PYTHON – TW- COURSE- PROJECT

TOPIC : ATM SYSTEM

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

NAME	PRN
TAJ MOHAMMED KAMAL AHMED SHAH	4119006
ANSARI MOHAMMED HAMZA SHAKEEL AHMED	4119007
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AAKASH NANHKURAM GUPTA	4119009

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 verfication 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 UNSUCCESFUL 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('-----------------')
```

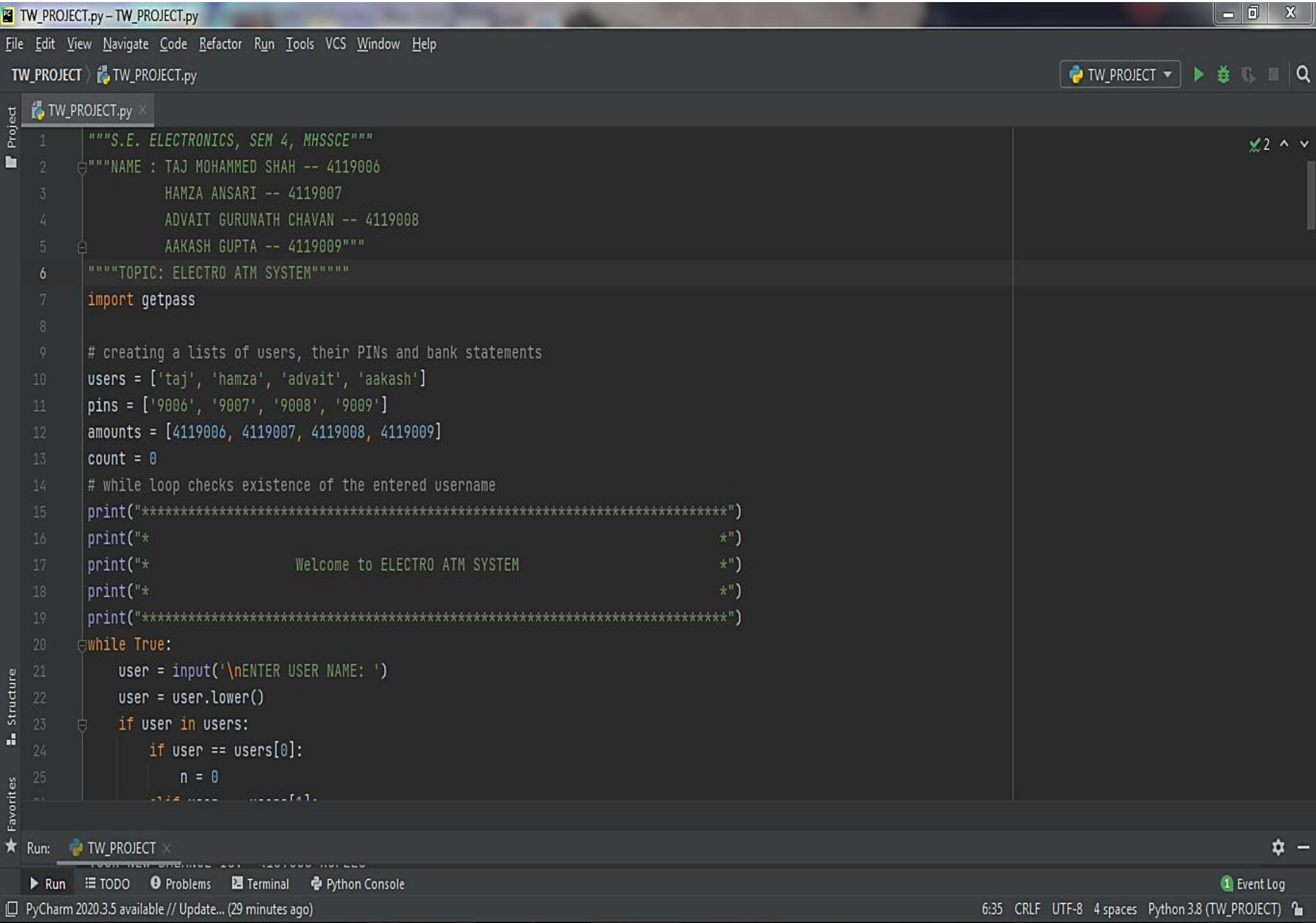
PROGRAM (CONT) :

```
        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 :


TW_PROJECT.py – TW_PROJECT.py
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TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
"""S.E. ELECTRONICS, SEM 4, MHSSCE"""
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users = ['taj', 'hamza', 'advait', 'aakash']
pins = ['9006', '9007', '9008', '9009']
amounts = [4119006, 4119007, 4119008, 4119009]
count = 0
# while loop checks existence of the entered username
print("**********")
print("* *")
print("* Welcome to ELECTRO ATM SYSTEM *")
print("* *")
print("**********")
while True:
user = input('\nENTER USER NAME: ')
user = user.lower()
if user in users:
if user == users[0]:
n = 0
Run: TW_PROJECT
Run TODO Problems Terminal Python Console
Event Log
PyCharm 2020.3.5 available // Update... (29 minutes ago)
6:35 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)

TW_PROJECT.py – TW_PROJECT.py

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TW_PROJECT 〉 TW_PROJECT.py

TW_PROJECT.py

```
while True:
    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('---------------')

# comparing pin
while count <= 3:
    print('-----------------')
    print('*****************')
    pin = input('PLEASE ENTER PIN: ')
```

Run: TW_PROJECT

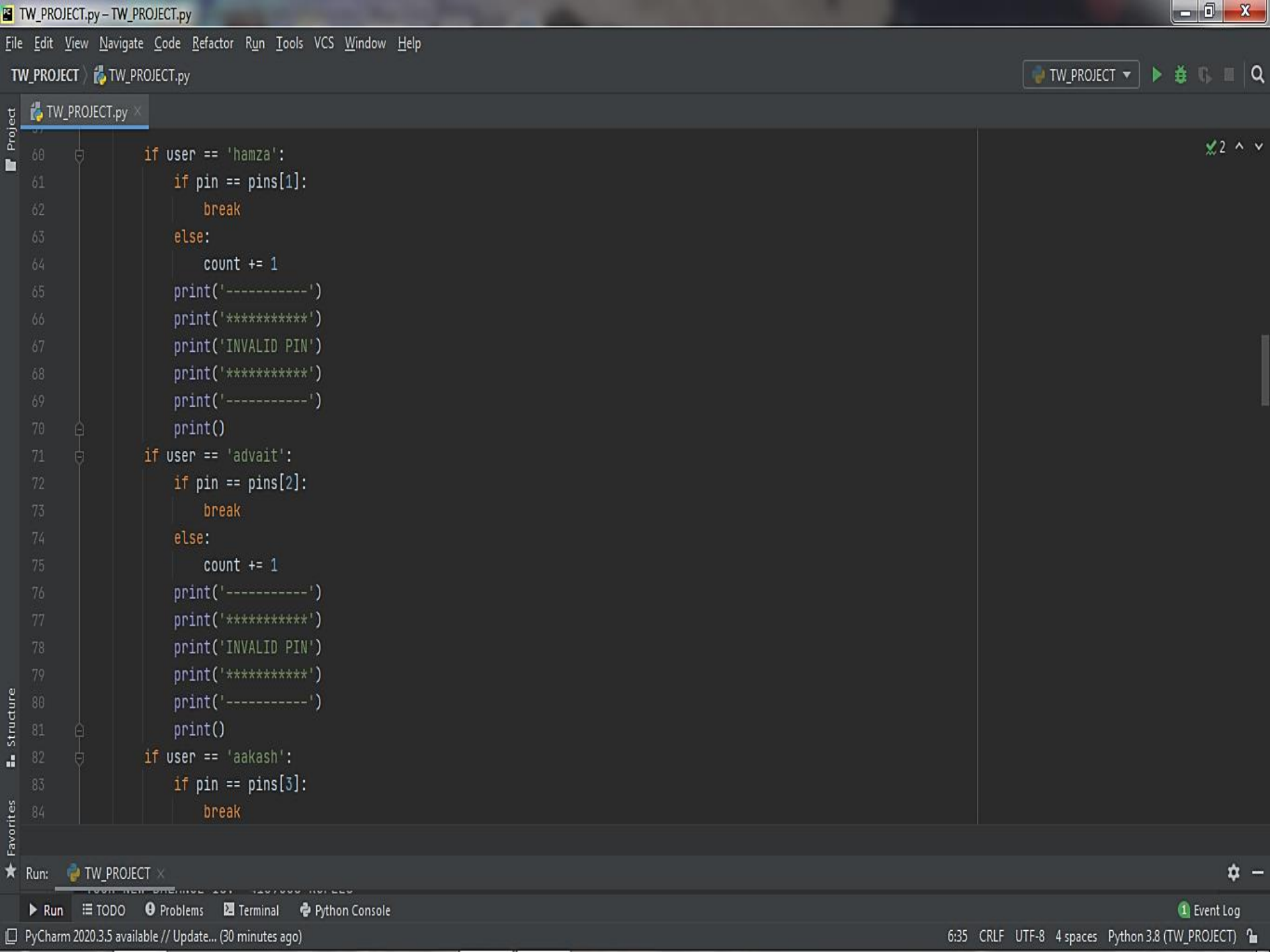
Run TODO Problems Terminal Python Console Event Log

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

6:35 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)

```
# 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()

        if user == 'hamza':
            if pin == pins[1]:
                break
            else:
                count += 1
```


TW_PROJECT.py – TW_PROJECT.py
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TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Project
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
Structure
Favorites
Run: TW_PROJECT
Run TODO Problems Terminal Python Console
Event Log
PyCharm 2020.3.5 available // Update... (30 minutes ago)
6:35 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)

```
            print()
        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
    # in case of a valid pin- continuing, or exiting
    if count == 3:
        print('-----------------------------------------------------')
        print('*****************************************************')
        print('3 UNSUCCESFUL PIN ATTEMPTS, EXITING')
```

```
            count += 1
        # in case of a valid pin- continuing, or exiting
        if count == 3:
            print('-----------------------------------------------------')
            print('*****************************************************')
            print('3 UNSUCCESFUL 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-----------')
    # Main menu
    while True:
        # os.system('clear')
```

TW_PROJECT.py – TW_PROJECT.py

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TW_PROJECT 〉 TW_PROJECT.py

TW_PROJECT

TW_PROJECT.py

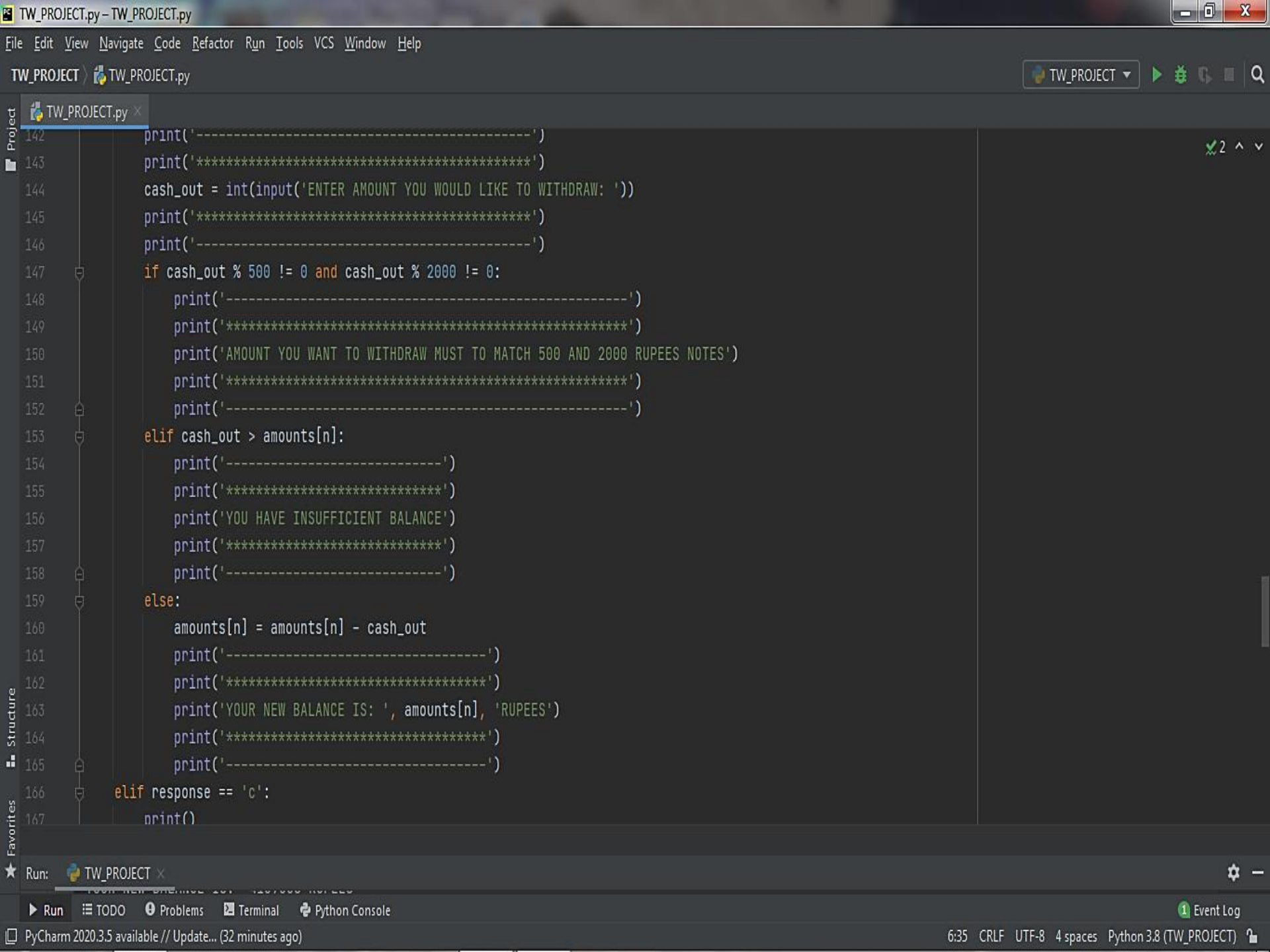
```
# Main menu
while True:
    # os.system('clear')
    print('-----------------------------')
    print('*****************************')
    response = input(
        'SELECT FROM FOLLOWING OPTIONS: \nStatement__(S) \nCash Withdraw___(W) \nCash Deposit___(C)  \nChange PIN_(P)  '
        '\nQuit_______(Q) \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('-----------------------------------------')
    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:
```

Run: TW_PROJECT

Run TODO Problems Terminal Python Console Event Log

PyCharm 2020.3.5 available // Update... (31 minutes ago)

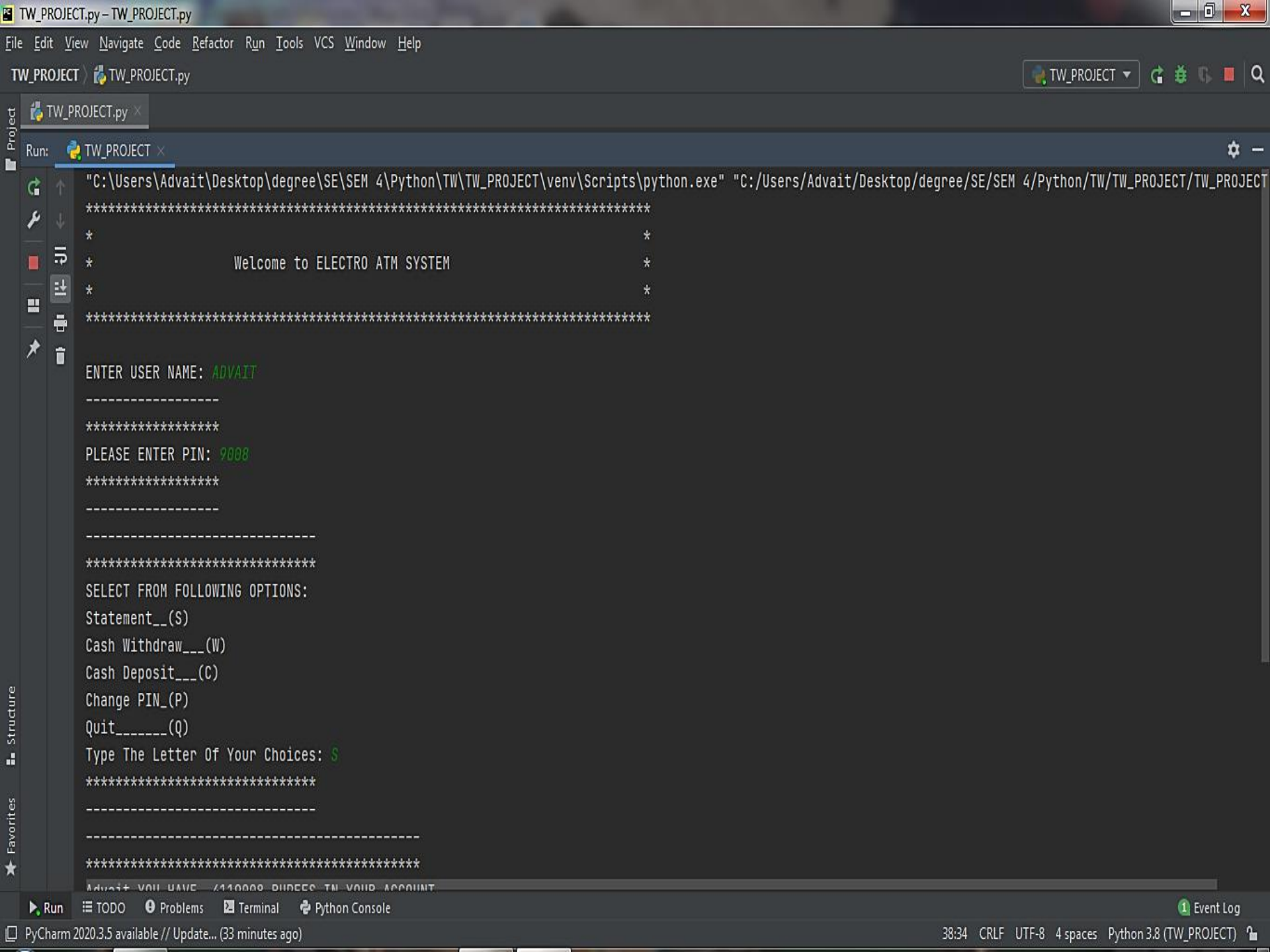
6:35 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)


TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
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('----------')
else:
amounts[n] = amounts[n] - cash_out
print('----------')
print('**********')
print('YOUR NEW BALANCE IS: ', amounts[n], 'RUPEES')
print('**********')
print('----------')
elif response == 'c':
print()
Run: TW_PROJECT
Run TODO Problems Terminal Python Console
Event Log
PyCharm 2020.3.5 available // Update... (32 minutes ago)
6:35 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)

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

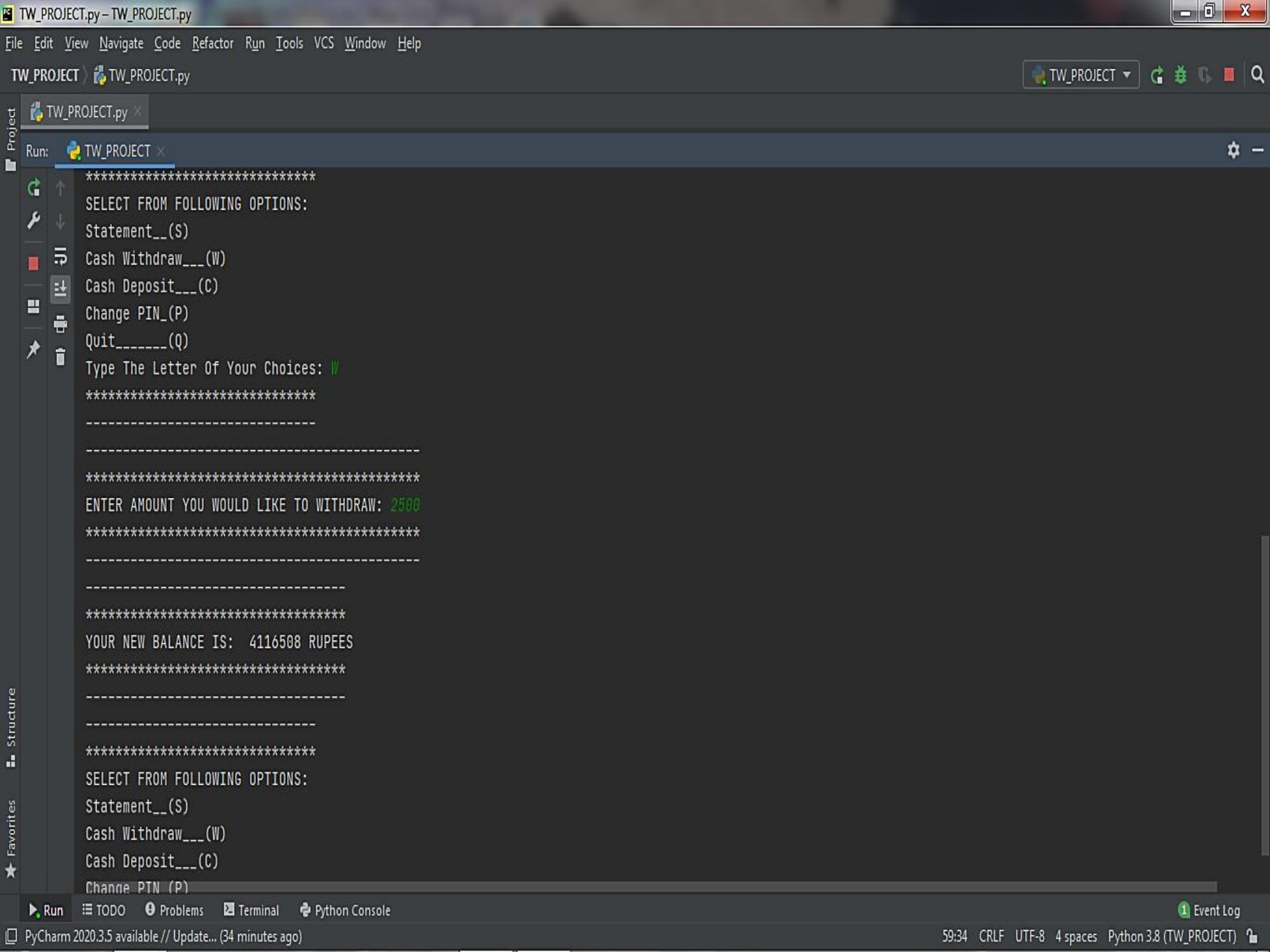
```
                print('************')
                print('------------')
            else:
                pins[n] = new_pin
                print('NEW PIN SAVED')
        else:
            print('-----------------------------------')
            print('***********************************')
            print('   NEW PIN MUST CONSIST OF 4 DIGITS \nAND MUST BE DIFFERENT TO PREVIOUS PIN')
            print('***********************************')
            print('-----------------------------------')
    elif response == 'q':
        exit()
    else:
        print('-----------------')
        print('*****************')
        print('RESPONSE NOT VALID')
        print('*****************')
        print('-----------------')

```


TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Run: TW_PROJECT
"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
****
* *
* 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
****

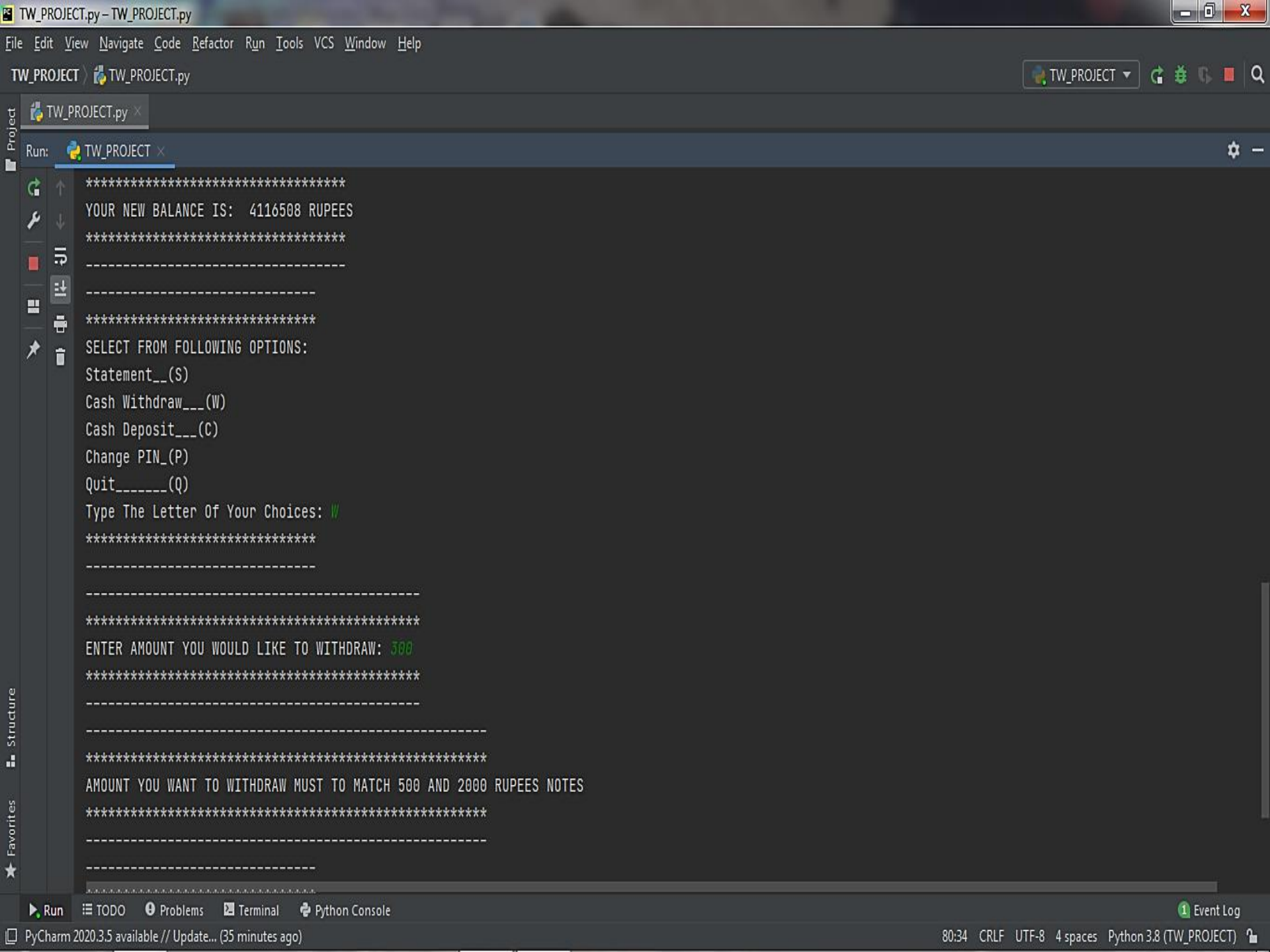
****
Run
TODO
Problems
Terminal
Python Console
Event Log
PyCharm 2020.3.5 available // Update... (33 minutes ago)
38:34 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)


TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Project
Run: TW_PROJECT
****
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)
Structure
Favorites
Run
TODO
Problems
Terminal
Python Console
Event Log
PyCharm 2020.3.5 available // Update... (34 minutes ago)
59:34 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)

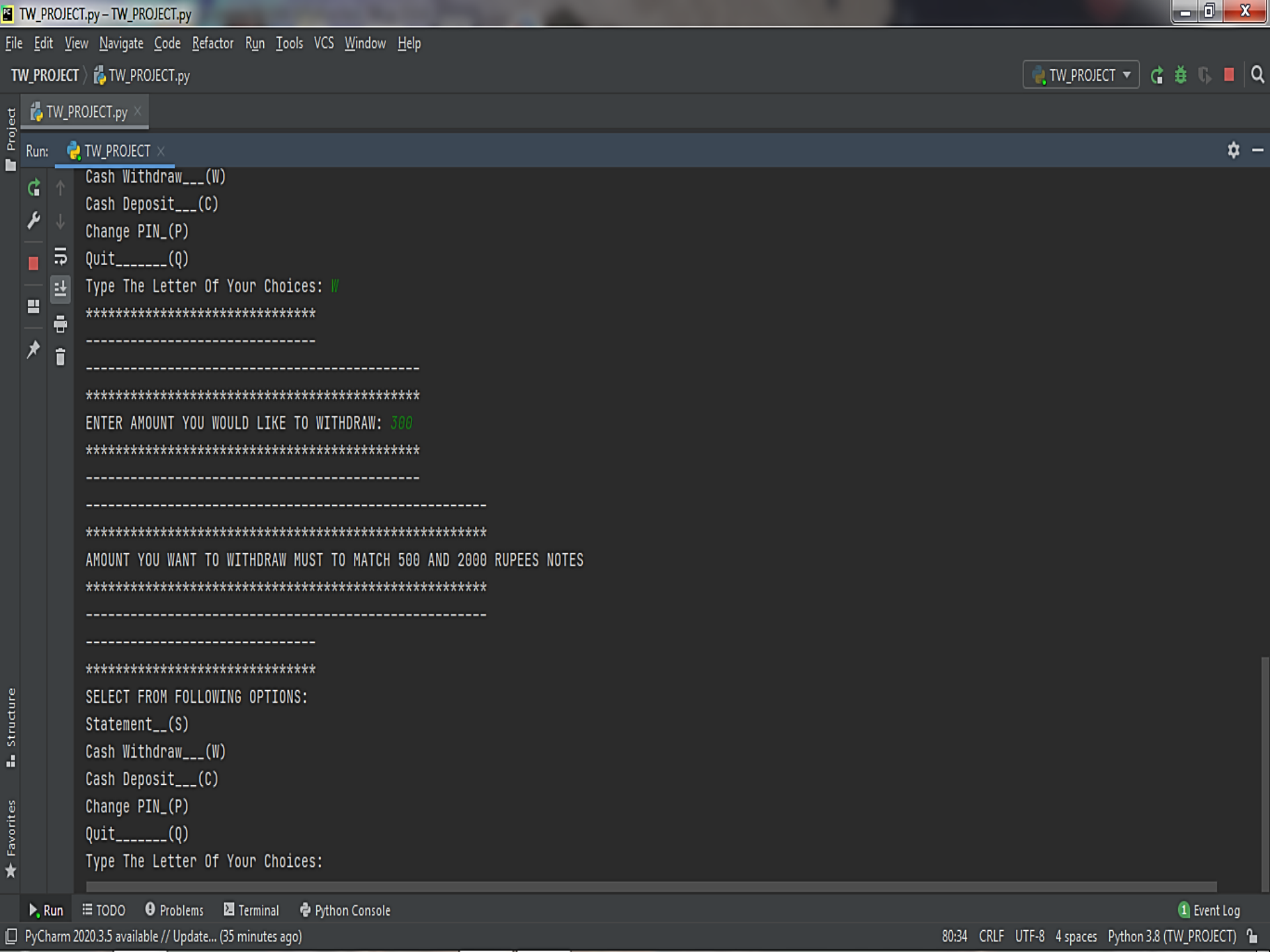

TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Run: TW_PROJECT
****
YOUR NEW BALANCE IS: 4116508 RUPEES
****

****
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
****

Run TODO Problems Terminal Python Console
Event Log
PyCharm 2020.3.5 available // Update... (35 minutes ago)
80:34 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)


TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Project
Run: TW_PROJECT
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:
Structure
Favorites
Run
TODO
Problems
Terminal
Python Console
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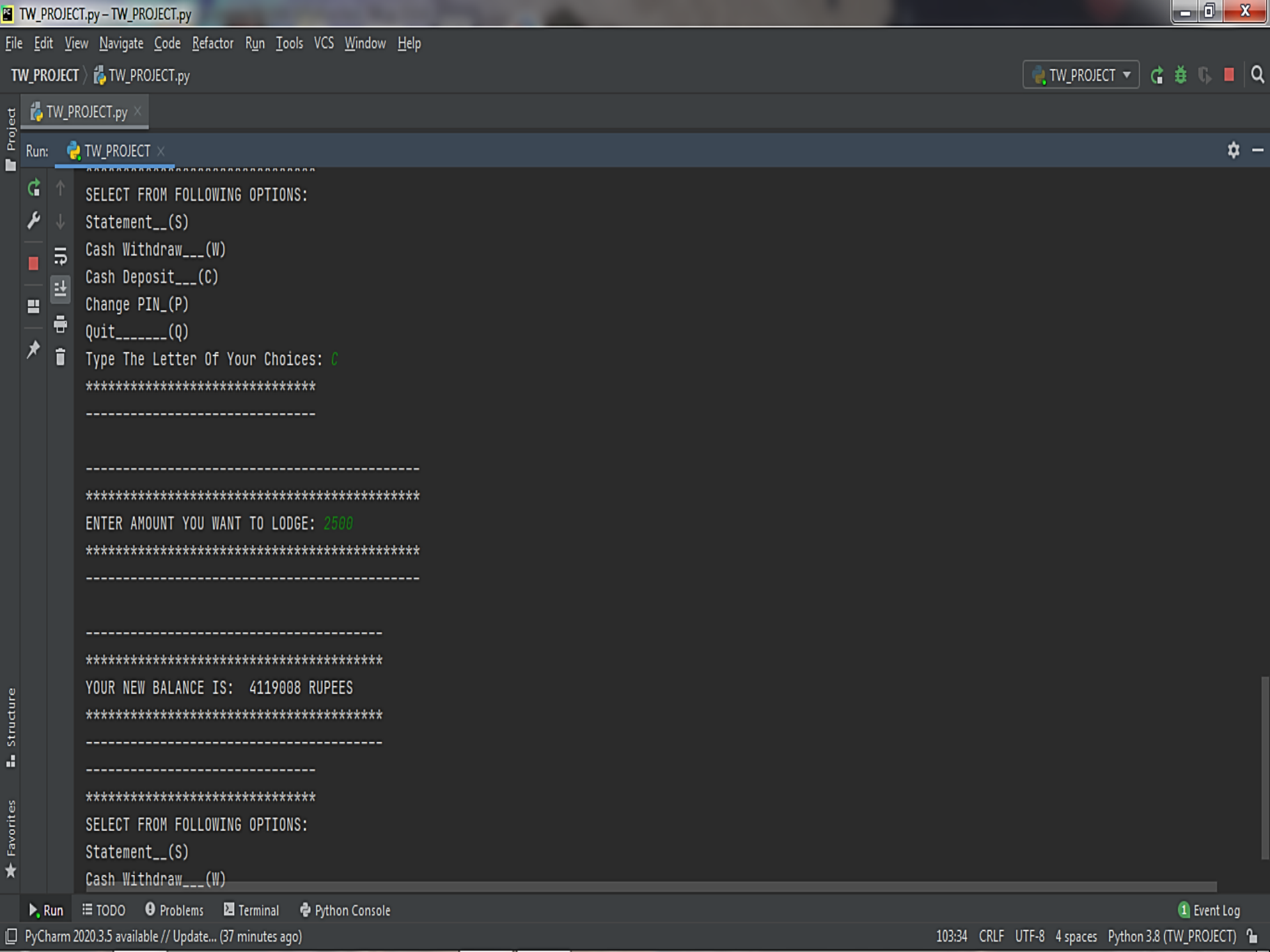
PyCharm 2020.3.5 available // Update... (35 minutes ago)
80:34 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)


TW_PROJECT.py – TW_PROJECT.py
File Edit View Navigate Code Refactor Run Tools VCS Window Help
TW_PROJECT 〉 TW_PROJECT.py
TW_PROJECT
TW_PROJECT.py
Run: TW_PROJECT
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)
Run TODO Problems Terminal Python Console
Event Log
PyCharm 2020.3.5 available // Update... (37 minutes ago)
103:34 CRLF UTF-8 4 spaces Python 3.8 (TW_PROJECT)