LOVELY PROFESSIONAL UNIVERSITY

PYTHON MINI PROJECT

Title Page

Topic- “ATM Management System”

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COURSE DETAILS: - COURSE CODE:- INT 213

Lovely Professional University Phagwara,

Punjab.

SUBMITTED TO: - MRS. AKSHARA RANA

Mini-Project Submission Report:

Course Name: Python Programming
Course Code: INT213

Project Name: ATM Management System

Team Members: RK21SPB53, RK21SPB54, RK21SPB55

Project Statement: Design an ATM Management System using python.

INTRODUCTION

This is a mini project on ATM management system in LPU, made by Awneesh (K21SPB53), Likin veer (K21SPB54),Bhanu Sandeep(K21SPB55) under the guidance of our respected Python teacher, Mrs Akshara Rana.

We used tkinter libraries for designing the interface and python for the project.

This project of ATM management system is used to store the transaction details, deposit, and withdraw money and view balance from the bank records. The ATM management system has many other features like login functionalities and change PIN.

This software helps user to easily enter and manage the transactions of their bank account and do certain other operations very easily without any error.

OBJECTIVE

It is an ATM Management System. It is used to calculate, perform, and maintain all the transactions and functions performed.

The system is basically used for accessing our bank account through any time machines.

The ATM machine has many features which include login facilities, view our bank account details, our balance enquiry, deposit, and withdrawal of our money.

AIM

- To develop a system that manages the transactions of the user
- Develop an interface for all the user actions made
- Give a reliable and great functionality for the user
- Attractive user interface that easily navigates through the system for the users.

- Develop different functionalities such as deposit, withdraw, check balance and other features.

DESCRIPTION OF MODULES:

- LOGIN: This function allows you to login into the system
- CHECK BALANCE: This function allows you to check the account balance of the logged in user
- DEPOSIT: This function lets the user to deposit money into the account.
- WITHDRAW: This function allows the user to withdraw money from his account.
- CHANGE PIN: This function allows the user to change his password as per his choice

SOURCE CODE

```python
import tkinter as tk
import time

current_balance = 1000
current_pin = '1234'

class SampleApp(tk.Tk):

    def __init__(self, *args, **kwargs):
        tk.Tk.__init__(self, *args, **kwargs)

        self.shared_data = {'Balance':tk.IntVar()}

        container = tk.Frame(self)
        container.pack(side="top", fill="both", expand=True)
        container.grid_rowconfigure(0, weight=1)
        container.grid_columnconfigure(0, weight=1)

        self.frames = {}
        for F in (StartPage, MenuPage, WithdrawPage, DepositPage, BalancePage, ChangePassPage):
            page_name = F.__name__
            frame = F(parent=container, controller=self)
            self.frames[page_name] = frame
            frame.grid(row=0, column=0, sticky="nsew")

        self.show_frame("StartPage")

    def show_frame(self, page_name):
        '''Show a frame for the given page name'''
        frame = self.frames[page_name]
        frame.tkraise()


class StartPage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller
        self.controller.title('ATM Management System')
        self.controller.state('zoomed')
        heading_label = tk.Label(self, text='ATM Management System', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)
        space_label = tk.Label(self,height=4,bg='#3d3d5c')
        space_label.pack()
        password_label = tk.Label(self, text='Enter your password', font=('orbitron',13), bg='#3d3d5c', fg='white')
```

```python
class MenuPage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller

        heading_label = tk.Label(self, text='ATM Management system', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)

        main_menu_label = tk.Label(self, text='Main Menu', font=('orbitron',13), fg='white', bg='#3d3d5c')
        main_menu_label.pack()

        selection_label = tk.Label(self, text='Please make a selection', font=('orbitron',13), fg='white', bg='#3d3d5c', anchor='w')
        selection_label.pack(fill='x')

        button_frame = tk.Frame(self,bg='#33334d')
        button_frame.pack(fill='both',expand=True)

        def withdraw():
            controller.show_frame('WithdrawPage')

        withdraw_button = tk.Button(button_frame, text='Withdraw', command=withdraw, relief='raised', borderwidth=3, width=50, height=5)
        withdraw_button.grid(row=0,column=0,pady=5)

        def deposit():
            controller.show_frame('DepositPage')

        deposit_button = tk.Button(button_frame, text='Deposit', command=deposit, relief='raised', borderwidth=3, width=50, height=5)
        deposit_button.grid(row=1,column=0,pady=5)

        def balance():
            controller.show_frame('BalancePage')

        balance_button = tk.Button(button_frame, text='Balance', command=balance, relief='raised', borderwidth=3, width=50, height=5)
        balance_button.grid(row=2,column=0,pady=5)

        def changepass():
            controller.show_frame('ChangePassPage')

        balance_button = tk.Button(button_frame, text='Change PIN', command=changepass, relief='raised', borderwidth=3, width=50, height=5)
        balance_button.grid(row=3,column=0,pady=5)

        def exit():
```

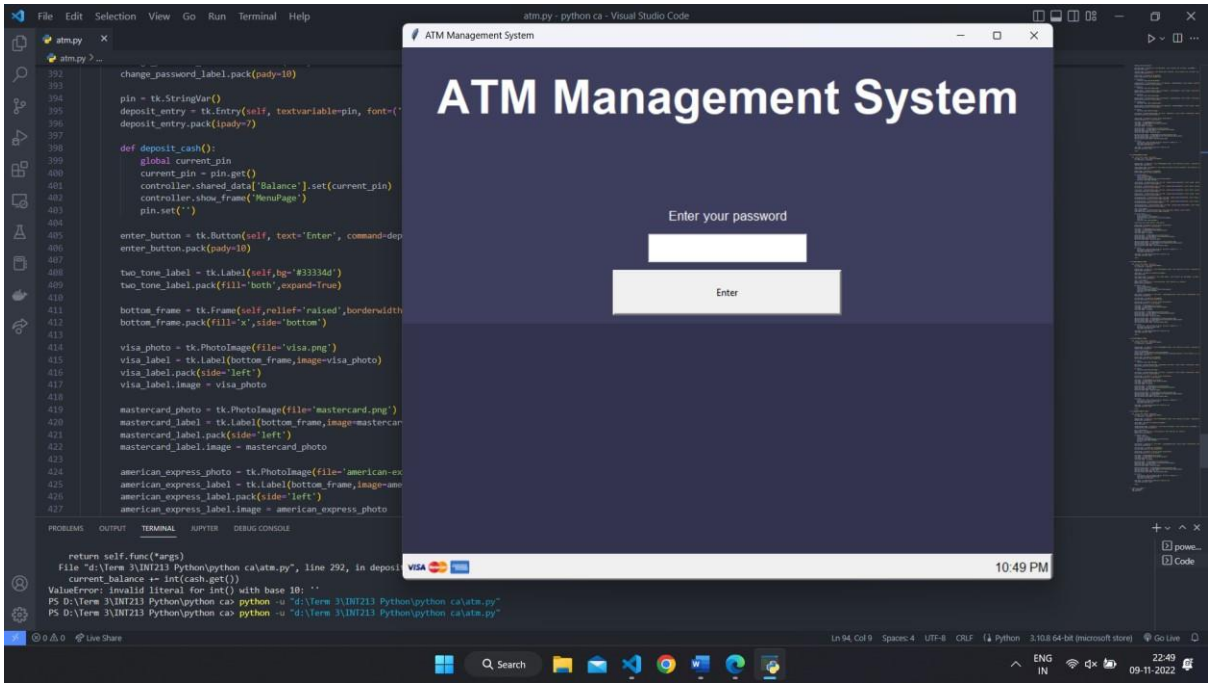
```python
class DepositPage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller

        heading_label = tk.Label(self, text='ATM Management system', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)

        space_label = tk.Label(self,height=4,bg='#3d3d5c')
        space_label.pack()

        enter_amount_label = tk.Label(self, text='Enter amount', font=('orbitron',13), bg='#3d3d5c', fg='white')
        enter_amount_label.pack(pady=10)

        cash = tk.StringVar()
        deposit_entry = tk.Entry(self, textvariable=cash, font=('orbitron',12), width=22)
        deposit_entry.pack(ipady=7)

        def deposit_cash():
            global current_balance
            current_balance += int(cash.get())
            controller.shared_data['Balance'].set(current_balance)
            controller.show_frame('MenuPage')
            cash.set('')

        enter_button = tk.Button(self, text='Enter', command=deposit_cash, relief='raised', borderwidth=3, width=40, height=3)
        enter_button.pack(pady=10)

        two_tone_label = tk.Label(self,bg='#33334d')
        two_tone_label.pack(fill='both',expand=True)

        bottom_frame = tk.Frame(self,relief='raised',borderwidth=3)
        bottom_frame.pack(fill='x',side='bottom')

        visa_photo = tk.PhotoImage(file='visa.png')
        visa_label = tk.Label(bottom_frame,image=visa_photo)
        visa_label.pack(side='left')
        visa_label.image = visa_photo

        mastercard_photo = tk.PhotoImage(file='mastercard.png')
        mastercard_label = tk.Label(bottom_frame,image=mastercard_photo)
        mastercard_label.pack(side='left')
        mastercard_label.image = mastercard_photo
```

```python
class WithdrawPage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller


        heading_label = tk.Label(self, text='ATM Management system', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)

        choose_amount_label = tk.Label(self, text='Choose the amount you want to withdraw', font=('orbitron',13), fg='white', bg='#3d3d5c')
        choose_amount_label.pack()

        button_frame = tk.Frame(self,bg='#33334d')
        button_frame.pack(fill='both',expand=True)

        def withdraw(amount):
            global current_balance
            current_balance -= amount
            controller.shared_data['Balance'].set(current_balance)
            controller.show_frame('MenuPage')

        twenty_button = tk.Button(button_frame, text='20', command=lambda:withdraw(20), relief='raised', borderwidth=3, width=50, height=5)
        twenty_button.grid(row=0,column=0,pady=5)

        forty_button = tk.Button(button_frame, text='40', command=lambda:withdraw(40), relief='raised', borderwidth=3, width=50, height=5)
        forty_button.grid(row=1,column=0,pady=5)

        sixty_button = tk.Button(button_frame, text='60', command=lambda:withdraw(60), relief='raised', borderwidth=3, width=50, height=5)
        sixty_button.grid(row=2,column=0,pady=5)

        eighty_button = tk.Button(button_frame, text='80', command=lambda:withdraw(80), relief='raised', borderwidth=3, width=50, height=5)
        eighty_button.grid(row=3,column=0,pady=5)

        one_hundred_button = tk.Button(button_frame, text='100', command=lambda:withdraw(100), relief='raised', borderwidth=3, width=50, height=5)
        one_hundred_button.grid(row=0,column=1,pady=5,padx=555)

        two_hundred_button = tk.Button(button_frame, text='200', command=lambda:withdraw(200), relief='raised', borderwidth=3, width=50, height=5)
        two_hundred_button.grid(row=1,column=1,pady=5)

        three_hundred_button = tk.Button(button_frame, text='300', command=lambda:withdraw(300), relief='raised', borderwidth=3, width=50, height=5)
        three_hundred_button.grid(row=2,column=1,pady=5)
```

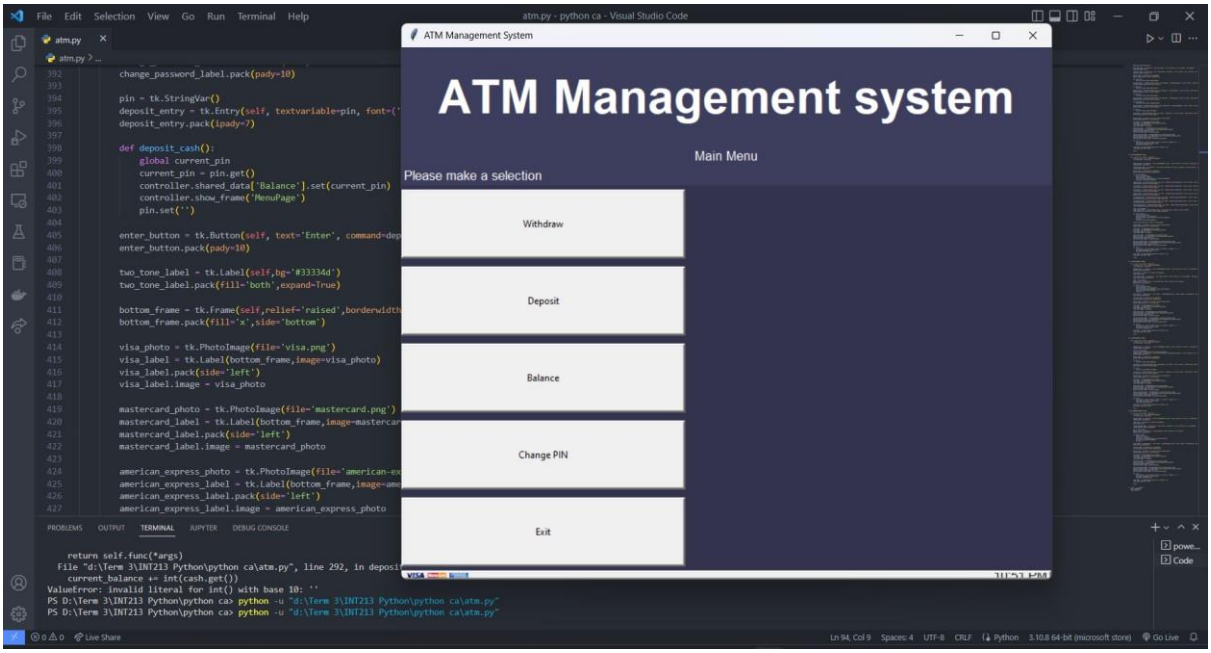
```python
class BalancePage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller


        heading_label = tk.Label(self, text='ATM Management System', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)

        global current_balance
        controller.shared_data['Balance'].set(current_balance)
        balance_label = tk.Label(self, textvariable=controller.shared_data['Balance'], font=('orbitron',13), fg='white', bg='#3d3d5c', anchor='w')
        balance_label.pack(fill='x')

        button_frame = tk.Frame(self,bg='#33334d')
        button_frame.pack(fill='both',expand=True)

        def menu():
            controller.show_frame('MenuPage')

        menu_button = tk.Button(button_frame, command=menu, text='Menu', relief='raised', borderwidth=3, width=50, height=5)
        menu_button.grid(row=0,column=0,pady=5)

        def exit():
            controller.show_frame('StartPage')

        exit_button = tk.Button(button_frame, text='Exit', command=exit, relief='raised', borderwidth=3, width=50, height=5)
        exit_button.grid(row=1,column=0,pady=5)

        bottom_frame = tk.Frame(self,relief='raised',borderwidth=3)
        bottom_frame.pack(fill='x',side='bottom')

        visa_photo = tk.PhotoImage(file='visa.png')
        visa_label = tk.Label(bottom_frame,image=visa_photo)
        visa_label.pack(side='left')
        visa_label.image = visa_photo

        mastercard_photo = tk.PhotoImage(file='mastercard.png')
        mastercard_label = tk.Label(bottom_frame,image=mastercard_photo)
        mastercard_label.pack(side='left')
        mastercard_label.image = mastercard_photo

        american_express_photo = tk.PhotoImage(file='american-express.png')
        american_express_label = tk.Label(bottom_frame,image=american_express_photo)
```

```python
class ChangePassPage(tk.Frame):

    def __init__(self, parent, controller):
        tk.Frame.__init__(self, parent,bg='#3d3d5c')
        self.controller = controller

        heading_label = tk.Label(self, text='ATM Management system', font=('orbitron',45,'bold'), foreground='#ffffff', background='#3d3d5c')
        heading_label.pack(pady=25)

        space_label = tk.Label(self,height=4,bg='#3d3d5c')
        space_label.pack()

        change_password_label = tk.Label(self, text='Enter new Password', font=('orbitron',13), bg='#3d3d5c', fg='white')
        change_password_label.pack(pady=10)

        pin = tk.StringVar()
        deposit_entry = tk.Entry(self, textvariable=pin, font=('orbitron',12), width=22)
        deposit_entry.pack(ipady=7)

        def deposit_cash():
            global current_pin
            current_pin = pin.get()
            controller.shared_data['Balance'].set(current_pin)
            controller.show_frame('MenuPage')
            pin.set('')

        enter_button = tk.Button(self, text='Enter', command=deposit_cash, relief='raised', borderwidth=3, width=40, height=3)
        enter_button.pack(pady=10)

        two_tone_label = tk.Label(self,bg='#33334d')
        two_tone_label.pack(fill='both',expand=True)

        bottom_frame = tk.Frame(self,relief='raised',borderwidth=3)
        bottom_frame.pack(fill='x',side='bottom')

        visa_photo = tk.PhotoImage(file='visa.png')
        visa_label = tk.Label(bottom_frame,image=visa_photo)
        visa_label.pack(side='left')
        visa_label.image = visa_photo

        mastercard_photo = tk.PhotoImage(file='mastercard.png')
        mastercard_label = tk.Label(bottom_frame,image=mastercard_photo)
        mastercard_label.pack(side='left')
        mastercard_label.image = mastercard_photo
```

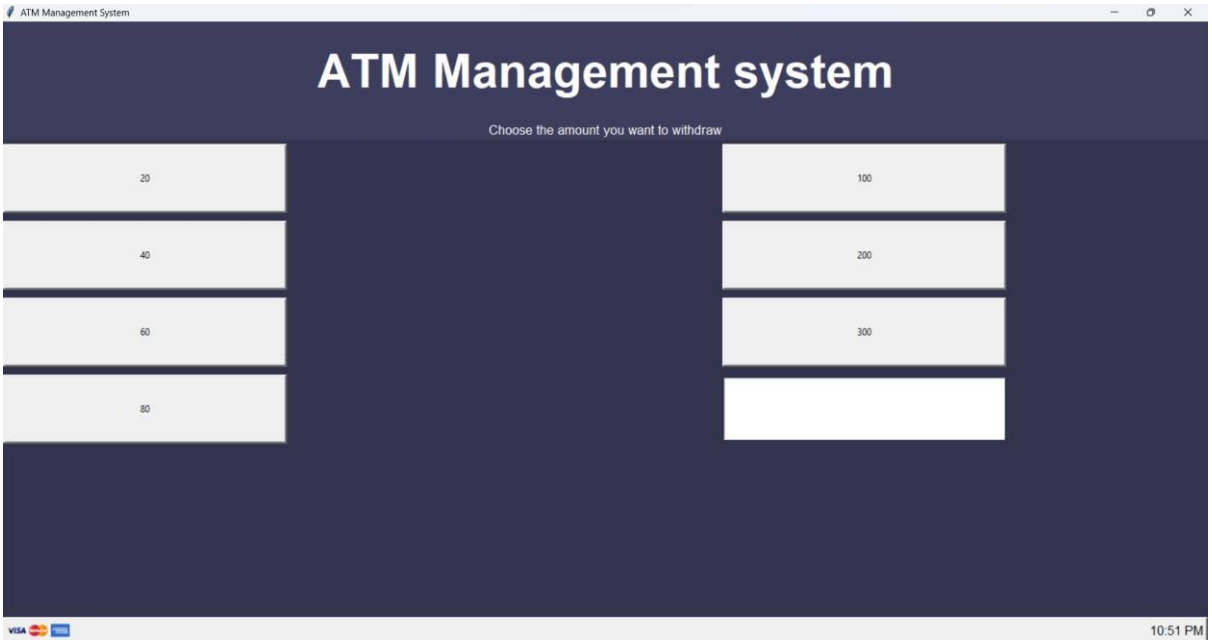
RESULT SCREENSHOTS



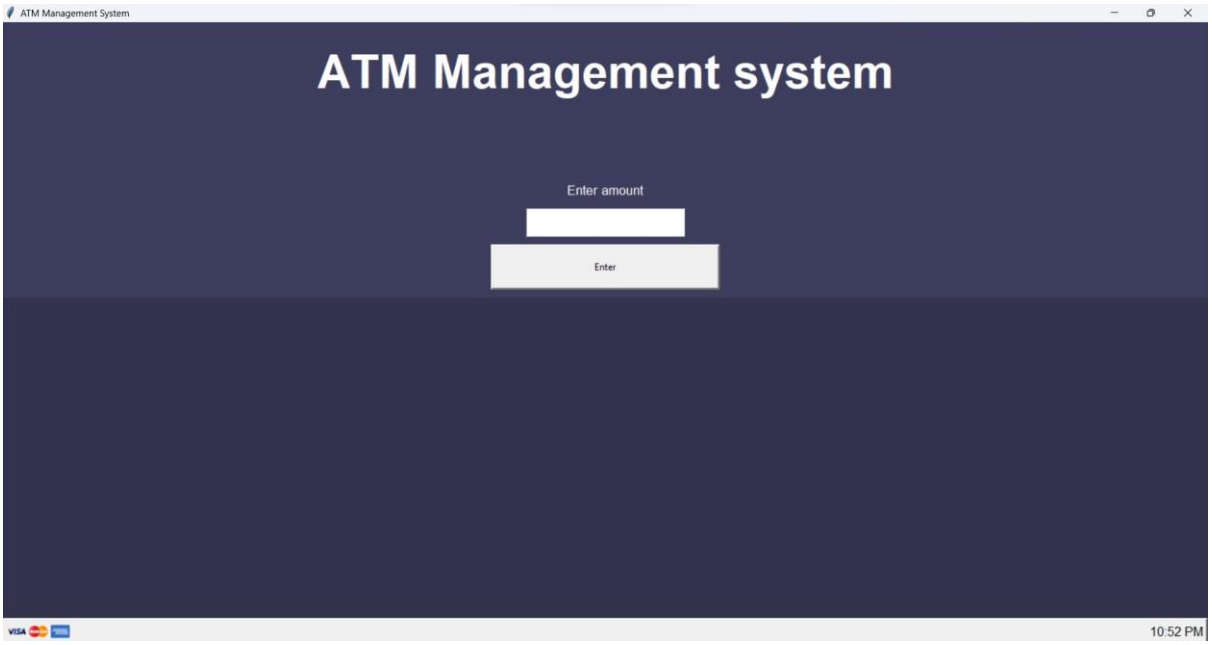
Login Page



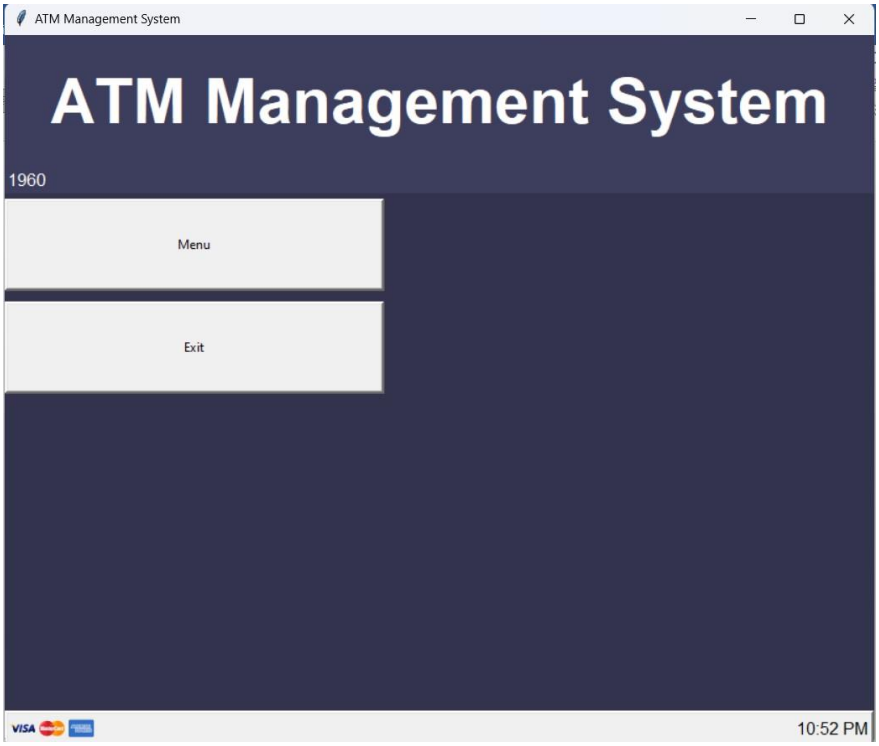
Menu Page



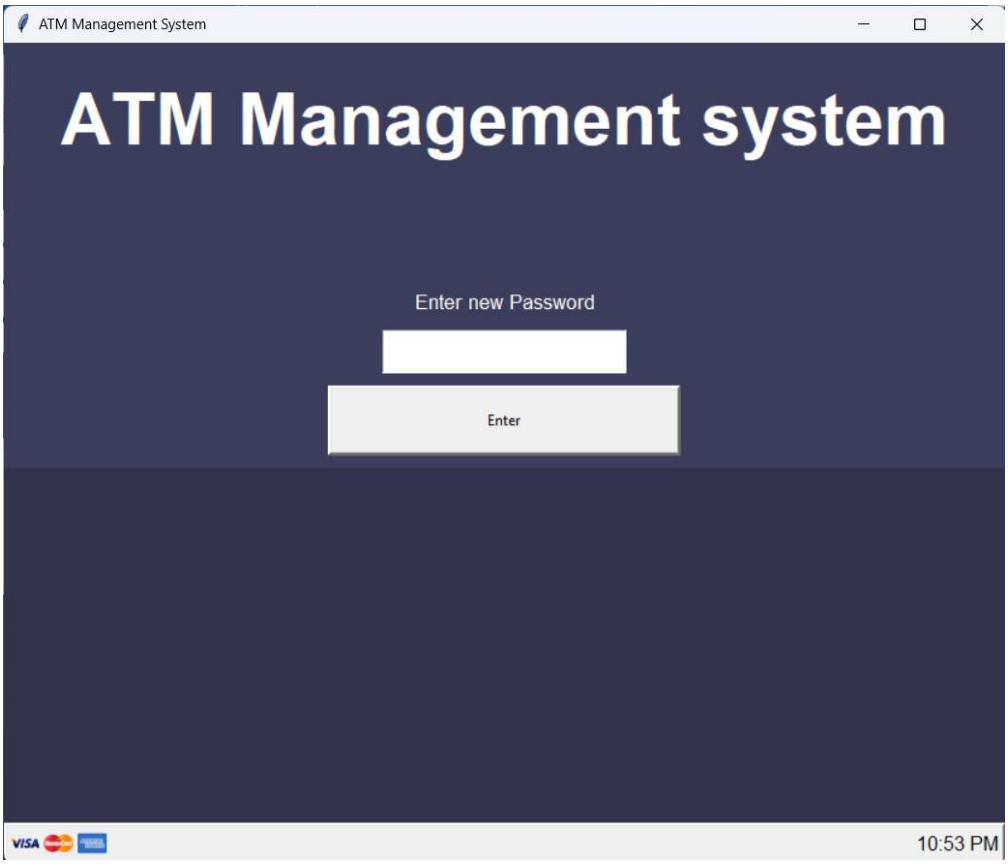
WITHDRAW PAGE



DEPOSIT PAGE



BALANCE PAGE



CHANGE PASSWORD PAGE

Conclusion

Working on this project helped us learn about python in more detail, it also made us realise how important and how useful it is, working on PIP modules, Tkinter, and other libraries, we learned about them in a more depth, how to work on Graphical User Interfaces (GUI) on python using Tkinter. This mini project even helped us understand how to create ATM management system and how the different modules work. Using this software user can easily keep and maintain the transactions of book and do variety of tasks.