SRMS

An Innovative Student Result Management System A MINI PROJECT REPORT

Submitted by

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ABSTRACT

A Student Result Management System (SRMS) is a digital solution designed to streamline the process of recording, analyzing, and disseminating student academic performance data. It automates grade entry, calculates GPA, and generates comprehensive reports, enhancing accuracy and efficiency. By providing secure, centralized access to results, the SRMS facilitates communication between educators, students, and parents. It supports data-driven decision-making, identifies academic trends, and helps in early detection of students needing intervention. This system modernizes traditional result management, ensuring timely and transparent dissemination of academic records, ultimately contributing to improved educational outcomes.

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1.INTRODUCTION

1.1 INTRODUCTION

A Student Result Management System (SRMS) is an innovative digital platform designed to enhance the efficiency and accuracy of managing student academic records. In educational institutions, handling vast amounts of data related to student performance can be a complex and time-consuming task. Traditional methods, often reliant on manual entry and paper-based systems, are prone to errors, delays, and inefficiencies. The SRMS addresses these challenges by automating the entire process of result management, from grade entry to report generation.

This system enables educators to input grades, calculate GPA, and produce comprehensive academic reports quickly and accurately. By centralizing data, it provides a secure and accessible repository for student performance records, facilitating seamless communication between teachers, students, and parents. The SRMS also supports advanced features such as statistical analysis, trend identification, and the early detection of students who may require additional support.

1.2 OBJECTIVES

The primary objectives of the **Student Result Management System (SRMS)** project are as follows:

Accuracy and Efficiency:

- i) Automated Data Entry: Reduce manual errors by automating grade input, ensuring accuracy in student records.
- ii) Swift Processing: Speed up the process of calculating GPAs and generating reports, saving time for educators.

• Centralized Data Management:

- i) Unified Repository: Maintain all student performance data in a single, secure location for easy access and management.
- ii) Enhanced Accessibility: Allow authorized users, such as teachers, students, and parents, to access relevant information anytime, anywhere.

• Improved Communication:

- i) Timely Updates: Provide instant updates on student performance to parents and students, fostering transparency.
- ii) Collaborative Platform: Enable better communication between educators and parents, facilitating discussions on student progress and areas for improvement.

• Data-Driven Insights:

- i) Performance Analytics: Utilize analytics tools to identify academic trends and student performance patterns.
- ii) Informed Decision-Making: Support data-driven decisions by providing detailed insights into student achievements and areas needing attention.

• Early Intervention:

- i) Risk Identification: Detect students at risk of academic underperformance early through continuous monitoring.
- ii) Targeted Support: Enable educators to design targeted interventions and support strategies to assist struggling students.

• Enhanced Reporting:

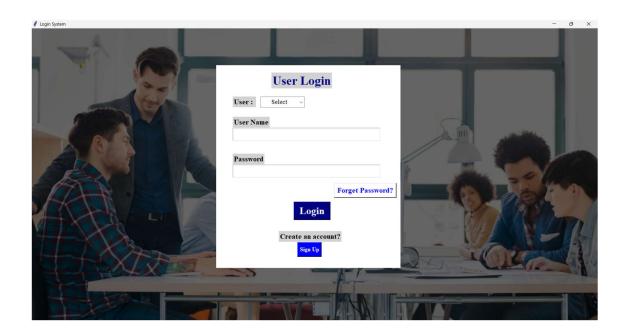
- i) Comprehensive Reports: Generate detailed academic reports that encompass a wide range of performance metrics.
- ii) Customizable Output: Allow customization of report formats to meet the specific needs of different stakeholders, such as parents, school administrators, and regulatory bodies.

1.3 MODULES

The Student Result Management System project is divided into several modules, each responsible for different aspects of the system. The key modules are as follows:

• User Authentication Module:

- i) Registration: Allows new users to create an account by providing their details.
- ii) Login: Authenticates users based on their credentials and provides access to the system.
- iii) Logout: Allows users to securely log out of the application.



Menu Module:

i) Course:

This option allows you to manage the courses offered. You can add, edit, or delete courses from the system.

ii) Student:

This section is for managing student data. You can add new students, update existing student information, or remove students.

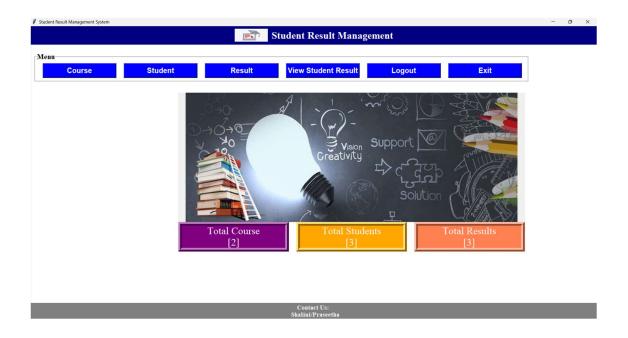
iii) Result:

This is where you can input and manage student results. You can add, update, or delete results for each student.

iv) View Student Result:

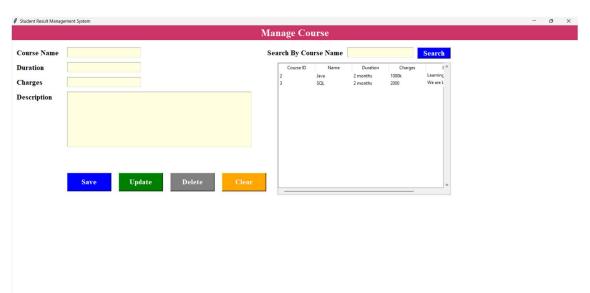
This option allows you to view the results of individual students. You can search for a student and view their academic performance.

v) Logout:
Click here to safely log out of the system.



• Course Module:

- i) Input Fields: On the left side, there are input fields labeled "Course Name", "Duration", "Charges", and "Description". These fields are likely used to enter
- ii) Buttons: Below the input fields, there are four buttons: "Save", "Update", "Delete", and "Clear". These buttons are probably used to perform actions on the data entered in the input fields.
- iii) Search Functionality: On the right side, there's a search functionality section with an input field labeled "Search By Course Name" followed by a "Description". These fields are likely used to enter and manage course information.
- iv) Data Table: Below the search section, there's a table with columns titled 'Course ID', 'Name', 'Duration', 'Charges', and '%'. This table seems to display the course data, possibly the search results or all available courses.



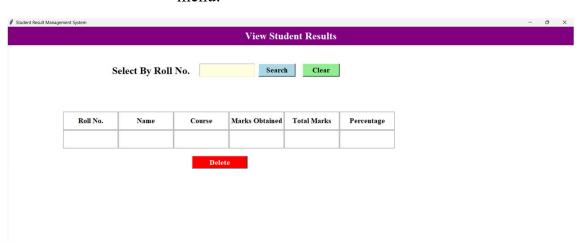
• Result Module:

- i) Select Student: This is a dropdown menu where you can select a student. There's also a 'Search' button next to it, which is likely used to find students in the system.
- ii) Name: This field is probably used to display the selected student's name.
- iii) Course: This field is likely used to display the course that the selected student is enrolled in.
- iv) Marks Obtained: This field is likely used to enter or display the marks obtained by the student in the selected course
- v) Full Marks: This field is likely used to enter or display the full marks of the selected course.
- vi) Submit and Clear Buttons: The 'Submit' button is probably used to save the entered data to the system. The 'Clear' button is likely used to clear all input fields.



• View Student Result Module:

- i) Select By Roll No.: This is a dropdown menu where you can select a student by their roll number. There's also a 'Search' button next to it, which is likely used to find students in the system.
- ii) Table: Below the search section, there's a table with columns for 'Roll No.', 'Name', 'Course', 'Marks Obtained', 'Total Marks', and 'Percentage'. This table seems to display the student results, possibly the search results or all available students.
- iii) Delete Button: At the bottom of the table, there is a button labeled "Delete". This button is probably used to delete the selected student's result from the system.
- iv) Clear Button: Next to the 'Search' button, there's a 'Clear' button. This button is likely used to clear the selected option in the "Select By Roll No." dropdown menu.



2.SURVEY OF TECHNOLOGIES

2.1 SOFTWARE DESCRIPTION

The Student Result Management project utilizes various software technologies to ensure a robust and scalable system. The core technologies include Python for server-side scripting, SQLite for database management.

2.2 LANGUAGES

The Student Result Management project leveraged several programming languages and technologies to build the system. This language was chosen for its specific strengths and contributions to different aspects of the project.

2.2.1 PYTHON

PYTHON is a widely-used open-source scripting language suited for web development. It was employed for server-side scripting to handle data processing, database interactions, and dynamic content generation. Key features of PYTHON utilized in this project include:

- Server-side scripting
- Form handling
- Database connectivity using SQLite
- Session management

LIBRARIES: -

1) TKINTER:

Tkinter is a standard GUI (Graphical User Interface) library in Python. It provides tools to create windows, dialogs, buttons, and other graphical elements, enabling interactive applications development easily.

2) PIL:

PIL (Python Imaging Library) is a Python library for opening, manipulating, and saving image files. It supports numerous file formats and provides powerful image processing capabilities, such as resizing, filtering, and enhancing.

3) SQLite:

SQLite is a lightweight, self-contained SQL database engine. It's serverless, zero-configuration, and transactional, making it ideal for embedded database applications, prototyping, and small to medium-sized data storage needs.

4) OS:

The OS module in Python provides functions for interacting with the operating system. It offers operations like file management, directory handling, process management, and system-specific functionalities, facilitating cross-platform development.

2.2.2 TOOLS USED: -

1) SQLite3: -

SQLite3 is a lightweight, self-contained SQL database engine included in Python's standard library. It allows for creating, querying, and managing relational databases using SQL commands. SQLite3 databases are stored as a single file, making them easy to manage, deploy, and integrate into applications without requiring a separate server.

2) VISUAL STUDIO CODE: -

Visual Studio Code (VS Code) is a lightweight, open-source code editor developed by Microsoft, renowned for its versatility and extensive feature set. It offers a customizable and intuitive interface with support for various programming languages, extensions, and debugging tools. With features like IntelliSense, Git integration, and built-in terminal, VS Code enhances developer productivity, making it a favourite among developers for building web, mobile, and cloud applications.

3) GITHUB: -

GitHub is a web-based platform for version control using Git, enabling collaboration and code sharing among developers worldwide. It provides a centralized repository for managing and tracking changes to code, facilitating seamless collaboration through features like pull requests, code reviews, and issue tracking. With its vast community, robust documentation, and integration with popular development tools, GitHub has become an essential platform for software development, fostering innovation and open-source contributions across various domains.

3.REQUIREMENTS AND ANALYSIS

3.1 REQUIREMENT SPECIFICATION

• User Requirements:

The system should be accessible via web browsers and mobile devices. Users should be able to create, edit, and delete inmate details, add inmates, and predict sentence.

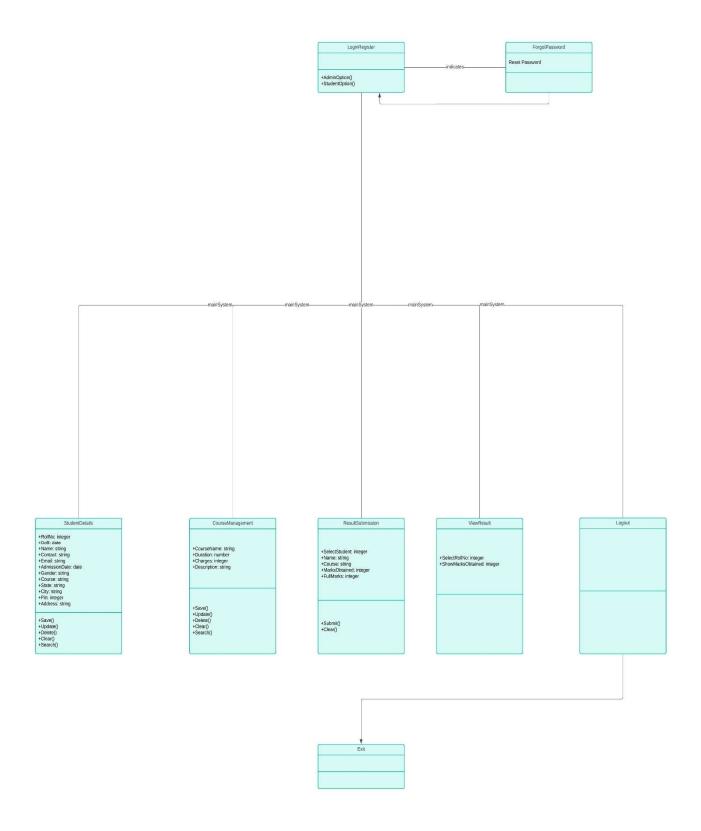
System Requirements:

The system should ensure data integrity and provide a secure environment for user information.

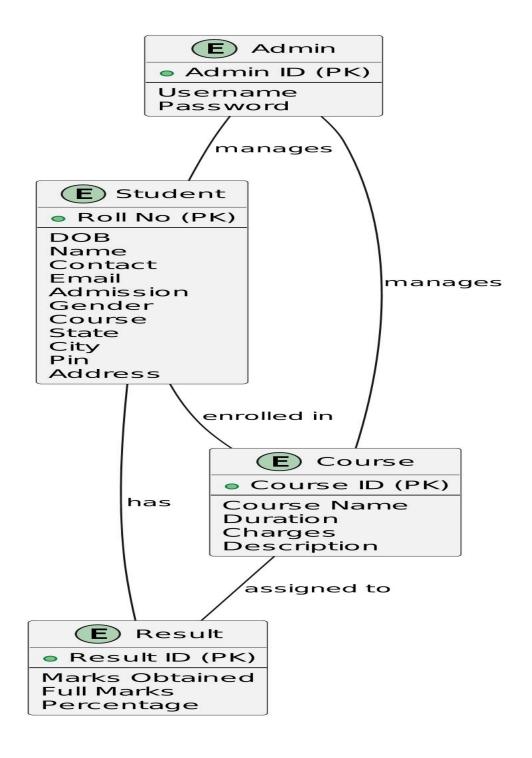
3.2 HARDWARE AND SOFTWARE REQUIREMENTS

- Hardware:
 - i) Server with minimum 4GB RAM and 100GB storage.
 - ii) Client devices with internet access.
- Software:
 - i) Operating System: Linux/Windows
 - ii) Web Server: Apache
 - iii) Database: SQLite3
 - iv) Languages: Python
 - v) Libraries:TKInter,PIL,OS and SQLite

3.3 ARCHITECTURE DIAGRAM



3.4 ER DIAGRAM



4.PROGRAM CODE

```
4.1 Module Codes:-
Login:
from tkinter import *
from PIL import Image, ImageTk
from tkinter import messagebox,ttk
import sqlite3
import os
class Login:
    def init (self, home):
         self.home=home
         self.home.title("Login System")
         self.home.geometry("1400x700+0+0")
         #====BG IMage=
         self.bg=ImageTk.PhotoImage(file="images/6.jpg")
         self.bg image=Label(self.home,image=self.bg).place(x=0,y=0,relwidth=1,relheight=1)
         Frame login=Frame(self.home,bg="white")
         Frame_login.place(x=500,y=100,height=550,width=500)
         # Login title
         title=Label(Frame login,text="User Login",font=("Times New Roman",25,"bold"),fg="navy
blue",bg="light gray").place(x=150,y=20)
         #Username and password lable
         lbl user=Label(Frame login,text="User Name",font=("Times New
Roman",15,"bold"),fg="black",bg="light gray").place(x=45,y=140)
         self.txt user=Entry(Frame login,font=("times new roman",15),bg="white")
         self.txt user.place(x=45,y=170,width=400,height=35)
         lbl_pass=Label(Frame_login,text="Password",font=("Times New Roman",15,"bold"),fg="black",bg="light",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="light",fg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black",bg="black"
gray'').place(x=45,y=240)
         self.txt pass=Entry(Frame login,font=("times new roman",15),bg="white")
         self.txt pass.place(x=45,y=270,width=400,height=35)
         forget=Button(Frame login,text="Forget
Password?",cursor="hand2",command=self.forget window,bg="white",fg="blue",font=("times new
roman",15,"bold")).place(x=320,y=320)
         signup=Button(Frame login,text="Sign
Up",cursor="hand2",command=self.register_window,bg="blue",fg="white",font=("times new
roman",12,"bold")).place(x=220,y=480,height=40)
         login=Button(Frame login,command=self.login function,text="Login",cursor="hand2",bg="navy
blue",fg="white",font=("times new roman",20,"bold")).place(x=210,y=370,width=100,height=50)
         lbl create=Label(Frame login,text="Create an account?",font=("Times New
Roman",15,"bold"),fg="black",bg="light gray").place(x=170,y=450)
         #Checkbuttons
         UserType=Label(Frame login,text="User:", font=("times new roman", 15, "bold"), bg="light
 gray",fg="black").place(x=45,y=85)
```

```
self.txt UserType=ttk.Combobox (Frame login,font=("times new roman",13),
state="readonly",justify=CENTER)
    self.txt_UserType['values']=("Select","Student","Admin" )
    self.txt UserType.place(x=120, y=85,width=120,height=30)
    self.txt UserType.current(0)
  def reset(self):
    self.cmb_quest.current(0)
    self.txt_new_passwd.delete(0,END)
    self.txt answer.delete(0,END)
    self.txt pass.delete(0,END)
    self.txt user.delete(0,END)
  def forget_passwd(self):
    if self.cmb quest.get()=="Select"or self.txt answer.get()=="" or self.txt new passwd.get()=="":
       messagebox.showerror("Error","All fields are required",parent=self.home2)
         conn=sqlite3.connect(database="ResultManagementSystem.db")
         cur=conn.cursor()
         cur.execute("Select * from AllUsers where email=? and question=? and
answer=?",(self.txt_user.get(),self.cmb_quest.get(),self.txt_answer.get()))
         row=cur.fetchone()
         if row==None:
            messagebox.showerror("Error", "Please Select the Correct security question and
answer",parent=self.home2)
            1,u,p,d=0,0,0,0
            if len(self.txt new passwd.get())>=8:
              for i in self.txt_new_passwd.get():
                 if(i.islower()):
                 elif(i.isupper()):
                   u+=1
                 elif(i.isdigit()):
                 elif(i=='@'or i=='&'or i=='#' or i=='!' or i==' '):
              if(1 \ge 1 and u \ge 1 and d \ge 1 and p \ge 1):
                 cur.execute("update AllUsers set password=? where email=?
',(self.txt new passwd.get(),self.txt user.get()))
                 conn.commit()
                 conn.close()
                 messagebox.showinfo("Success", "Your Password has been Reset, Please Login with new
password",parent=self.home2)
                 self.reset()
                 self.home2.destroy()
```

```
messagebox.showerror("Error", "Password should have 8 characters at least one upper case
letter,lower case letter,numeric value and special character '@','&','#','!', '"',parent=self.home2)
              messagebox.showerror("Error", "Password should have 8 characters at least one upper case
letter,lower case letter,numeric value and special character '@','&','#','!','_",parent=self.home2)
       except Exception as es:
         messagebox.showerror("Error",f"Error Due to: {str(es)}",parent=self.home)
Forget Password Window
  def forget window(self):
    if self.txt user.get()=="":
       messagebox.showerror("Error","Please enter email to reset your password",parent=self.home)
         conn=sqlite3.connect(database="ResultManagementSystem.db")
         cur=conn.cursor()
         cur.execute("Select * from AllUsers where email=?",(self.txt_user.get(),))
         row=cur.fetchone()
         if row==None:
           messagebox.showerror("Error", "Please Enter Valid Email address to reset your
password",parent=self.home)
           conn.close()
           self.home2=Toplevel()
           self.home2.title("Forget Password")
           self.home2.geometry("400x400+500+150")
           self.home2.focus force()
           self.home2.grab set()
         #Title for Forget Interface
            title=Label(self.home2,text="Forget Password",font=("Times New
Roman",25),fg="red",bg="white").place(x=0,relwidth=1)
         #Contents in Forget Password Page
            question=Label(self.home2, text="Security Question", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=50,y=100)
            self.cmb quest=ttk.Combobox (self.home2, font=("times new roman",13),
state="readonly",justify=CENTER)
           self.cmb quest['values']=("Select", "Your First Pet Name", "Your Birth Place", "Your Best Friend
Name")
           self.cmb quest.place(x=50, y=130,width=250)
           self.cmb quest.current (0)
            answer=Label(self.home2, text="Answer", font=("times new roman", 15, "bold"),bg="white",
fg="gray").place(x=50,y=180)
            self.txt answer=Entry(self.home2, font=("times new roman", 15),bg="lightgray")
           self.txt answer.place(x=50, y=210,width=250)
            new passwd=Label(self.home2, text="New Password", font=("times new
roman",15,"bold"),bg="white", fg="gray").place(x=50,y=260)
            self.txt new passwd=Entry(self.home2, font=("times new roman", 15),bg="lightgray")
           self.txt new passwd.place(x=50, v=290,width=250)
```

```
btn change passwd=Button(self.home2,text="Reset
Password",command=self.forget passwd,bg="Green",fg="White",font=("times new
roman",15,"bold")).place(x=90,y=340)
       except Exception as es:
         messagebox.showerror("Error",f"Error Due to: {str(es)}",parent=self.home)
By clicking on Sign-Up button going directly on sign-up page by destroying login page
  def register window(self):
    self.home.destroy()
    import Register
  def login function(self):
    if self.txt pass.get()=="" or self.txt user.get()=="" or self.txt UserType.get()=="select":
       messagebox.showerror("Error","All fields are requires",parent=self.home)
         conn=sqlite3.connect(database="ResultManagementSystem.db")
         cur=conn.cursor()
         cur.execute("Select * from AllUsers where email=? and password=? and u name=?
 ,(self.txt user.get(),self.txt pass.get(),self.txt UserType.get()))
         row=cur.fetchone()
         if row==None:
            messagebox.showerror("Error", "Invalid Username or Password or UserType", parent=self.home)
            if (self.txt UserType.get()=="Student"):
              messagebox.showinfo("Success",f"Welcome :- {self.txt user.get()}",parent=self.home)
              self.home.destroy()
              os.system("python dashboardStudent.py")
              messagebox.showinfo("Success",f"Welcome :- {self.txt_user.get()}",parent=self.home)
              self.home.destroy()
              os.system("python dashboard.py")
            conn.close()
       except Exception as es:
         messagebox.showerror("Error",f"Error Due to: {str(es)}",parent=self.home)
home=Tk()
obj=Login(home)
home.mainloop()
Register;-
from tkinter import*
from tkinter import ttk, messagebox
from turtle import width
from PIL import Image, ImageTk #pip install pillow
import sqlite3
import os
 def init (self, home):
```

```
self.home=home
    self.home.title("Registeration Window")
    self.home.geometry("1350x700+0+0")
    self.home.config(bg="white")
    #===Bg Image=
    self.bg=ImageTk.PhotoImage(file="Images/6.1.jpg")
    bg =Label(self.home, image=self.bg).place(x=250, y=0, relwidth=1,relheight=1)
    self.left=ImageTk.PhotoImage(file="Images/left.jpg")
    left=Label(self.home, image=self.left).place(x=80, y=100, width=400,height=500)
    #===Register frame =
    frame1=Frame(self.home, bg="white")
    frame1.place(x=480, y=100,width=700,height=550)
    title=Label(frame1, text="REGISTER HERE", font=("times new roman", 20, "bold"),
bg="white",fg="green").place(x=50,y=30)
    #-----Row1
    self.var fname=StringVar()
    f name=Label(frame1, text="First Name", font=("times new roman", 15,
"bold"),bg="white",fg="gray").place(x=50,y=100)
    self.txt fname=Entry(frame1,font=("times new roman",15),bg="lightgray")
    self.txt fname.place(x=50,y=130,width=250)
    1_name=Label(frame1, text="Last Name", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=370,y=100)
    self.txt lname=Entry(frame1, font=("times new roman",15), bg="lightgray")
    self.txt lname.place(x=370, y=130,width=250)
    contact=Label(frame1, text="Contact No.", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=50,y=170)
    self.txt contact=Entry(frame1, font=("times new roman", 15), bg="lightgray")
    self.txt contact.place(x=50, y=200,width=250)
    email=Label(frame1, text="Email", font=("times new roman", 15,
"bold"),bg="white",fg="gray").place(x=370,y=170)
    self.txt email=Entry(frame1, font=("times new roman", 15), bg="lightgray")
    self.txt email.place(x=370, y=200,width=250)
    question=Label(frame1, text="Security Question", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=50,y=240)
    self.cmb quest=ttk.Combobox (frame1, font=("times new roman",13), state="readonly",justify=CENTER)
    self.cmb quest['values']=("Select", "Your First Pet Name", "Your Birth Place", "Your Best Friend Name")
    self.cmb quest.place(x=50, y=270,width=250)
    self.cmb quest.current (0)
    answer=Label(frame1, text="Answer", font=("times new roman",15,"bold"),bg="white",
fg="gray").place(x=370,y=240)
    self.txt answer=Entry(frame1, font=("times new roman", 15),bg="lightgray")
    self.txt answer.place(x=370, y=270,width=250)
```

```
password=Label(frame1, text="Password", font=("times new
roman",15,"bold"),bg="white",fg="gray").place(x=50,y=310)
    self.txt password=Entry(frame1, font=("times new roman",15),bg="lightgray")
    self.txt password.place(x=50, y=340,width=250)
    cpassword=Label(frame1, text="Confirm Password", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=370,y=310)
    self.txt_cpassword=Entry(frame1, font=("times new roman",15), bg="lightgray")
    self.txt cpassword.place(x=370, y=340,width=250)
    UserType=Label(frame1, text="User", font=("times new roman", 15, "bold"),
bg="white",fg="gray").place(x=220,y=380)
    self.txt UserType=ttk.Combobox (frame1, font=("times new roman",13),
state="readonly",justify=CENTER)
    self.txt UserType['values']=("Select", "Student", "Admin")
    self.txt UserType.place(x=270, y=380,width=100)
    self.txt UserType.current (0)
    self.var chk=IntVar()
    chk=Checkbutton (frame1, text="I Agree The Terms & Conditions",variable=self.var chk,onvalue=1,
offvalue=0, font=("times new roman",12),bg="white").place(x=50,y=430)
    self.btn img=ImageTk.PhotoImage(file="Images/register.png")
    btn_register=Button(frame1,image=self.btn_img,bd=0,
cursor="hand2",command=self.register data).place(x=50,y=470)
    btn login=Button(self.home,text="Sign In",command=self.login window,font=("times new
roman",20,"bold"),fg="white",bg="blue").place(x=280,y=580)
  def login window(self):
    self.home.destroy()
    os.system("python login.py")
  def clear(self):
    self.txt fname.delete(0,END)
    self.txt lname.delete(0,END)
    self.txt contact.delete(0,END)
    self.txt email.delete(0,END)
    self.txt answer.delete(0,END)
    self.txt password.delete(0,END)
    self.txt cpassword.delete(0,END)
    self.cmb quest.current(0)
    self.txt UserType.current (0)
#Register Function
  def register data(self):
    if self.txt fname.get()=="" or self.txt contact.get()=="" or self.txt email.get()=="" or
self.cmb quest.get()=="Select"or self.txt answer.get()=="" or self.txt password.get()==""or
self.txt cpassword.get()=="" or self.txt UserType.get()=="Select" :
       messagebox.showerror("Error", "All Fields Are Required",parent=self.home)
    elif self.txt password.get()!=self.txt cpassword.get():
       messagebox.showerror("Error", "Password & Confirm Password should be same",parent=self.home)
    elif self.var chk.get()==0:
       messagebox.showerror("Error", "Please Agree our terms & condition",parent=self.home)
```

```
fn = 0
         ln = 0
         #Validation for first and last name
          for i in self.txt fname.get():
            if i.isupper() or i.islower():
               fn+=1
          for i in self.txt_lname.get():
            if i.isupper() or i.islower():
               ln+=1
          if (fn==len(self.txt fname.get())) and (ln==len(self.txt lname.get())):
            s = 0
            for i in self.txt_contact.get():
               if i.isdigit():
            if s==10:
               #Validation for Email
               k=self.txt email.get()[-10:-1]
              j=k+"m"
               if(j=="@gmail.com") and len(self.txt_email.get())>=12:
                 1,u,p,d=0,0,0,0
                 if len(self.txt password.get())>=8:
                    for i in self.txt password.get():
                      if(i.islower()):
                      elif(i.isupper()):
                         u+=1
                      elif(i.isdigit()):
                         d+=1
                    if(1 \ge 1 and u \ge 1 and d \ge 1 and p \ge 1):
                      conn=sqlite3.connect(database="ResultManagementSystem.db")
                      cur=conn.cursor()
                      cur.execute("select *from AllUsers where email=?",(self.txt email.get(),))
                      row=cur.fetchone()
                      if row!=None:
                         messagebox.showerror("Error", "User already exist please try with another
email",parent=self.home)
                         cur.execute("insert into AllUsers (f name,l namen, contact, email, question, answer,
password,u name) values(?,?,?,?,?,?,?)",
                                (self.txt fname.get(),
                                self.txt lname.get(),
```

```
self.txt contact.get(),
                                self.txt_email.get(),
                                self.cmb quest.get(),
                                self.txt answer.get(),
                                self.txt password.get(),
                                self.txt_UserType.get()
                                ))
                         conn.commit()
                         conn.close()
                         messagebox.showinfo("Success", "Register Successful",parent=self.home)
                         self.clear()
                         self.login window()
                      messagebox.showerror("Error", "Password should have 8 characters, upper case
letter,lower case letter,numeric value and special character '@','&','#','!','_ "',parent=self.home)
                    messagebox.showerror("Error", "Password should have 8 characters, atleast one upper case
letter,lower tcase letter,numeric value and special character '@','&','#','!', '",parent=self.home)
                 messagebox.showerror("Error", "Please Enter Valid Email address")
               messagebox.showerror("Error", "Please Enter Valid Contact Number.")
            messagebox.showerror("Error", "Please Enter Valid First name or Last name.")
       except Exception as es:
               messagebox.showerror("Error", f"Error due to: {str(es)}",parent=self.home)
home=Tk()
obj=Register(home)
home.mainloop()
Password:-
#Password
pass1 =input("Enter Password: ")
1,u,p,d=0,0,0,0
if len(pass 1) >= 8:
  for i in pass1:
     if(i.islower()):
     elif(i.isupper()):
       u+=1
     elif(i.isdigit()):
       d+=1
     elif(i=='@'or i=='&'or i=='#' or i=='!' or i==' '):
  if(1 \ge 1 and u \ge 1 and d \ge 1 and p \ge 1):
     print("Valid Password")
```

```
print("Invalid Password")
else:
  print("Invalid Password")
FirstName = 'Shubham'
LastName= "kumbhar"
fn = 0
\overline{\ln = 0}
for i in FirstName:
  if i.isupper() or i.islower():
     fn+=1
for i in LastName:
  if i.isupper() or i.islower():
     ln+=1
if fn == len(FirstName) and ln == len(LastName):
  print("OK")
else:
  print("Error")
contact="1234567288"
\mathbf{s} = 0
for i in contact:
  if i.isdigit():
if s==10:
  print("Continue")
else:
  print("error")
pass1 ="shubham@gmail.com"
k=pass1[-10:-1]
j=k+"m"
print(j)
if(j!="@gmail.com"):
  print("error")
  print("Ok")
```

```
4.2 WebApplication:-
Course:-
from tkinter import*
from PIL import Image,ImageTk
from tkinter import ttk,messagebox
import sqlite3
class CourseClass:
 def init (self,home):
    self.home=home
    self.home.title("Student Result Management System")
    self.home.geometry("1200x500+80+170")
    self.home.config(bg="white")
    self.home.focus force()
  #Title of Course
    title=Label(self.home,text="Manage Course",font=("times new
roman",20,"bold"),bg="#CC3366",fg="white").place(x=0,y=0,relwidth=1,height=40)
    self.var course=StringVar()
    self.var duration=StringVar()
    self.var_charges=StringVar()
  #Categories of Courses
    courseName = Label(self.home,text="Course Name",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=60)
    duration = Label(self.home,text="Duration",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=100)
    charges = Label(self.home,text="Charges",font=("times new
roman'', 15, "bold"), bg="white").place(x=10,y=140)
    description = Label(self.home,text="Description",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=180)
  #Entry Fields
    self.courseName1 = Entry(self.home,textvariable=self.var course,font=("times new
roman",15,"bold"),bg="lightyellow")
    self.courseName1.place(x=150,y=60,width=200)
    duration1 = Entry(self.home,textvariable=self.var_duration,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=150,y=100,width=200)
    charges1 = Entry(self.home,textvariable=self.var charges,font=("times new")
roman",15,"bold"),bg="lightyellow").place(x=150,y=140,width=200)
    self.description1 = Text(self.home,font=("times new roman",15,"bold"),bg="lightyellow")
    self.description1.place(x=150,y=180,width=500,height=150)
    self.add btn=Button(self.home,text="Save",font=("times new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add)
    self.add btn.place(x=150,y=400,width=120,height=50)
    self.update btn=Button(self.home,text="Update",font=("times new
roman",15,"bold"),bg="green",fg="white",cursor="hand2",command=self.update)
    self.update btn.place(x=290,y=400,width=120,height=50)
```

```
self.delete btn=Button(self.home,text="Delete",font=("times new
roman",15,"bold"),bg="grey",fg="white",cursor="hand2",command=self.delete)
    self.delete btn.place(x=430,y=400,width=120,height=50)
    self.clear btn=Button(self.home,text="Clear",font=("times new
roman",15,"bold"),bg="orange",fg="white",cursor="hand2",command=self.clear)
    self.clear btn.place(x=570,y=400,width=120,height=50)
  #Search Panel
    self.var search=StringVar()
    search courseName = Label(self.home,text="Search By Course Name",font=("times new
roman",15,"bold"),bg="white").place(x=690,y=60)
    search courseName1 = Entry(self.home,textvariable=self.var search,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=910,y=60,width=180)
    btn search=Button(self.home,text="Search",font=("times new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.search).place(x=1100,y=60,width=90,
height=30)
  #Content
    self.C Frame=Frame(self.home,bd=2,relief=RIDGE)
    self.C Frame.place(x=720,y=100,width=470,height=360)
  #Table
    #Scroll bar for table to view all headings
    scroly=Scrollbar(self.C Frame,orient=VERTICAL)
    scrolx=Scrollbar(self.C Frame,orient=HORIZONTAL)
    # Columns and headings and adding commands for the functioning of scroll bar
    self.CourseTable=ttk.Treeview(self.C Frame,columns=("cid","name","duration","charges","description"),x
scrollcommand=scrolx.set,yscrollcommand=scroly.set)
    scrolx.pack(side=BOTTOM,fill=X)
    scroly.pack(side=RIGHT,fill=Y)
    scrolx.config(command=self.CourseTable.xview)
    scroly.config(command=self.CourseTable.yview)
  #Headings and Coloumns for the tables
    self.CourseTable.heading("cid",text="Course ID")
    self.CourseTable.heading("name",text="Name")
    self.CourseTable.heading("duration",text="Duration")
    self.CourseTable.heading("charges",text="Charges")
    self.CourseTable.heading("description",text="Description")
    self.CourseTable["show"]="headings"
    self.CourseTable.column("cid",width=100)
    self.CourseTable.column("name",width=100)
    self.CourseTable.column("duration", width=100)
    self.CourseTable.column("charges",width=100)
    self.CourseTable.column("description", width=150)
    self.CourseTable.pack(fill=BOTH,expand=1)
    self.CourseTable.bind("<ButtonRelease-1>",self.get data) #When you click on any cid row it will show
details on their sections get data function is defined below
    self.show() #It is help to show details in table the function is defined at the bottom
  def clear(self):
    self.show()
    self.var course.set("")
```

```
self.var duration.set("")
    self.var charges.set("")
    self.var search.set("")
    self.description1.delete('1.0',END)
    self.courseName1.config(state=NORMAL)
 def delete(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
      if self.var course.get()=="":
        messagebox.showerror("Error", "Course name should be required", parent=self.home)
        cur.execute("Select * from course where name=?",(self.var_course.get(),))
        row=cur.fetchone()
        if row==None:
           messagebox.showerror("Error, Select The Course From the List first",parent=self.home)
           p=messagebox.askyesno("Confirm", "Do you really want to delete", parent=self.home)
           if p==True:
             cur.execute("Delete from course where name=? ",(self.var_course.get(),))
             conn.commit()
             messagebox.showinfo("Delete", "Course deleted Successfully", parent=self.home)
             self.clear() #We are calling clear because we declare show in to that
    except Exception as ex:
      messagebox.showerror("Error",f"Error due to {str(ex)}")
 def get data(self,event):
    self.courseName1.config(state="readonly")
    self.courseName1
    r=self.CourseTable.focus()
    content=self.CourseTable.item(r)
    row=content["values"]
    self.var course.set(row[1])
    self.var duration.set(row[2])
    self.var charges.set(row[3])
    self.description1.delete('1.0',END)
    self.description1.insert(END,row[4])
# Adding Details and Saving
 def add(self):
   conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
      if self.var course.get()=="":
        messagebox.showerror("Error", "Course name should be required", parent=self.home)
        cur.execute("Select * from course where name=?",(self.var course.get(),)) #Due to tupple we added ,
        row=cur.fetchone()
        if row!=None:
           messagebox.showerror("Error, Course name already Present",parent=self.home)
```

```
cur.execute("Insert into course (name, duration, charges, description) values(?,?,?,?)",(
            self.var course.get(),
            self.var duration.get(),
            self.var charges.get(),
            self.description1.get("1.0",END)
         ))
         conn.commit()
         messagebox.showinfo("Great", "Course Added Successfully", parent=self.home)
         self.show()
  except Exception as ex:
    messagebox.showerror("Error",f"Error due to {str(ex)}")
def update(self):
  conn=sqlite3.connect(database="ResultManagementSystem.db")
  cur=conn.cursor()
     if self.var course.get()=="":
       messagebox.showerror("Error", "Course name should be required", parent=self.home)
       cur.execute("Select * from course where name=?",(self.var_course.get(),))
       row=cur.fetchone()
       if row==None:
         messagebox.showerror("Error", "Select Course From List", parent=self.home)
         cur.execute("Update course set duration=?,charges=?,description=? where name=? ",(
            self.var duration.get(),
            self.var charges.get(),
            self.description1.get("1.0",END),
            self.var course.get()
         ))
         conn.commit()
         messagebox.showinfo("Great", "Course Update Successfully", parent=self.home)
         self.show()
  except Exception as ex:
     messagebox.showerror("Error",f"Error due to {str(ex)}")
def show(self):
  conn=sqlite3.connect(database="ResultManagementSystem.db")
  cur=conn.cursor()
    cur.execute("Select * from course")
    rows=cur.fetchall()
    self.CourseTable.delete(*self.CourseTable.get_children())
    for row in rows:
       self.CourseTable.insert(",END,values=row)
  except Exception as ex:
     messagebox.showerror("Error",f"Error due to {str(ex)}")
```

```
def search(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       cur.execute(f"Select * from course where name LIKE '%{self.var_search.get()}%'")
       rows=cur.fetchall()
       self.CourseTable.delete(*self.CourseTable.get children())
       for row in rows:
         self.CourseTable.insert(",END,values=row)
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
if name ==" main ":
  home=Tk()
  obj=CourseClass(home)
  home.mainloop()
Dashboard:-
#Admin Dashboard
from tkinter import*
from tkinter import messagebox
from PIL import Image,ImageTk
from course import CourseClass
from student import StudentClass
from result import ResultClass
from ViewResult import ViewClass
import sqlite3
import os
class ResultManagementSystem:
  def init (self,home):
    self.home=home
    self.home.title("Student Result Management System")
    self.home.geometry("1450x700+0+0")
    self.home.config(bg="white")
    self.logo=Image.open("images/logo.jpg")
    self.logo=self.logo.resize((90,35),Image.Resampling.LANCZOS)
    self.logo=ImageTk.PhotoImage(self.logo)
    title=Label(self.home,text="Student Result
Management",padx=10,compound=LEFT,image=self.logo,font=("times new roman",20,"bold"),bg="Navy
Blue",fg="white").place(x=0,y=0,relwidth=1,height=50)
    Frame = LabelFrame(self.home,text="Menu",font=("times new roman",15,"bold"),bg="white")
    Frame.place(x=10,y=70,width=1340,height=80)
    button Course=Button(Frame,text="Course",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add course).place(x=20,y=5,width=20
0,\text{height}=40)
```

```
button Student=Button(Frame,text="Student",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add_student).place(x=240,y=5,width=
200, height=40)
    button Result=Button(Frame,text="Result",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add_result).place(x=460,y=5,width=20
0,\text{height}=40)
    button View=Button(Frame,text="View Student Result",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add_view).place(x=680,y=5,width=20
0.\text{height}=40
    button Logout=Button(Frame,text="Logout",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.logout).place(x=900,y=5,width=200,h
eight=40)
    button Exit=Button(Frame,text="Exit",font=("ties new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.exit).place(x=1120,y=5,width=200,hei
ght=40)
    # Content Window
    self.bgImage=Image.open("Images/7.jpg")
    self.bgImage=self.bgImage.resize((900,350),Image.Resampling.LANCZOS)
    self.bgImage=ImageTk.PhotoImage(self.bgImage)
    self.lbl bg=Label(self.home,image=self.bgImage).place(x=400,y=180,width=940,height=350)
    # Update Details
    self.totalCourse=Label(self.home,text="Total Courses \n 0 ",font=("times new
roman",20),bd=10,relief=RIDGE,bg="purple",fg="white")
    self.totalCourse.place(x=400,y=530,width=300,height=80)
    self.totalstudent=Label(self.home,text="Total Student \n 0 ",font=("times new
roman",20),bd=10,relief=RIDGE,bg="orange",fg="white")
    self.totalstudent.place(x=720,y=530,width=300,height=80)
    self.totalresults=Label(self.home,text="Total Results \n 0 ",font=("times new
roman",20),bd=10,relief=RIDGE,bg="coral",fg="white")
    self.totalresults.place(x=1040,y=530,width=300,height=80)
    footer=Label(self.home,text="Contact Us: \n Shalini/Praseetha",font=("times new
roman",13,"bold"),bg="grey",fg="white").pack(side=BOTTOM,fill=X)
    self.update details()
  #Adding function for bottom buttons(Total corses, students, results)
  def update details(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       cur.execute("Select * from course")
       cr=cur.fetchall()
       self.totalCourse.config(text=f"Total Course\n[{str(len(cr))}]")
       self.totalCourse.after(200,self.update details)
       cur.execute("Select * from student")
       cr=cur.fetchall()
       self.totalstudent.config(text=f"Total Students\n[{str(len(cr))}]")
       cur.execute("Select * from result")
       cr=cur.fetchall()
```

```
self.totalresults.config(text=f"Total Results n[{str(len(cr))}]")
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def add course(self):
    self.window1=Toplevel(self.home)
    self.obj1=CourseClass(self.window1)
  def add student(self):
    self.window1=Toplevel(self.home)
    self.obj1=StudentClass(self.window1)
  def add result(self):
    self.window1=Toplevel(self.home)
    self.obj1=ResultClass(self.window1)
  def add view(self):
    self.window1=Toplevel(self.home)
    self.obj1=ViewClass(self.window1)
  def logout(self):
    op=messagebox.askyesno("Confirm Again", "Do You really Want to Logout ?",parent=self.home)
    if op==True:
       self.home.destroy()
       os.system("Python Login.py")
  def exit(self):
    op=messagebox.askyesno("Confirm Again","Do You really Want to Exit?",parent=self.home)
    if op==True:
       self.home.destroy()
if name ==" main ":
  home=Tk()
  obj=ResultManagementSystem(home)
  home.mainloop()
Dashboard For Student:-
#Student Dashboard
from tkinter import*
from tkinter import messagebox,ttk
from PIL import Image,ImageTk
from course import CourseClass
from student import StudentClass
from result import ResultClass
from ViewResult import ViewClass
import sqlite3
import os
class studentSystem:
 def init (self,home):
    self.home=home
    self.home.title("Student Page")
    self.home.geometry("1450x700+0+0")
    self.home.config(bg="white")
```

```
title=Label(self.home,text="Student Result",font=("times new
roman",20,"bold"),bg="purple",fg="white").place(x=0,y=0,relwidth=1,height=50)
    #Searching Button
    self.var search=StringVar()
    lbl rollno = Label(self.home,text="Enter Roll No. ",font=("times new
roman",30,"bold"),bg="white").place(x=450,y=60)
    txt rollno1 = Entry(self.home,textvariable=self.var search,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=700,y=70,width=180,height=35)
    btn search=Button(self.home,text="Search",font=("times new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.search).place(x=900,y=70,width=100,
height=35)
    btn clear=Button(self.home,text="Clear",font=("times new
roman", 15, "bold"), bg="orange", fg="white", cursor="hand2", command=self.clear).place(x=1020, y=70, width=10
0,\text{height}=35
    button Logout=Button(text="Logout",font=("ties new
roman",15,"bold"),bg="red",fg="white",cursor="hand2",command=self.logout).place(x=1170,y=70,width=100,
height=35)
    #Result Of Student and content to show
    lbl roll = Label(self.home,text="Roll No.",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=100,y=200,width=190,height=90)
    lbl_name = Label(self.home,text="Name",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=290,y=200,width=190,height=90)
    lbl course = Label(self.home,text="Course",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=480,y=200,width=190,height=90)
    lbl marks = Label(self.home,text="Marks Obtained",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=670,y=200,width=190,height=90)
    lbl full = Label(self.home,text="Total Marks",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=860,y=200,width=190,height=90)
    lbl percentage = Label(self.home,text="Percentage",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=1050,y=200,width=190,height=90)
    self.roll = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.roll.place(x=100,y=290,width=190,height=90)
    self.name = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.name.place(x=290,y=290,width=190,height=90)
    self.course = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.course.place(x=480,y=290,width=190,height=90)
    self.marks = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.marks.place(x=670,y=290,width=190,height=90)
    self.full = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.full.place(x=860,y=290,width=190,height=90)
    self.percentage = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.percentage.place(x=1050,y=290,width=190,height=90)
#Functions
  def search(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
```

```
if self.var search.get()=="":
         messagebox.showerror("Error", "Roll No. should be required", parent=self.home)
         cur.execute("Select * from result where roll=?",(self.var search.get(),))
         row=cur.fetchone()
         if row !=None:
           self.var id=row[0]
            self.roll.config(text=row[1])
           self.name.config(text=row[2])
           self.course.config(text=row[3])
           self.marks.config(text=row[4])
           self.full.config(text=row[5])
            self.percentage.config(text=row[6])
            messagebox.showerror("Error","No record Found",parent=self.home)
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def clear(self):
     self.var id=""
     self.roll.config(text="")
     self.name.config(text="")
     self.course.config(text="")
     self.marks.config(text="")
     self.full.config(text="")
     self.percentage.config(text="")
     self.var search.set("")
  def logout(self):
     op=messagebox.askyesno("Confirm Again", "Do You really Want to Logout ?",parent=self.home)
    if op==True:
       self.home.destroy()
       os.system("Python Login.py")
if name ==" main ":
  home=Tk()
  obj=studentSystem(home)
  home.mainloop()
Student:-
from os import name
from tkinter import*
from PIL import Image, ImageTk
from tkinter import ttk,messagebox
import sqlite3
class StudentClass:
  def __init__(self,home):
     self.home=home
     self.home.title("Student Result Management System")
    self.home.geometry("1200x500+80+170")
```

```
self.home.config(bg="white")
    self.home.focus force()
  #Title of Course
    title=Label(self.home,text="Manage Student Details",font=("times new
roman",20,"bold"),bg="#CC3366",fg="white").place(x=0,y=0,relwidth=1,height=40)
    self.var roll=StringVar()
    self.var name=StringVar()
    self.var email=StringVar()
    self.var gender=StringVar()
    self.var dob=StringVar()
    self.var contact=StringVar()
    self.var_course=StringVar()
    self.var adm date=StringVar()
    self.var state=StringVar()
    self.var city=StringVar()
    self.var pin=StringVar()
  #Categories of student details 1 side
    rollno = Label(self.home,text="Roll No.",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=60)
    name = Label(self.home,text="Name",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=100)
    email = Label(self.home,text="Email",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=140)
    gender = Label(self.home,text="Gender",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=180)
    state = Label(self.home,text="State",font=("times new roman",15,"bold"),bg="white").place(x=10,y=220)
    self.state1 = Entry(self.home,textvariable=self.var state,font=("times new
roman",15,"bold"),bg="lightyellow")
    self.state1.place(x=150,y=220,width=150)
    city = Label(self.home,text="City",font=("times new roman",15,"bold"),bg="white").place(x=330,y=220)
    self.city1 = Entry(self.home,textvariable=self.var_city,font=("times new
roman",15,"bold"),bg="lightyellow")
    self.city1.place(x=380,y=220,width=110)
    pin = Label(self.home,text="Pin",font=("times new roman",15,"bold"),bg="white").place(x=510,y=220)
    self.pin1 = Entry(self.home,textvariable=self.var_pin,font=("times new
roman",15,"bold"),bg="lightyellow")
    self.pin1.place(x=560,y=220,width=120)
    address = Label(self.home,text="Address",font=("times new
roman",15,"bold"),bg="white").place(x=10,y=260)
  #Entry Fields 1
    self.rollno1 = Entry(self.home,textvariable=self.var_roll,font=("times_new"
roman",15,"bold"),bg="lightyellow")
    self.rollno1.place(x=150,y=60,width=200)
    name1 = Entry(self.home,textvariable=self.var name,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=150,y=100,width=200)
    email1 = Entry(self.home,textvariable=self.var email,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=150,y=140,width=200)
```

```
self.gender1 =
ttk.Combobox(self.home,textvariable=self.var_gender,values=("Select","Male","Female","Other"),font=("times
new roman",15,"bold"),state="readonly",justify=CENTER)
    self.gender1.place(x=150,y=180,width=200)
    self.gender1.current(0)
  #Address
    self.address = Text(self.home,font=("times new roman",15,"bold"),bg="lightyellow")
    self.address.place(x=150,y=260,width=540,height=100)
  #Categories of student details 2 side
    dob = Label(self.home,text="D.O.B",font=("times new roman",15,"bold"),bg="white").place(x=360,y=60)
    contact = Label(self.home,text="Contact",font=("times new
roman",15,"bold"),bg="white").place(x=360,y=100)
    admission = Label(self.home,text="Admission",font=("times new
roman",15,"bold"),bg="white").place(x=360,y=140)
    course = Label(self.home,text="Course",font=("times new
roman",15,"bold"),bg="white").place(x=360,y=180)
  #Entry Fields 2
    self.course list=[]
    #Function call to update list
    self.fetch course()
    self.dob1 = Entry(self.home,textvariable=self.var_dob,font=("times_new
roman",15,"bold"),bg="lightyellow")
    self.dob1.place(x=480,y=60,width=200)
    contact1 = Entry(self.home,textvariable=self.var contact,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=480,y=100,width=200)
    admission1 = Entry(self.home,textvariable=self.var adm date,font=("times new
roman",15,"bold"),bg="lightyellow").place(x=480,y=140,width=200)
    self.course1 = ttk.Combobox(self.home,textvariable=self.var course,values=self.course list,font=("times
new roman",15,"bold"),state="readonly",justify=CENTER)
    self.course1.place(x=480,y=180,width=200)
    self.course1.set("Select")
    self.add btn=Button(self.home,text="Save",font=("times new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.add)
    self.add_btn.place(x=150,y=400,width=120,height=50)
    self.update_btn=Button(self.home,text="Update",font=("times new
roman",15,"bold"),bg="green",fg="white",cursor="hand2",command=self.update)
    self.update btn.place(x=290,y=400,width=120,height=50)
    self.delete btn=Button(self.home,text="Delete",font=("times new
roman",15,"bold"),bg="grey",fg="white",cursor="hand2",command=self.delete)
    self.delete btn.place(x=430,y=400,width=120,height=50)
    self.clear btn=Button(self.home,text="Clear",font=("times new
roman",15,"bold"),bg="orange",fg="white",cursor="hand2",command=self.clear)
    self.clear btn.place(x=570,y=400,width=120,height=50)
  #Search Panel
    self.var search=StringVar()
    search rollno = Label(self.home,text="Search By Roll No. ",font=("times new
roman",15,"bold"),bg="white").place(x=720,y=60)
```

```
search rollno1 = Entry(self.home,textvariable=self.var search,font=("times new
roman", 15, "bold"), bg="lightyellow"), place(x=890, v=60, width=160, height=30)
    btn search=Button(self.home,text="Search",font=("times new
roman",15,"bold"),bg="blue",fg="white",cursor="hand2",command=self.search).place(x=1070,y=60,width=100
,height=30)
  #Content
    self.C Frame=Frame(self.home,bd=2,relief=RIDGE)
    self.C_Frame.place(x=720,y=100,width=470,height=360)
    scroly=Scrollbar(self.C Frame,orient=VERTICAL)
    scrolx=Scrollbar(self.C Frame,orient=HORIZONTAL)
    # Columns and headings and adding commands for the functioning of scroll bar
    self.CourseTable=ttk.Treeview(self.C Frame,columns=("roll","name","email","gender","dob","contact","a
dmission", "course", "state", "city", "pin", "address"), xscrollcommand=scrolx.set, yscrollcommand=scroly.set)
    scrolx.pack(side=BOTTOM,fill=X)
    scroly.pack(side=RIGHT,fill=Y)
    scrolx.config(command=self.CourseTable.xview)
    scroly.config(command=self.CourseTable.yview)
    self.CourseTable.heading("roll",text="Roll No")
    self.CourseTable.heading("name",text="Name")
    self.CourseTable.heading("email",text="Email")
    self.CourseTable.heading("gender",text="Gender")
    self.CourseTable.heading("dob",text="D.O.B")
    self.CourseTable.heading("contact",text="Contact")
    self.CourseTable.heading("admission",text="Admission")
    self.CourseTable.heading("course",text="Course")
    self.CourseTable.heading("state",text="State")
    self.CourseTable.heading("city",text="City")
    self.CourseTable.heading("pin",text="PIN")
    self.CourseTable.heading("address",text="Address")
    self.CourseTable["show"]="headings"
    self.CourseTable.column("roll",width=100)
    self.CourseTable.column("name",width=100)
    self.CourseTable.column("email",width=100)
    self.CourseTable.column("gender",width=100)
    self.CourseTable.column("dob",width=100)
    self.CourseTable.column("contact",width=100)
    self.CourseTable.column("admission",width=100)
    self.CourseTable.column("course",width=100)
    self.CourseTable.column("state",width=100)
    self.CourseTable.column("city",width=100)
    self.CourseTable.column("pin",width=100)
    self.CourseTable.column("address",width=100)
    self.CourseTable.pack(fill=BOTH,expand=1)
    self.CourseTable.bind("<ButtonRelease-1>",self.get data) #When you click on any cid row it will show
```

```
self.show() #It is help to show details in table the function is defined at the bottom
def clear(self):
  self.var roll.set("")
  self.var name.set("")
  self.var email.set("")
  self.var_gender.set("Select")
  self.var dob.set("")
  self.var contact.set("")
  self.var adm date.set("")
  self.var course.set("Select")
  self.var_state.set("")
  self.var city.set("")
  self.var pin.set("")
  self.address.delete("1.0",END)
  self.rollno1.config(state=NORMAL)
  self.var search.set("")
def delete(self):
  conn=sqlite3.connect(database="ResultManagementSystem.db")
  cur=conn.cursor()
     if self.var roll.get()=="":
       messagebox.showerror("Error", "Roll No should be required ",parent=self.home)
       cur.execute("Select * from student where roll=?",(self.var roll.get(),))
       row=cur.fetchone()
       if row==None:
          messagebox.showerror("Error, Select The Student From the List first",parent=self.home)
          p=messagebox.askyesno("Confirm","Do you really want to delete",parent=self.home)
          if p==True:
            cur.execute("Delete from student where roll=? ",(self.var roll.get(),))
            conn.commit()
            messagebox.showinfo("Delete", "Student deleted Successfully", parent=self.home)
            self.clear() #We are calling clear because we declare show in to that
  except Exception as ex:
     messagebox.showerror("Error",f"Error due to {str(ex)}")
def get data(self,event):
  self.rollno1.config(state="readonly")
  self.rollno1
  r=self.CourseTable.focus()
  content=self.CourseTable.item(r)
  row=content["values"]
  self.var roll.set(row[0])
  self.var name.set(row[1])
  self.var email.set(row[2])
  self.var gender.set(row[3])
```

```
self.var dob.set(row[4])
    self.var contact.set(row[5])
    self.var adm date.set(row[6])
    self.var course.set(row[7])
    self.var state.set(row[8])
    self.var_city.set(row[9])
    self.var pin.set(row[10])
    self.address.delete("1.0",END)
    self.address.insert(END,row[11])
 def add(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       if self.var_roll.get()==""or self.var_name.get()=="" or self.var_email.get()=="" or
self.var course=="Select":
         messagebox.showerror("Error", "Roll No., Student name, Email and Course must
required",parent=self.home)
       else:
         cur.execute("Select * from student where roll=?",(self.var roll.get(),)) #Due to tupple we added , at
         row=cur.fetchone()
         if row!=None:
            messagebox.showerror("Error, Roll No. is already Present",parent=self.home)
            cur.execute("Insert into student
(roll,name,email,gender,dob,contact,admission,course,state,city,pin,address) values(?,?,?,?,?,?,?,?,?,?,?),(
              self.var roll.get(),
              self.var name.get(),
              self.var email.get(),
              self.var gender.get(),
              self.var dob.get(),
              self.var contact.get(),
              self.var adm date.get(),
              self.var_course.get(),
              self.var_state.get(),
              self.var city.get(),
              self.var_pin.get(),
              self.address.get("1.0",END)
            ))
            conn.commit()
            messagebox.showinfo("Great", "Student Added Successfully", parent=self.home)
            self.show()
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  #Updating Details
  def update(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
```

```
cur=conn.cursor()
       if self.var roll.get()=="":
         messagebox.showerror("Error", "Roll No should be required", parent=self.home)
         cur.execute("Select * from student where roll=?",(self.var_roll.get(),))
         row=cur.fetchone()
         if row==None:
            messagebox.showerror("Error", "Select Student From List", parent=self.home)
            cur.execute("Update student set
name=?,email=?,gender=?,dob=?,contact=?,admission=?,course=?,state=?,city=?,pin=?,address=? where roll=?
              self.var name.get(),
              self.var email.get(),
              self.var gender.get(),
              self.var dob.get(),
              self.var contact.get(),
              self.var adm date.get(),
              self.var course.get(),
              self.var_state.get(),
              self.var_city.get(),
              self.var pin.get(),
              self.address.get("1.0",END),
              self.var roll.get()
            ))
            conn.commit()
            messagebox.showinfo("Great", "Student Update Successfully", parent=self.home)
            self.show()
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def show(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       cur.execute("Select * from student")
       rows=cur.fetchall()
       self.CourseTable.delete(*self.CourseTable.get children())
       for row in rows:
         self.CourseTable.insert(",END,values=row)
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def fetch course(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       cur.execute("Select name from course")
       rows=cur.fetchall()
```

```
if len(rows)>0:
         for row in rows:
           self.course list.append(row[0])
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def search(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       cur.execute("Select * from student where roll=?",(self.var search.get(),))
       row=cur.fetchone()
       if row !=None:
         self.CourseTable.delete(*self.CourseTable.get_children())
         self.CourseTable.insert(",END,values=row)
         messagebox.showerror("Error", "No record Found", parent=self.home)
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
if name ==" main ":
  home=Tk()
  obj=StudentClass(home)
  home.mainloop()
View Result:-
#View Result
from tkinter import*
from PIL import Image,ImageTk
from tkinter import ttk, messagebox
import sqlite3
class ViewClass:
  def init (self,home):
    self.home=home
    self.home.title("Student Result Management System")
    self.home.geometry("1200x500+80+170")
    self.home.config(bg="white")
    self.home.focus force()
  #Title of result
    title=Label(self.home,text="View Student Results",font=("times new
roman",20,"bold"),bg="purple",fg="white").place(x=0,y=0,relwidth=1,height=50)
    self.var search=StringVar()
    self.var id=""
    lbl select = Label(self.home,text="Select By Roll No.",font=("times new
roman",20,"bold"),bg="white").place(x=280,y=100)
    txt select = Entry(self.home,textvariable=self.var search,font=("times new
roman",20),bg="lightyellow").place(x=520,y=100,width=150)
```

```
btn search=Button(self.home,text="Search",font=("times new
roman",15,"bold"),bg="lightblue",fg="black",cursor="hand2",command=self.search).place(x=680,y=100,width
    btn clear=Button(self.home,text="Clear",font=("times new
roman",15,"bold"),bg="lightgreen",fg="black",cursor="hand2",command=self.clear).place(x=800,y=100,width
=100, height=35)
    lbl roll = Label(self.home,text="Roll No.",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=150,y=230,width=150,height=50)
    lbl name = Label(self.home,text="Name",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=300,y=230,width=150,height=50)
    lbl course = Label(self.home,text="Course",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=450,y=230,width=150,height=50)
    lbl marks = Label(self.home,text="Marks Obtained",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=600,y=230,width=150,height=50)
    lbl full = Label(self.home,text="Total Marks",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE),place(x=750,y=230,width=150,height=50)
    lbl percentage = Label(self.home,text="Percentage",font=("times new
roman",15,"bold"),bg="white",bd=2,relief=GROOVE).place(x=900,y=230,width=150,height=50)
    self.roll = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.roll.place(x=150,y=280,width=150,height=50)
    self.name = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.name.place(x=300,y=280,width=150,height=50)
    self.course = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.course.place(x=450,y=280,width=150,height=50)
    self.marks = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.marks.place(x=600,y=280,width=150,height=50)
    self.full = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.full.place(x=750,y=280,width=150,height=50)
    self.percentage = Label(self.home,font=("times new roman",15,"bold"),bg="white",bd=2,relief=GROOVE)
    self.percentage.place(x=900,y=280,width=150,height=50)
    btn_delete=Button(self.home.text="Delete".font=("times new
roman",15,"bold"),bg="red",fg="white",cursor="hand2",command=self.delete).place(x=500,y=350,width=150,
height=35)
  def search(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
       if self.var search.get()=="":
         messagebox.showerror("Error", "Roll No. should be required", parent=self.home)
         cur.execute("Select * from result where roll=?",(self.var_search.get(),))
         row=cur.fetchone()
         if row !=None:
           self.var id=row[0]
           self.roll.config(text=row[1])
           self.name.config(text=row[2])
```

```
self.course.config(text=row[3])
            self.marks.config(text=row[4])
           self.full.config(text=row[5])
            self.percentage.config(text=row[6])
            messagebox.showerror("Error","No record Found",parent=self.home)
    except Exception as ex:
       messagebox.showerror("Error",f"Error due to {str(ex)}")
  def clear(self):
    self.var id=""
    self.roll.config(text="")
    self.name.config(text="")
    self.course.config(text="")
    self.marks.config(text="")
    self.full.config(text="")
    self.percentage.config(text="")
    self.var search.set("")
  def delete(self):
    conn=sqlite3.connect(database="ResultManagementSystem.db")
    cur=conn.cursor()
      if self.var id=="":
         messagebox.showerror("Error", "search Student Result First", parent=self.home)
         cur.execute("Select * from result where rid=?",(self.var id,))
         row=cur.fetchone()
         if row==None:
            messagebox.showerror("Error", "Invalid Student Result", parent=self.home)
            p=messagebox.askyesno("Confirm","Do you really want to delete",parent=self.home)
              cur.execute("Delete from result where rid=? ",(self.var id,))
              conn.commit()
              messagebox.showinfo("Delete", "Result deleted Successfully", parent=self.home)
              self.clear() #We are calling clear because we declare show in to that
    except Exception as ex:
      messagebox.showerror("Error",f"Error due to {str(ex)}")
if name ==" main ":
  home=Tk()
  obj=ViewClass(home)
  home.mainloop()
```

```
4.3 Database Connectivity
#Database File
import sqlite3
def create db():
  conn=sqlite3.connect(database="ResultManagementSystem.db")
  cur=conn.cursor()
  cur.execute("Create table if not exists course(cid INTEGER primary key AutoIncrement,name text,duration
text, charges text, description text)")
  conn.commit()
  cur.execute("Create table if not exists student(roll INTEGER primary key AutoIncrement,name text,email
test,gender text,dob text,contact text,admission text,course text,state text,city text,pin text,address text)")
  conn.commit()
#Table Creation for Result Page
  cur.execute("Create table if not exists result(rid INTEGER primary key AutoIncrement,roll text,name text,
course text,marks obtain text,full marks text,percentage text)")
  conn.commit()
  cur.execute("Create table if not exists AllUsers(eid INTEGER primary key AutoIncrement,f name
text,l_namen text, contact text, email text, question text, answer text, password text,u_name text)")
  conn.commit()
  conn.close()
create db()
```

5.EXISTING SOFTWARES

There are several Student Result Management software solutions currently in use, designed to help correctional facilities manage information, Marks, Results, security, and administrative tasks. Here are some examples:

• Blackboard:-

A comprehensive Learning Management System (LMS) facilitating course management, assessment, and grading, offering educators tools for tracking student performance.

➤ Use Case:-Facilitates course management, assessment, and grading for educators to track student performance efficiently.

• Canvas:-

An open-source LMS with features for grading, course organization, and communication, providing educators and students a user-friendly platform for managing academic progress.

➤ Use Case:-Enables educators and students to manage academic progress through grading, course organization, and communication features.

• Moodle:-

A widely-used LMS supporting online learning, offering features for creating quizzes, assignments, and tracking student progress through gradebooks and analytics.

➤ Use Case:-Supports online learning by offering tools for creating quizzes, assignments, and tracking student progress via gradebooks and analytics.

• PowerSchool:-

A student information system (SIS) with modules for grading, attendance, and scheduling, providing educators comprehensive tools for managing student data and academic progress.

➤ Use Case:- Provides comprehensive tools for educators to manage student data, including grading, attendance, and scheduling functionalities.

• Google Classroom:-

A free LMS integrated with G Suite for Education, offering educators tools for creating assignments, grading, and communication, providing a streamlined platform for digital learning.

➤ Use Case:-Offers educators a streamlined platform within G Suite for Education for creating assignments, grading, and communication with students, enhancing digital learning experiences.

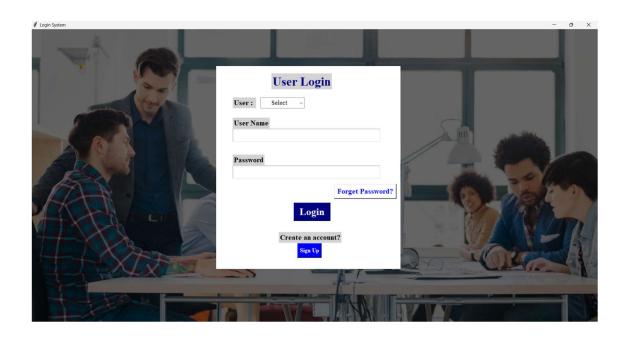
6. NEW ADDITION

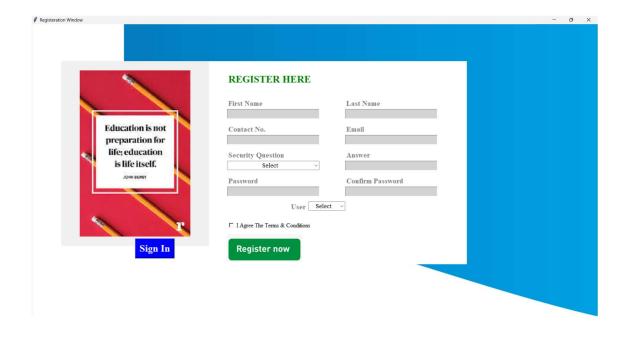
SRMS (Student Result Management Systems) provides modern educational tools empower educators with deep result analysis, seamless communication, and robust data security. These systems promote personalized learning experiences, foster collaboration, and ensure compliance, driving continuous improvement and student success in today's digital educational landscape.

- Enhanced Result Analysis Tools: Implementing advanced analytics features to provide insights into student performance trends, helping educators identify areas for improvement and personalize learning experiences effectively.
- Integrated Communication Platform: Developing a seamless communication system within the student result management software, facilitating collaboration between educators, students, and parents to foster a supportive learning environment.
- Data Security and Privacy Measures: Implementing robust data security protocols and privacy measures to ensure the confidentiality and integrity of student information, adhering to regulatory compliance standards such as GDPR and FERPA...

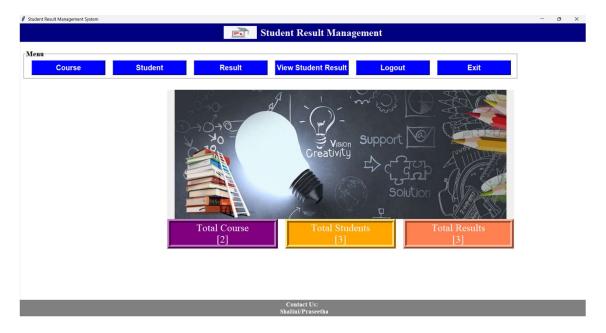
7. RESULTS AND DISCUSSION

LOGIN/REGISTER INTERFACE

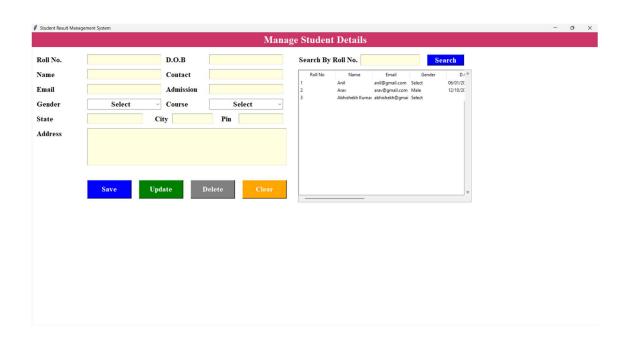




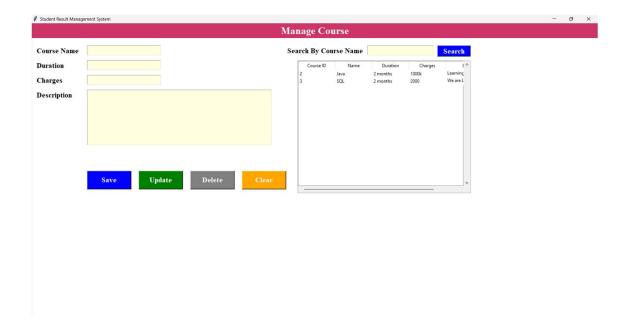
DASHBOARD INTERFACE FOR ADMIN



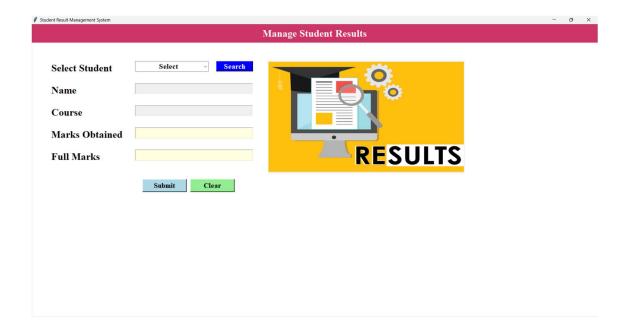
INTERFACE FOR MANAGING STUDENT DETAILS



INTERFACE FOR MANAGING COURSE DETAILS



INTERFACE FOR UPDATING STUDENT RESULTS



INTERFACE FOR STUDENTS TO VIEW RESULT

ge			Student Result			
	E	nter Roll N	0.	Search	Clear	1
Roll No.	Name	Course	Marks Obtained	Total Marks	Percentage	

8.CONCLUSION

In conclusion, Student Result Management Systems (SRMS) are instrumental in modern education, facilitating efficient data management, communication, and academic success. Through sophisticated result analysis tools and seamless communication platforms, SRMS empower educators to personalize learning experiences, identify trends, and foster collaboration among stakeholders. Moreover, stringent data security measures ensure the protection of sensitive student information, maintaining compliance with regulatory standards. As educational institutions continue to embrace digital innovation, SRMS serve as catalysts for positive change, driving continuous improvement and preparing students for success in a rapidly evolving global landscape. In essence, SRMS represent a transformative force in education, shaping the future of teaching and learning.

9.REFERENCE

Below is a list of references and resources used during the development of the Student Result Management System Project. These include documentation, libraries, frameworks, and tools that were essential for building and testing the application.

• Python Documentation:

Official Python Documentation

https://docs.python.org/3/

• TKInter:

Python Software Foundation. (n.d.). TKInter documentation. https://docs.python.org/3/library/tkinter.html

• PIL (Python Imaging Library):

PythonWare. (n.d.). Pillow (PIL Fork) documentation. https://pillow.readthedocs.io/en/stable/index.html

• OS Module:

Python Software Foundation. (n.d.). OS documentation. https://docs.python.org/3/library/os.html

• SQLite:

SQLite. (n.d.). SQLite documentation. https://www.sqlite.org/docs.html

These references provide comprehensive documentation and resources for learning and using each of these libraries and modules in Python programming.