ASSIGNMENT – 1 **Name: Avinaash Venkat B**

TOPIC : STRINGS

1. **Domain Checker Program**

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter Email Address
(Diamond)
Does email contain "@gmail.com" ?
(Parallelogram)
Display "Email is Valid"
(Parallelogram)
Display "Email is not valid"
(Oval)
END

Code

```
n = input("Enter the Email Address: ").strip()

if '@gmail.com' in n:

    print("Email is Valid")

else:

    print("Email is not valid")
```

ouput:

```
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26> python -u "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assignment-1\String\domain_checker copy 2.py"
Enter the Email Address: bass.avinaashvenkat@gmail.com
Email is Valid
```

2. **Reverse Password Program**

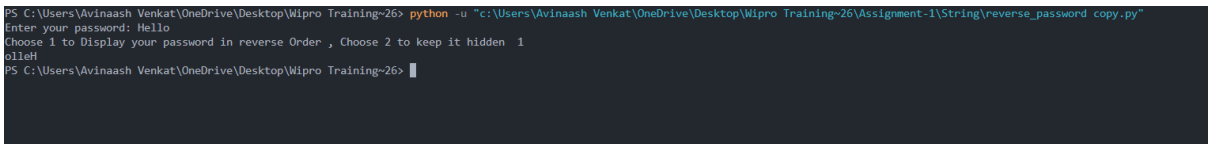
Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter password
(Parallelogram)
Enter method choice
(Diamond)
Is method equal to 1 ?
(Parallelogram)
Display password in reverse order
(Diamond)
Is method equal to 2 ?
(Parallelogram)

Display password as hidden symbols
(Oval)
END

Code

```
n = str(input("Enter your password: "))

method = int(input("Choose 1 to Display your password in reverse Order , Choose 2 to keep it hidden "))

match method:

    case 1:

        print(n[::-1])

    case 2:

        print(f'Password is confidential :{"#"*len(n)}')
```

OUPUT:



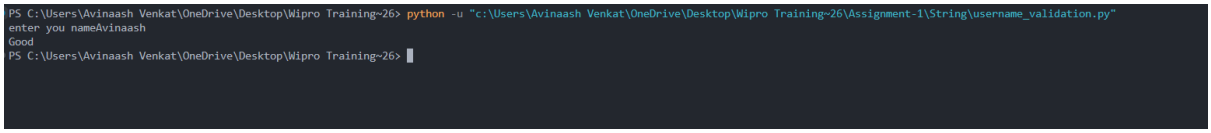
3. Username Validation Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter username
(Diamond)
Is length of username >= 8 ?
(Parallelogram)
Display "Good"
(Parallelogram)
Display "Please Enter username greater than or equal to 8"
(Oval)
END

Code

```
n = input("enter you name").strip()

if len(n)>=8:

    print("Good")

else:

    print("Please Enter username greater than or equal to 8")
```

Output



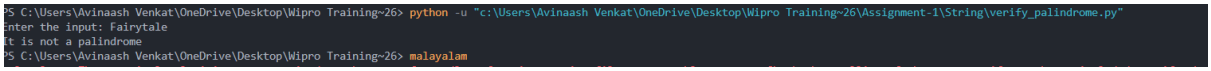
4. Verify Palindrome Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter input string
(Diamond)
Is reversed string equal to original ?
(Parallelogram)
Display "It is a palindrome"
(Parallelogram)
Display "It is not a palindrome"
(Oval)
END

Code

```
n= input("Enter the input: ").strip()

if n[::-1] == n:

   print("It is a palindrome")

else:

   print("It is not a palindrome")
```

Output



5. Vowels Count Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter feedback
(Rectangle)
Initialize vowel count to 0
(Rectangle)
Check each character
(Diamond)
Is character a vowel ?
(Rectangle)
Increase vowel count
(Parallelogram)

Display vowel count
(Oval)
END

Code

```
feedback = input("Enter your valuable Feeback: ").strip()

q = 0

for i in feedback:

   if i in "aeiouAEIOU":

      q+=1

print(f" The count of vowels in feedback is {q}")
```

Output

TOPIC : LISTS

1. **Expense Tracker Program**

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter list of expenses
(Rectangle)
Calculate total expenses
(Rectangle)
Calculate average expenses
(Parallelogram)
Display total and average
(Oval)
END

Code

```
n = list(map(int,input("Enter your expenses: ").split()))

print(f'Total-Expenses-> {sum(n)} Average of expenses-> {sum(n)//len(n)}')
```

OUTPUT:

2. **Product Price Program**

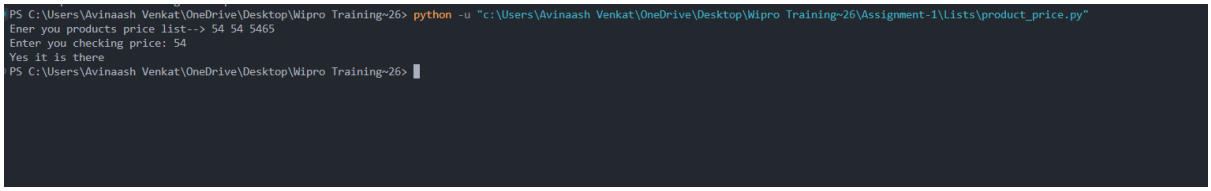
Flowchart Pseudocode
(Oval)

START
(Parallelogram)
Enter product price list
(Parallelogram)
Enter checking price
(Diamond)
Is price present in list ?
(Parallelogram)
Display result
(Oval)
END

Code

```
products = list(map(int,input("Ener you products price list--> ").split()))

price = int(input("Enter you checking price: "))

print("Yes it is there" if price in products else " No it is not there Man!!!")
```

output



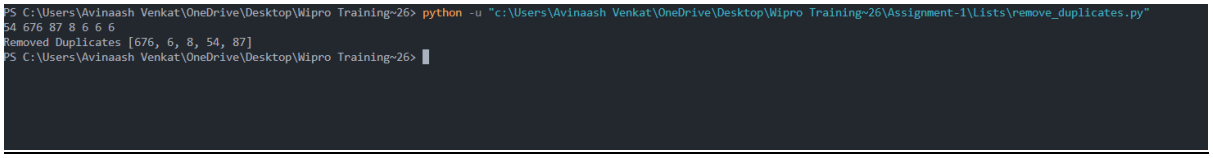
3. Remove Duplicates Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter list of numbers
(Rectangle)
Remove duplicate elements
(Parallelogram)
Display updated list
(Oval)
END

Code

```
n = list(map(int,input().split()))

ans = list(set(n))

print(f'Removed Duplicates {ans}')
```

Output:



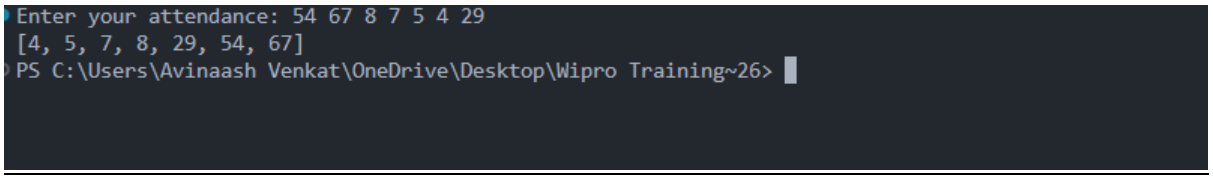
4. Attendance Sort Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter attendance list
(Rectangle)
Apply bubble sort
(Rectangle)
Swap if needed
(Parallelogram)
Display sorted list
(Oval)
END

Code

```
attendance = list(map(int,input("Enter your attendance: ").split()))

def bubble_sort(lst):
    Sorted = False
    while not Sorted:
        Sorted = True
        for i in range(len(lst)-1):
            if lst[i]>lst[i+1]:
                Sorted = False
                lst[i],lst[i+1] = lst[i+1],lst[i]
    return lst

print(bubble_sort(attendance))
```

Output:



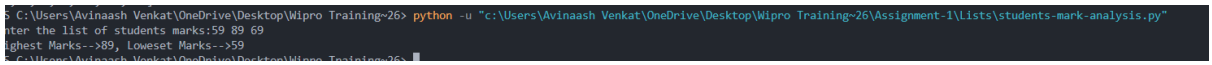
5. Students Mark Analysis Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter students marks
(Rectangle)
Find highest mark
(Rectangle)
Find lowest mark
(Parallelogram)
Display highest and lowest
(Oval)
END

Code

```
marks = list(map(int,input("Enter the list of students marks:" ).split()))

print(f'Highest Marks-->{max(marks)}, Loweset Marks-->{min(marks)}')
```

Output:



TOPIC : FOR LOOPS

1. **Attendance Counter Program**

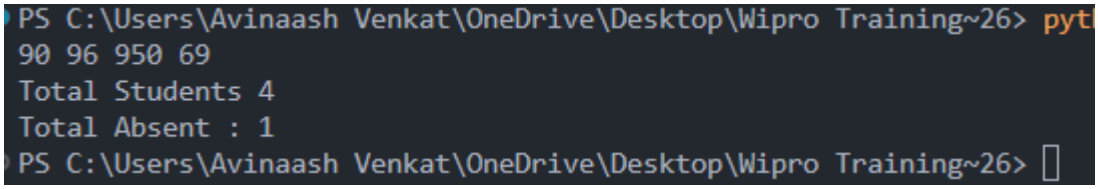
Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter attendance list
(Rectangle)
Initialize present and absent count
(Rectangle)
Check each value
(Diamond)
Is value zero ?
(Rectangle)
Increase absent
(Rectangle)
Increase present
(Parallelogram)
Display totals
(Oval)
END

Code

```
attendance=  list(map(int,input().split()))
```

```
val = 0

absent = 1

for i in attendance:

   if i!=0:

      val+=1

   else:

      absent+=1

print(f"Total Students {val}")

if absent:

   print(f"Total Absent : {absent}")

else:

   print(f"Total Absent: {'Nil'}")
```

Ouput:



2. **Count Even Program**

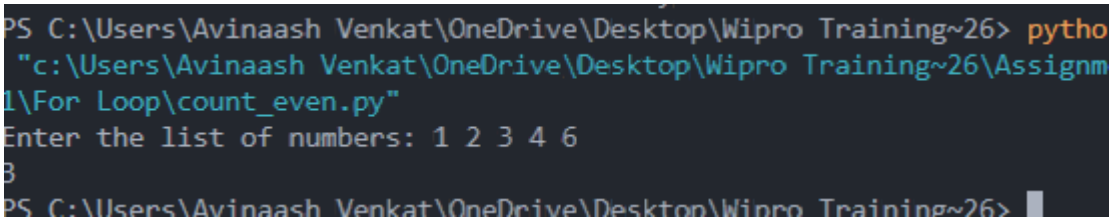
Flowchart Pseudocode

(Oval)
START
(Parallelogram)
Enter list of numbers
(Rectangle)
Initialize even count to 0
(Rectangle)
Check each number
(Diamond)
Is number even ?
(Rectangle)
Increase even count
(Parallelogram)
Display even count
(Oval)
END

Code

```
lst = list(map(int,input("Enter the list of numbers: ").split()))

cnt = 0

for i in lst:

    if i%2==0:

        cnt +=1

print(cnt)
```

Output:



3. First N Generator Program

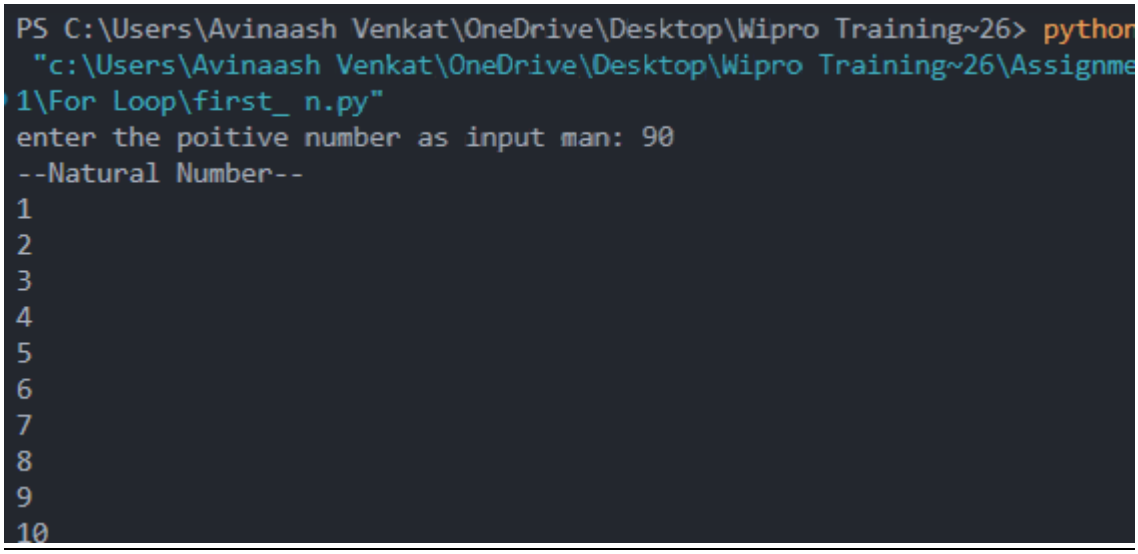
Flowchart Pseudocode

(Oval)
START
(Parallelogram)
Enter positive number
(Diamond)
Is number greater than zero ?
(Rectangle)
Generate numbers from 1 to N
(Parallelogram)
Display natural numbers
(Parallelogram)
Display error message
(Oval)
END

Code

```
n = int(input("enter the poitive number as input man: "))

if n > 0:

    print("--Natural Number-- ")

    for i in range(1,n+1):

        print(i)

else:

    print("I said before right ?")
```

Output:



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4. **Password Validator Program**

Flowchart Pseudocode

(Oval)
START
(Parallelogram)
Enter password
(Rectangle)
Initialize check flag
(Rectangle)
Check each character
(Diamond)
Is character digit or special symbol ?
(Rectangle)
Set check flag true
(Diamond)
Is check flag true ?
(Parallelogram)
Display strong password
(Parallelogram)
Display weak password
(Oval)
END

Code

```
n = input("Enter your password: ")

check = False

for i in n:

    if i in "!@#$%^&*()_+" or i in "1234567890":

        check = True

if check:
```

```
    print("Password is Strong: ")
else:
    print("Password is Weak")
```

Output:

```
 "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assignment
1\For Loop\password.py"
Enter your password: Avinaash
Password is Weak
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26>
```

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5. **Tables Generator Program**

Flowchart Pseudocode

(Oval)
START
(Parallelogram)
Enter number
(Rectangle)
Repeat from 1 to 10
(Rectangle)
Multiply number with counter
(Parallelogram)
Display table
(Oval)
END

Code

```
tables = int(input("Enter the number: "))

for i in range(1,11):
    print(f"{tables} X {i} = {tables*i}")
```

Output:

```
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26> pyth
 "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assign
1\For Loop\tables.py"
Enter the number: 10
10 X 1 = 10
10 X 2 = 20
10 X 3 = 30
10 X 4 = 40
10 X 5 = 50
10 X 6 = 60
10 X 7 = 70
10 X 8 = 80
10 X 9 = 90
10 X 10 = 100
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26>
```

TOPIC : WHILE LOOPS

1. **ATM PIN RETRY Program**

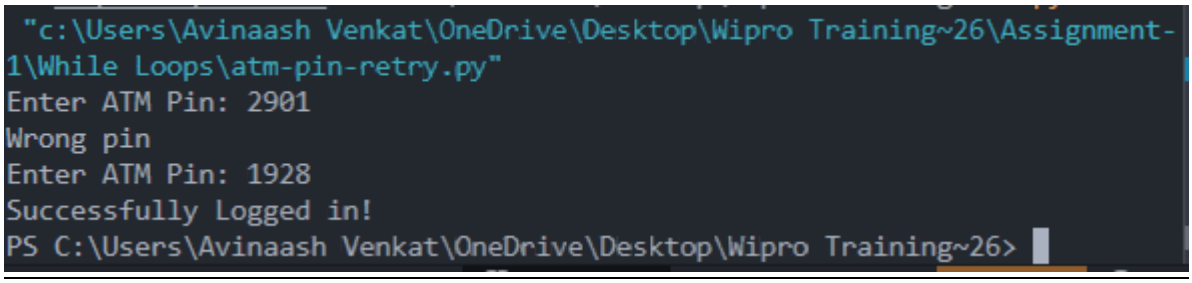
Flowchart Pseudocode
(Oval)
START
(Rectangle)
Set correct pin and chance
(Parallelogram)
Enter ATM pin
(Diamond)
Is pin correct ?
(Parallelogram)
Display success
(Rectangle)
Increase chance
(Parallelogram)
Display wrong pin
(Diamond)
Is chance equal to 3 ?
(Parallelogram)
Display card blocked
(Oval)
END

Code

```
correct_pin = "1928"

chance = 0

while chance <= 3:

    atm = input("Enter ATM Pin: ").strip()

    if atm==correct_pin:
```

```
        print("Successfully Logged in! ")
        break
    else:
        chance +=1
        print("Wrong pin")
if chance==3:
    print("Card Blocked")
```

Output:



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2. **Countdown Program**

Flowchart Pseudocode

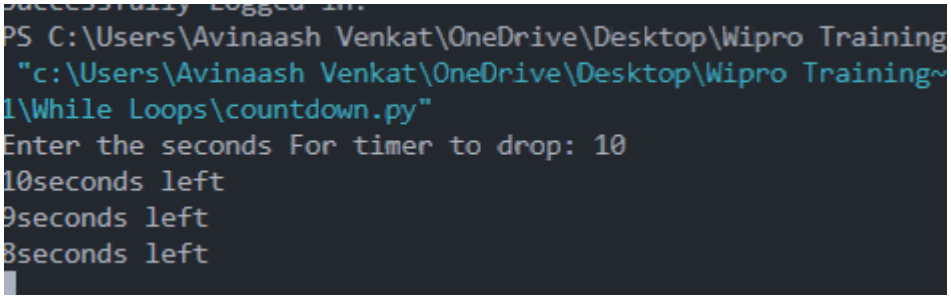
(Oval)
START
(Parallelogram)
Enter timer value
(Diamond)
Is timer >= 0 ?
(Parallelogram)
Display seconds
(Rectangle)
Decrease timer
(Parallelogram)
Display time over
(Oval)
END

Code

```
import time

timer = int(input("Enter the seconds For timer to drop: "))

while timer>=0:
    print(f'{timer}seconds left')
    timer -= 1
```

```
    time.sleep(0.9)

print("Time over !!")
```

Output



3. **Guess Game Program**

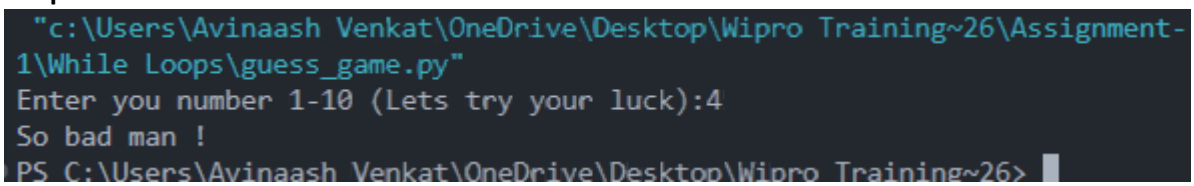
Flowchart Pseudocode

(Oval)
START
(Parallelogram)
Enter number
(Rectangle)
Generate random number
(Diamond)
Is guess correct ?
(Parallelogram)
Display win message
(Parallelogram)
Display lose message
(Oval)
END

Code

```
import random

value = int(input("Enter you number 1-10 (Lets try your luck):"))

if value == (random.randint(1,10)):

    print("Guessing Is blast Congrats : ",value)

else:

    print("So bad man !")
```

Output



Password Retry Program

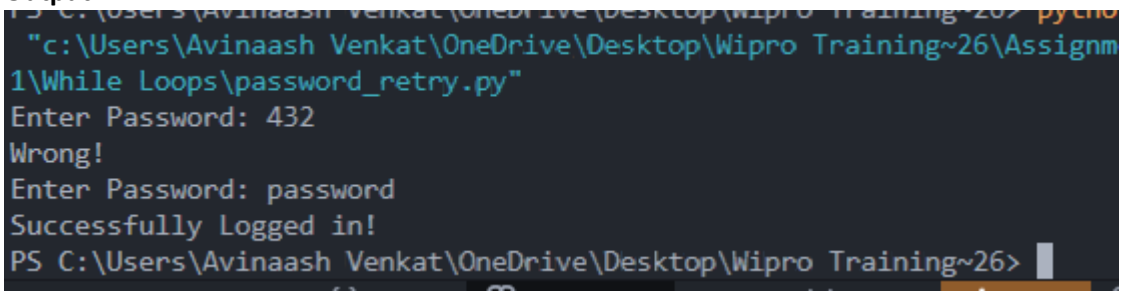
Flowchart Pseudocode

(Oval)
START
(Rectangle)
Set correct password and chance
(Parallelogram)
Enter password
(Diamond)
Is password correct ?
(Parallelogram)
Display success
(Rectangle)
Increase chance
(Diamond)
Is chance equal to 3 ?
(Parallelogram)
Display retry message
(Oval)
END

Code

```
import time

correct_pin = "password"

chance = 0

while chance <= 3:

   password = input("Enter Password: ").strip()

   if password==correct_pin:

      print("Successfully Logged in! ")

      break

   else:

      chance +=1

      print("Wrong!")

if chance==3:

   print("try again after 10 seconds")
```

Output



Shopping Cart Program

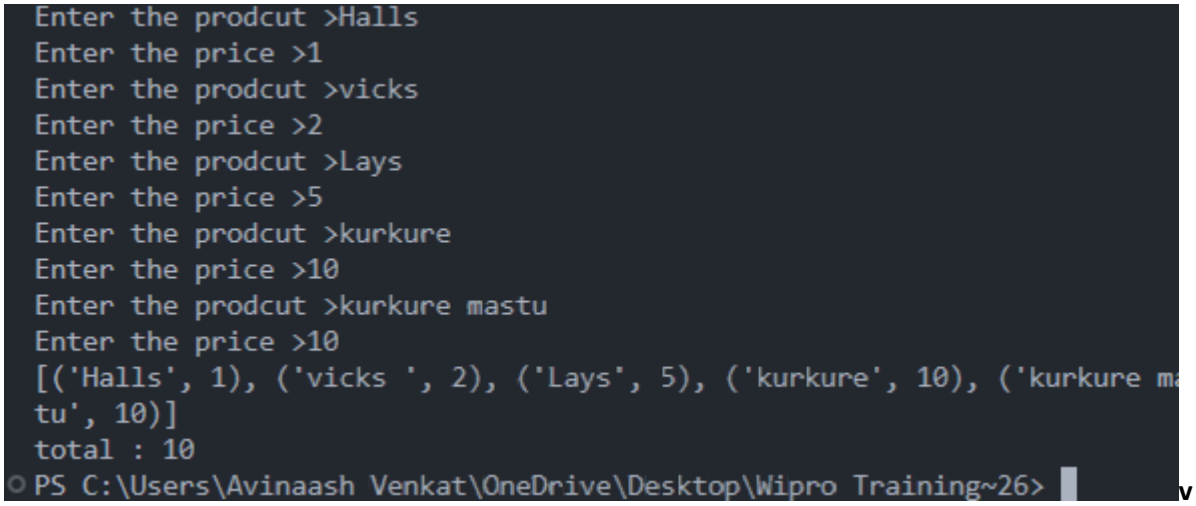
Flowchart Pseudocode

(Oval)
START
(Rectangle)
Initialize shopping cart
(Rectangle)
Add products and prices
(Rectangle)
Calculate total
(Parallelogram)
Display total
(Oval)
END

Code

```
shopping_cart = []

for i in range(5):

    product = input("Enter the prodcut >")

    price = int(input("Enter the price >"))

    shopping_cart.append((product,price))

tot = 0

i = 0

print(shopping_cart)

while i < len(shopping_cart):

    tot += shopping_cart[i][1]

    i+=1

print(f'total : {tot}')
```

Output



TOPIC : CONDITIONAL CASES

1. Driving License Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter age
(Diamond)
Is age >= 18 ?
(Parallelogram)
Display eligible message
(Parallelogram)
Display not eligible message
(Oval)
END

Code

```
age = int(input("Enter your age: "))

if age >= 18:

   print("Eligible for Driving License")

else:

   print("Not Eligible for Driving License")
```

Output:

```
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26> python -u
 "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assignment-
1\Conditional\driving.py"
Enter your age: 18
Do you have Lisense
Choose 0 for No or 1 for Yes 0
You are not eligible please take lisense
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26>
```

2. EB BILL Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter units consumed
(Diamond)
Check units range
(Rectangle)
Calculate bill
(Parallelogram)
Display bill amount
(Oval)
END

Code

```
units = int(input("Enter units: "))

if units <= 100:

   bill = units * 1

elif units <= 200:

   bill = (100*1) + (units-100)*2

else:

   bill = (100*1) + (100*2) + (units-200)*3

print("Bill Amount:", bill)
```

Output:

```
 "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assig
1\Conditional\eb.py"
Enter total units consumed: 100
Your Electricity Bill is: 100
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26>
```

3. Exam Result Program

Flowchart Pseudocode
(Oval)

START
(Parallelogram)
Enter marks
(Diamond)
Check marks range
(Parallelogram)
Display grade
(Oval)
END

Code

```
marks = int(input("Enter the marks to know your Grade: "))

if marks >= 90:

    print("A grade")

elif marks >= 75:

    print("B grade")

elif marks >= 50:

    print("C grade")

else:

    print("Fail")
```

Output:

```
PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26> python -u
 "c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assignment-
1\Conditional\exam_result.py"
Enter the marks to know your Grade: 90 86 95 1
A
Topper
B
Average
A
Topper
F
Retry Dont worry ,God is with you.
```

4. Loan Eligibility Program

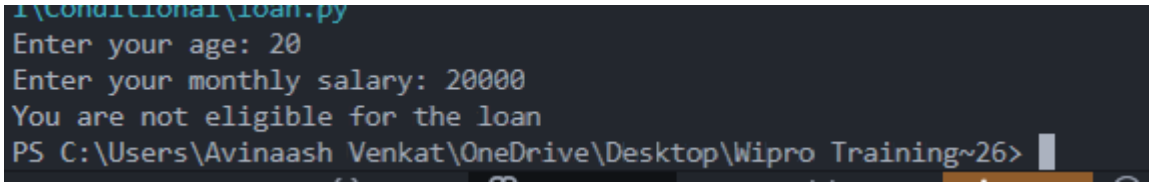
Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter age and income
(Diamond)
Check eligibility
(Parallelogram)

Display result
(Oval)
END

Code

```
age = int(input("Enter age: "))

income = int(input("Enter income: "))

if age >= 21 and income >= 20000:

    print("Eligible for Loan")

else:

    print("Not Eligible for Loan")
```

Output



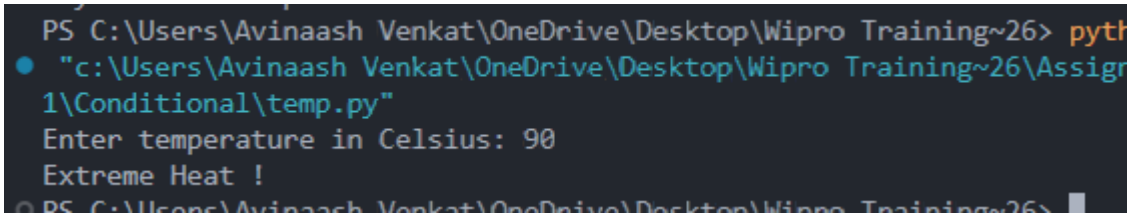
5. Temperature Program

Flowchart Pseudocode
(Oval)
START
(Parallelogram)
Enter temperature
(Diamond)
Check temperature range
(Parallelogram)
Display message
(Oval)
END

Code

```
temp = int(input("Enter temperature: "))

if temp < 0:

    print("Freezing")

elif temp <= 30:

    print("Normal")

else:

    print("High Temperature")
```

Output


PS C:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26> pyth
"c:\Users\Avinaash Venkat\OneDrive\Desktop\Wipro Training~26\Assign
1\Conditional\temp.py"
Enter temperature in Celsius: 90
Extreme Heat !