

# **PYTHON – TW- COURSE-** **PROJECT**

## **TOPIC : ATM SYSTEM**

**S.E. ELECTRONICS, SEM 4, M.H. SABOO**  
**SIDDIK COLLEGE OF ENGINEERING**

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## DESCRIPTION :-

In this ATM SYSTEM program, various parameters like those in a real ATM machine of any bank are considered. Were in, the customer is made to insert his/her card and is asked by the program to enter his/her username and a valid pin. If the user is not listed in the bank's data then the program will leave a message stating 'INVALID USER' and will ask to try again till a proper and valid user ID is entered into. For pin verification the user will be given 3 chances. In these 3 chances, if the user fails to provide with valid and correct pin, then his/her card will be blocked and will be asked to contact the branch hereby exiting the program. In this program function of depositing and withdrawing cash is also given i.e. one can deposit or withdraw cash in the multiples of 500 and 2000. One can also change his/her pin. After completion of transactions one can also see their bank statement.

**\*\*\*One of the main feature of the program made is that it first asks for valid user ID from user and then accepts the valid PIN provided. It's not like the currently used atm in which the user is asked for pin just by inserting the card \*\*\***

# PROGRAM :

"""S.E. ELECTRONICS, SEM 4, MHSSCE"""

"""NAME : TAJ MOHAMMED SHAH -- 4119006

HAMZA ANSARI -- 4119007

ADVAIT GURUNATH CHAVAN -- 4119008

AAKASH GUPTA -- 4119009"""

"""TOPIC: ELECTRO ATM SYSTEM"""

import getpass

# creating a lists of users, their PINs and bank statements

users = ['taj', 'hamza', 'advait', 'aakash']

pins = ['9006', '9007', '9008', '9009']

amounts = [4119006, 4119007, 4119008, 4119009]

count = 0

print("\*\*\*\*\*")

print("\*")

print("Welcome to ELECTRO ATM SYSTEM")

print("\*")

print("\*\*\*\*\*")

## **PROGRAM (CONT) :**

# while loop checks existence of the entered username

```
user = input('\nENTER USER NAME: ')
```

```
user = user.lower()
```

```
if user in users:
```

```
    if user == users[0]:
```

```
        n = 0
```

```
    elif user == users[1]:
```

```
        n = 1
```

```
    elif user == users[2]:
```

```
        n = 2
```

```
    else:
```

```
        n = 3
```

```
        break
```

```
else:
```

```
    print('-----')
```

```
    print('*****')
```

```
    print('INVALID USERNAME')
```

```
    print('*****')
```

```
    print('-----')
```

## **PROGRAM (CONT) :**

**# comparing pin**

**while count <= 3:**

**print('-----')**

**print('\*\*\*\*\*')**

**pin = input('PLEASE ENTER PIN: ')**

**print('\*\*\*\*\*')**

**print('-----')**

**if pin.isdigit():**

**if user == 'taj':**

**if pin == pins[0]:**

**break**

**else:**

**count += 1**

**print('-----')**

**print('\*\*\*\*\*')**

**print('INVALID PIN')**

**print('\*\*\*\*\*')**

**print('-----')**

**print()**

## PROGRAM (CONT) :

```
if user == 'hamza':
    if pin == pins[1]:
        break
    else:
        count += 1
        print('-----')
        print('*****')
        print('INVALID PIN')
        print('*****')
        print('-----')
        print()
if user == 'advait':
    if pin == pins[2]:
        break
    else:
        count += 1
        print('-----')
        print('*****')
        print('INVALID PIN')
        print('*****')
        print('-----')
        print()
```

## PROGRAM (CONT) :

```
if user == 'aakash':  
    if pin == pins[3]:  
        break  
    else:  
        count += 1  
        print('-----')  
        print('*****')  
        print('INVALID PIN')  
        print('*****')  
        print('-----')  
        print()  
else:  
    print('-----')  
    print('*****')  
    print('PIN CONSISTS OF 4 DIGITS')  
    print('*****')  
    print('-----')  
    count += 1
```

## PROGRAM (CONT) :

# in case of a valid pin- continuing, or exiting

if count == 3:

```
print('-----')
print('*****')
print('3 UNSUCCESSFUL PIN ATTEMPTS, EXITING')
print('!!!!!!YOUR CARD HAS BEEN LOCKED!!!!!!')
print('!!!!!!!!!!!!!!!!PLEASE CONTACT YOUR BRANCH!!!!!!!!!!!!!!!!')
print('*****')
print('-----')
exit()
```

```
print('-----')
print('*****')
print('LOGIN SUCCESFUL, CONTINUE')
print('*****')
print('-----')
print()
print('-----')
print('*****')
print(str.capitalize(users[n]), 'welcome to ELECTRO ATM SYSTEM')
print('*****')
print('-----ELECTRO ATM SYSTEM-----')
```



## PROGRAM (CONT) :

# Main menu

while True:

    # os.system('clear')

    print('-----')

    print('\*\*\*\*\*')

    response = input( 'SELECT FROM FOLLOWING OPTIONS: \nStatement\_\_(S) \nCash  
                    Withdraw\_\_(W) \nCash Deposit\_\_(C) \nChange PIN\_(P) '  
                    '\nQuit\_\_\_\_\_(Q) \nType The Letter Of Your Choices: ').lower()

    print('\*\*\*\*\*')

    print('-----')

    valid\_responses = ['s', 'w', 'c', 'p', 'q']

    response = response.lower()

    if response == 's':

        print('-----')

        print('\*\*\*\*\*')

        print(str.capitalize(users[n]), 'YOU HAVE ', amounts[n], 'RUPEES IN YOUR ACCOUNT.')

        print('\*\*\*\*\*')

        print('-----')

## PROGRAM (CONT) :

elif response == 'w':

```
print('-----')
```

```
print('*****')
```

```
cash_out = int(input('ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: '))
```

```
print('*****')
```

```
print('-----')
```

if cash\_out % 500 != 0 and cash\_out % 2000 != 0:

```
print('-----')
```

```
print('*****')
```

```
print('AMOUNT YOU WANT TO WITHDRAW MUST TO MATCH 500 AND 2000 RUPEES  
NOTES')
```

```
print('*****')
```

```
print('-----')
```

elif cash\_out > amounts[n]:

```
print('-----')
```

```
print('*****')
```

```
print('YOU HAVE INSUFFICIENT BALANCE')
```

```
print('*****')
```

```
print('-----')
```

## PROGRAM (CONT) :

else:

```
amounts[n] = amounts[n] - cash_out
```

```
print('-----')
```

```
print('*****')
```

```
print('YOUR NEW BALANCE IS: ', amounts[n], 'RUPEES')
```

```
print('*****')
```

```
print('-----')
```

elif response == 'c':

```
print()
```

```
print('-----')
```

```
print('*****')
```

```
cash_in = int(input('ENTER AMOUNT YOU WANT TO LODGE: '))
```

```
print('*****')
```

```
print('-----')
```

```
print()
```

if cash\_in % 500 != 0 and cash\_in % 2000 != 0:

```
print('-----')
```

```
print('*****')
```

```
print('AMOUNT YOU WANT TO LODGE MUST TO MATCH 500 AND 2000 RUPEES NOTES')
```

```
print('*****')
```

```
print('-----')
```

## **PROGRAM (CONT) :**

**else:**

```
amounts[n] = amounts[n] + cash_in  
print('-----')  
print('*****')  
print('YOUR NEW BALANCE IS: ', amounts[n], 'RUPEES')  
print('*****')  
print('-----')
```

**elif response == 'p':**

```
print('-----')  
print('*****')  
new_pin = str(getpass.getpass('ENTER A NEW PIN: '))  
print('*****')  
print('-----')  
if new_pin.isdigit() and new_pin != pins & [n] and len(new_pin) == 4:  
print('-----')  
print('*****')  
new_card_pin = str(getpass.getpass('CONFIRM NEW PIN: '))  
print('*****')  
print('-----')
```

## PROGRAM (CONT) :

```
if new_card_pin != new_pin:
    print('-----')
    print('*****')
    print('PIN MISMATCH')
    print('*****')
    print('-----')
else:
    pins[n] = new_pin
    print('NEW PIN SAVED')
else:
    print('-----')
    print('*****')
    print('  NEW PIN MUST CONSIST OF 4 DIGITS \nAND MUST BE DIFFERENT TO PREVIOUS
          PIN')
    print('*****')
    print('-----')
```

## PROGRAM (CONT) :

```
elif response == 'q':
```

```
    exit()
```

```
else:
```

```
    print('-----')
```

```
    print('*****')
```

```
    print('RESPONSE NOT VALID')
```

```
    print('*****')
```

```
    print('-----')
```

# OUTPUT :

The screenshot displays the PyCharm IDE interface with a Python script named `TW_PROJECT.py`. The script is a simulation of an ATM system for 'S.E. ELECTRONICS, SEM 4, MHSSCE'. It includes a list of users with their names, PINs, and account numbers. The program prompts the user to enter their name and checks if it exists in the list. If the name is found, it prints the account number. The script is currently running, as indicated by the 'Run' button in the bottom toolbar.

```
1 """S.E. ELECTRONICS, SEM 4, MHSSCE"""
2 """NAME : TAJ MOHAMMED SHAH -- 4119006
3     HAMZA ANSARI -- 4119007
4     ADVAIT GURUNATH CHAVAN -- 4119008
5     AAKASH GUPTA -- 4119009"""
6 """TOPIC: ELECTRO ATM SYSTEM"""
7 import getpass
8
9 # creating a lists of users, their PINs and bank statements
10 users = ['taj', 'hamza', 'advait', 'aakash']
11 pins = ['9006', '9007', '9008', '9009']
12 amounts = [4119006, 4119007, 4119008, 4119009]
13 count = 0
14 # while loop checks existence of the entered username
15 print("*****")
16 print("*")
17 print("      Welcome to ELECTRO ATM SYSTEM      ")
18 print("*")
19 print("*****")
20 while True:
21     user = input('\nENTER USER NAME: ')
22     user = user.lower()
23     if user in users:
24         if user == users[0]:
25             n = 0
26             while n < 3:
27                 pin = input("ENTER PIN: ")
28                 if pin == pins[0]:
29                     print("****")
30                     print("      Amount: ", amounts[0])
31                     print("****")
32                     break
33                 else:
34                     print("Wrong PIN")
35                     n += 1
36             else:
37                 print("Account Locked")
38         elif user == users[1]:
39             n = 0
40             while n < 3:
41                 pin = input("ENTER PIN: ")
42                 if pin == pins[1]:
43                     print("****")
44                     print("      Amount: ", amounts[1])
45                     print("****")
46                     break
47                 else:
48                     print("Wrong PIN")
49                     n += 1
50             else:
51                 print("Account Locked")
52         elif user == users[2]:
53             n = 0
54             while n < 3:
55                 pin = input("ENTER PIN: ")
56                 if pin == pins[2]:
57                     print("****")
58                     print("      Amount: ", amounts[2])
59                     print("****")
60                     break
61                 else:
62                     print("Wrong PIN")
63                     n += 1
64             else:
65                 print("Account Locked")
66         elif user == users[3]:
67             n = 0
68             while n < 3:
69                 pin = input("ENTER PIN: ")
70                 if pin == pins[3]:
71                     print("****")
72                     print("      Amount: ", amounts[3])
73                     print("****")
74                     break
75                 else:
76                     print("Wrong PIN")
77                     n += 1
78             else:
79                 print("Account Locked")
80         else:
81             print("User not found")
82     else:
83         print("User not found")
84         continue
85     break
```

PyCharm 2020.3.5 available // Update... (29 minutes ago) 6:35 CRLF UTF-8 4 spaces Python 3.8 (TW\_PROJECT)

Project TW\_PROJECT.py x

```
20 while True:
21     user = input('\nENTER USER NAME: ')
22     user = user.lower()
23     if user in users:
24         if user == users[0]:
25             n = 0
26         elif user == users[1]:
27             n = 1
28         elif user == users[2]:
29             n = 2
30         else:
31             n = 3
32         break
33     else:
34         print('-----')
35         print('*****')
36         print('INVALID USERNAME')
37         print('*****')
38         print('-----')
39
40 # comparing pin
41 while count <= 3:
42     print('-----')
43     print('*****')
44     pin = input('PLEASE ENTER PIN: ')
```

Run: TW\_PROJECT x

Run TODO Problems Terminal Python Console

Event Log



```
40 # comparing pin
41 while count <= 3:
42     print('-----')
43     print('*****')
44     pin = input('PLEASE ENTER PIN: ')
45     print('*****')
46     print('-----')
47     if pin.isdigit():
48         if user == 'taj':
49             if pin == pins[0]:
50                 break
51             else:
52                 count += 1
53             print('-----')
54             print('*****')
55             print('INVALID PIN')
56             print('*****')
57             print('-----')
58             print()
59
60         if user == 'hamza':
61             if pin == pins[1]:
62                 break
63             else:
64                 count += 1
```

Project TW\_PROJECT.py x

```
60     if user == 'hamza':
61         if pin == pins[1]:
62             break
63         else:
64             count += 1
65         print('-----')
66         print('*****')
67         print('INVALID PIN')
68         print('*****')
69         print('-----')
70         print()
71     if user == 'advait':
72         if pin == pins[2]:
73             break
74         else:
75             count += 1
76         print('-----')
77         print('*****')
78         print('INVALID PIN')
79         print('*****')
80         print('-----')
81         print()
82     if user == 'aakash':
83         if pin == pins[3]:
84             break
```

Run: TW\_PROJECT x

Run TODO Problems Terminal Python Console

PyCharm 2020.3.5 available // Update... (30 minutes ago)

6:35 CRLF UTF-8 4 spaces Python 3.8 (TW\_PROJECT)

Project TW\_PROJECT.py x

```
81     print()
82     if user == 'aakash':
83         if pin == pins[3]:
84             break
85         else:
86             count += 1
87             print('-----')
88             print('*****')
89             print('INVALID PIN')
90             print('*****')
91             print('-----')
92             print()
93
94     else:
95         print('-----')
96         print('*****')
97         print('PIN CONSISTS OF 4 DIGITS')
98         print('*****')
99         print('-----')
100         count += 1
101     # in case of a valid pin- continuing, or exiting
102     if count == 3:
103         print('-----')
104         print('*****')
105         print('3 UNSUCCESSFUL PIN ATTEMPTS, EXITING')
106         print('*****')
```

Run: TW\_PROJECT x

Run TODO Problems Terminal Python Console

Event Log

Project TW\_PROJECT.py x

```
100     count += 1
101     # in case of a valid pin- continuing, or exiting
102     if count == 3:
103         print('-----')
104         print('*****')
105         print('3 UNSUCCESSFUL PIN ATTEMPTS, EXITING')
106         print('!!!!YOUR CARD HAS BEEN LOCKED!!!!')
107         print('!!!!!!!!!!!!PLEASE CONTACT YOUR BRANCH!!!!!!!!!!!!')
108         print('*****')
109         print('-----')
110         exit()
111
112     print('-----')
113     print('*****')
114     print('LOGIN SUCCESSFUL, CONTINUE')
115     print('*****')
116     print('-----')
117     print()
118     print('-----')
119     print('*****')
120     print(str.capitalize(users[n]), 'welcome to ELECTRO ATM SYSTEM')
121     print('*****')
122     print('-----ELECTRO ATM SYSTEM-----')
123 # Main menu
124 while True:
125     # os.system('clear')
```

✓ 2 ^ v

Run: TW\_PROJECT x

⚙️ —

▶ Run ⚙️ TODO ⓘ Problems 📄 Terminal 🐍 Python Console

1 Event Log

```
123 # Main menu
124 while True:
125     # os.system('clear')
126     print('-----')
127     print('*****')
128     response = input(
129         'SELECT FROM FOLLOWING OPTIONS: \nStatement__(S) \nCash Withdraw__(W) \nCash Deposit__(C) \nChange PIN_(P) '
130         '\nQuit_____(Q) \nType The Letter Of Your Choices: ').lower()
131     print('*****')
132     print('-----')
133     valid_responses = ['s', 'w', 'c', 'p', 'q']
134     response = response.lower()
135     if response == 's':
136         print('-----')
137         print('*****')
138         print(str.capitalize(users[n]), 'YOU HAVE ', amounts[n], 'RUPEES IN YOUR ACCOUNT.')
139         print('*****')
140         print('-----')
141     elif response == 'w':
142         print('-----')
143         print('*****')
144         cash_out = int(input('ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: '))
145         print('*****')
146         print('-----')
147         if cash_out % 500 != 0 and cash_out % 2000 != 0:
```



TW\_PROJECT.py

```

142 print('-----')
143 print('*****')
144 cash_out = int(input('ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: '))
145 print('*****')
146 print('-----')
147 if cash_out % 500 != 0 and cash_out % 2000 != 0:
148     print('-----')
149     print('*****')
150     print('AMOUNT YOU WANT TO WITHDRAW MUST TO MATCH 500 AND 2000 RUPEES NOTES')
151     print('*****')
152     print('-----')
153 elif cash_out > amounts[n]:
154     print('-----')
155     print('*****')
156     print('YOU HAVE INSUFFICIENT BALANCE')
157     print('*****')
158     print('-----')
159 else:
160     amounts[n] = amounts[n] - cash_out
161     print('-----')
162     print('*****')
163     print('YOUR NEW BALANCE IS: ', amounts[n], 'RUPEES')
164     print('*****')
165     print('-----')
166 elif response == 'c':
167     print()
    
```

Run: TW\_PROJECT

Run TODO Problems Terminal Python Console

```
164         print('*****')
165         print('-----')
166     elif response == 'c':
167         print()
168         print('-----')
169         print('*****')
170         cash_in = int(input('ENTER AMOUNT YOU WANT TO LODGE: '))
171         print('*****')
172         print('-----')
173         print()
174         if cash_in % 500 != 0 and cash_in % 2000 != 0:
175             print('-----')
176             print('*****')
177             print('AMOUNT YOU WANT TO LODGE MUST TO MATCH 500 AND 2000 RUPEES NOTES')
178             print('*****')
179             print('-----')
180         else:
181             amounts[n] = amounts[n] + cash_in
182             print('-----')
183             print('*****')
184             print('YOUR NEW BALANCE IS: ', amounts[n], 'RUPEES')
185             print('*****')
186             print('-----')
187     elif response == 'p':
188         print('-----')
189         print('*****')
```

Project TW\_PROJECT.py x

```
186     print('-----')
187 elif response == 'p':
188     print('-----')
189     print('*****')
190     new_pin = str(getpass.getpass('ENTER A NEW PIN: '))
191     print('*****')
192     print('-----')
193     if new_pin.isdigit() and new_pin != pins & [n] and len(new_pin) == 4:
194         print('-----')
195         print('*****')
196         new_card_pin = str(getpass.getpass('CONFIRM NEW PIN: '))
197         print('*****')
198         print('-----')
199         if new_card_pin != new_pin:
200             print('-----')
201             print('*****')
202             print('PIN MISMATCH')
203             print('*****')
204             print('-----')
205         else:
206             pins[n] = new_pin
207             print('NEW PIN SAVED')
208     else:
209         print('-----')
210         print('*****')
```

Run: TW\_PROJECT x

Run TODO Problems Terminal Python Console

PyCharm 2020.3.5 available // Update... (32 minutes ago)

6:35 CRLF UTF-8 4 spaces Python 3.8 (TW\_PROJECT) Event Log



Project TW\_PROJECT.py x

```
203     print('*****')
204     print('-----')
205     else:
206         pins[n] = new_pin
207         print('NEW PIN SAVED')
208     else:
209         print('-----')
210         print('*****')
211         print('    NEW PIN MUST CONSIST OF 4 DIGITS \nAND MUST BE DIFFERENT TO PREVIOUS PIN')
212         print('*****')
213         print('-----')
214     elif response == 'q':
215         exit()
216     else:
217         print('-----')
218         print('*****')
219         print('RESPONSE NOT VALID')
220         print('*****')
221         print('-----')
222
```

Structure

Favorites

Run: TW\_PROJECT x

Run TODO Problems Terminal Python Console

PyCharm 2020.3.5 available // Update... (32 minutes ago)

Event Log

6:35 CRLF UTF-8 4 spaces Python 3.8 (TW\_PROJECT)

Project TW\_PROJECT.py x

Run: TW\_PROJECT x

```
"C:\Users\Advait\Desktop\degree\SE\SEM 4\Python\TW\TW_PROJECT\venv\Scripts\python.exe" "C:/Users/Advait/Desktop/degree/SE/SEM 4/Python/TW/TW_PROJECT/TW_PROJECT.py"
*****
*
*           Welcome to ELECTRO ATM SYSTEM
*
*
*****
ENTER USER NAME: ADVAIT
-----
*****
PLEASE ENTER PIN: 9008
*****
-----
-----
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices: S
*****
-----
-----
*****
Advait+ YOU HAVE 440000 DOLLARS IN YOUR ACCOUNT
```

```
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices: W
*****
-----
-----
*****
ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: 2500
*****
-----
-----
*****
YOUR NEW BALANCE IS: 4116508 RUPEES
*****
-----
-----
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
```

```
*****
YOUR NEW BALANCE IS:  4116508 RUPEES
*****
-----
-----
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices: W
*****
-----
-----
*****
ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: 300
*****
-----
-----
*****
AMOUNT YOU WANT TO WITHDRAW MUST TO MATCH 500 AND 2000 RUPEES NOTES
*****
-----
-----
```

```

Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices: W
*****
-----
*****
ENTER AMOUNT YOU WOULD LIKE TO WITHDRAW: 300
*****
-----
*****
AMOUNT YOU WANT TO WITHDRAW MUST TO MATCH 500 AND 2000 RUPEES NOTES
*****
-----
*****
SELECT FROM FOLLOWING OPTIONS:
Statement_(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices:
    
```



```
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
Cash Deposit__(C)
Change PIN_(P)
Quit_____(Q)
Type The Letter Of Your Choices: C
*****
-----

-----
*****
ENTER AMOUNT YOU WANT TO LODGE: 2500
*****
-----

-----
*****
YOUR NEW BALANCE IS: 4119008 RUPEES
*****
-----

-----
*****
SELECT FROM FOLLOWING OPTIONS:
Statement__(S)
Cash Withdraw__(W)
```