data = eval(data[start_index : end_index + 1])
    deletion_storage(delete_data)
  with open("Data.txt", "r") as d:
    all_data = d.readlines()
  with open("Data.txt", "w") as d:
    for line in all_data:
```

```
start_i = line.find(":") + 1
end_i = line.find(",", start_i)
if int(line[start_i:end_i]) == adm_no:
    continue
else:
    d.write(line)
```

5. User Manual

SOFTWARE REQUIREMENTS:-

Python IDLE or Code editor like (VS Code)

HOW TO USE:-

- 1. Install the program Folder to your computer.
- 2. Run HYPOTHALAMUS and done.

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