الاسم: إيلين عبدالله غصة

الرقم الجامعي:2258

وظيفة برمجة p1

Question 1:

A-If you have two lists, L1=['HTTP','HTTPS','FTP','DNS'] L2=[80,443,20,53], convert it to generate this dictionary d={'HTTP':80,'HTTPS':443,'FTP':20,'DNS':53 }

```
d= { }
L1 = ['HTTP','HTTPS','FTP','DNS']
L2 = [80,433,21,53]
for i,j in zip(L1,L2):
    d[i]=j
print(d)
```

```
C:\python312\python.exe "C:\Users\lenovo\Desktop\lec6 codes\1.py"
{'HTTP': 80, 'HTTPS': 433, 'FTP': 21, 'DNS': 53}
```

B- Write a Python program that calculates the factorial of a given number entered by user.

1.py 2.py

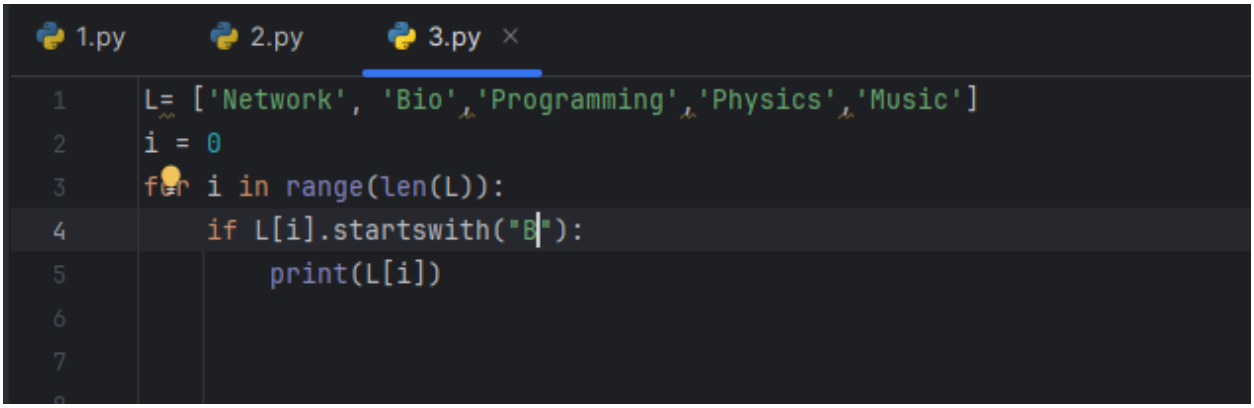
```
1  x=int(input())
2  f=1
3  for i in range(1,x+1):
4      f=f*i
5  print(f)
6
```

```
C:\python312\python.exe "C:\Users\lenovo\Desktop\lec6 codes\2.py"
5
120
```

C- L=[‘Network’ , ’Bio’ , ’Programming’, ‘Physics’ , ‘Music’]

In this exercise, you will implement a Python program that reads the items of the previous list and identifies the items that starts with ‘B’ letter, then print it on screen.

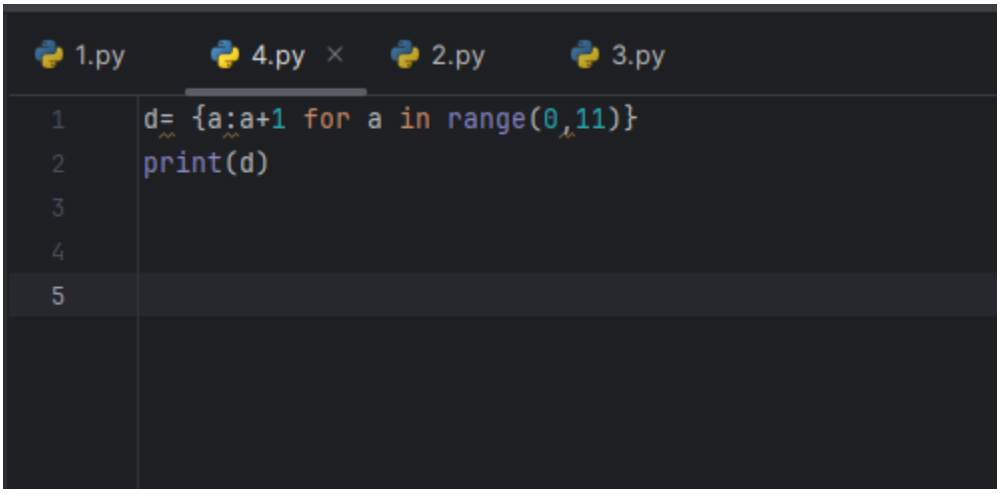
Tips: using loop, ‘Len ()’ , starts with() method




```
C:\python312\python.exe "C:\Users\lenovo\Desktop\lec6 codes\3.py"
Bio
```

D: Using Dictionary comprehension, Generate this dictionary

d={0:1,1:2,2:3,3:4,4:5,5:6,6:7,7:8,8:9,9:10,10:11}




```
C:\python312\python.exe "C:\Users\lenovo\Desktop\lec6 codes\4.py"
{0: 1, 1: 2, 2: 3, 3: 4, 4: 5, 5: 6, 6: 7, 7: 8, 8: 9, 9: 10, 10: 11}
```

Question 2:

Convert from Binary to Decimal.

Write a Python program that converts a Binary number into its equivalent Decimal number.

The program should start reading the binary number from the user. Then the decimal equivalent number must be calculated. Finally, the program must display the equivalent decimal number on the screen.

Tips: solve input errors.

1.py 4.py binary.py 2.py 3.py

```
b_num = list(input("Input a binary number: "))
value = 0

for i in range(len(b_num)):
    digit = b_num.pop()
    if digit == '1':
        value = value + pow(2, i)
print("The decimal value of the number is", value)
```

```
C:\python312\python.exe "C:\Users\lenovo\Desktop\lecó codes\binary.py"
Input a binary number: 100
The decimal value of the number is 4
```

Question 3:

Working with Files" Quiz Program".

Type python quiz program that takes a text or json or csv file as input for (20 (Questions, Answers)). It asks the questions and finally computes and prints user results and store user name and result in separate file csv or json file.

1.py 4.py binary.py que.py 2.py 3.py

```
import json
que = { }
res = 0
num = 1
e= open("que.txt",'r')
que = json.load(e)
e.close()
print("Enter t or f ")
name = input("Enter your name: ")
for i in que.keys():
    print("Question",num,": ", i)
    answer = input("The answer  ")
    if answer.lower() == que[i].lower():
        res = res + 1

    num = num + 1

result={name:res}
m = open("result.txt",'w')
final = json.dump(result,m)
m.close()
```

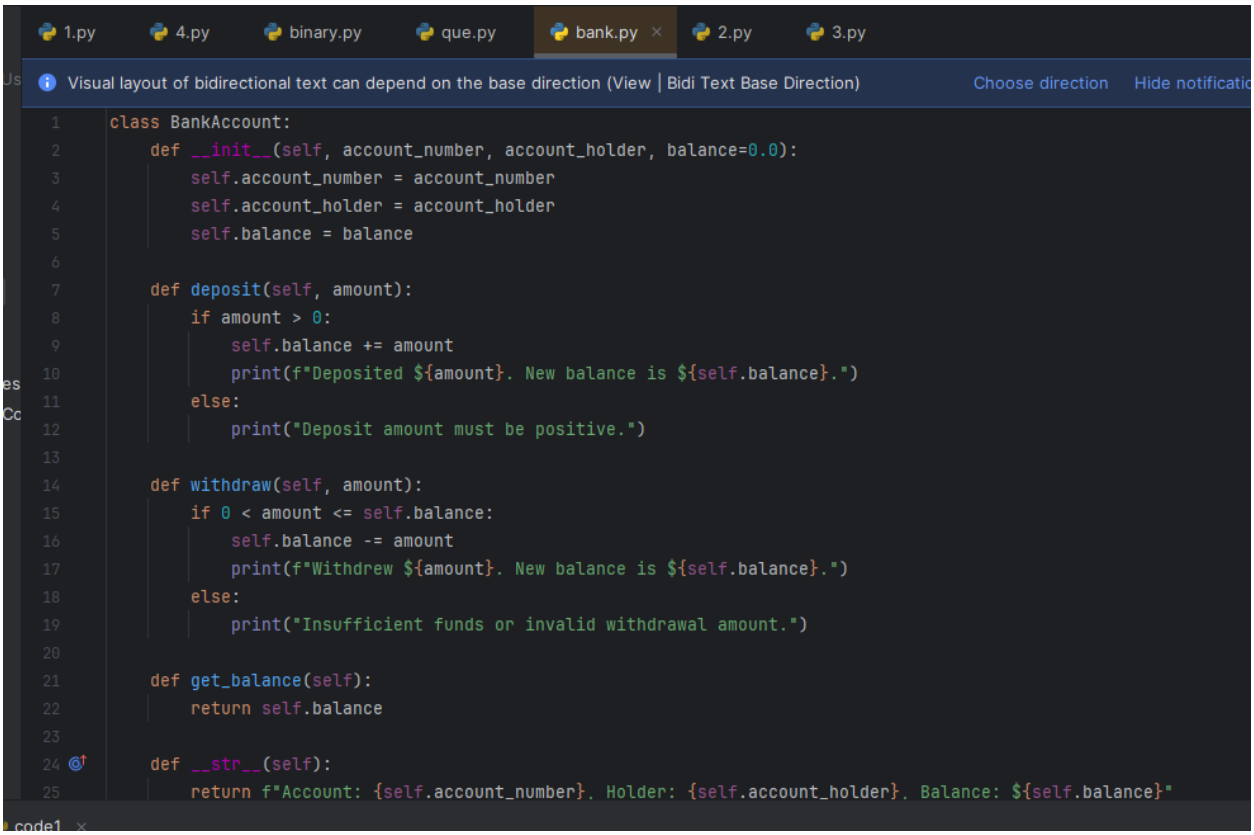
result - المفكرة

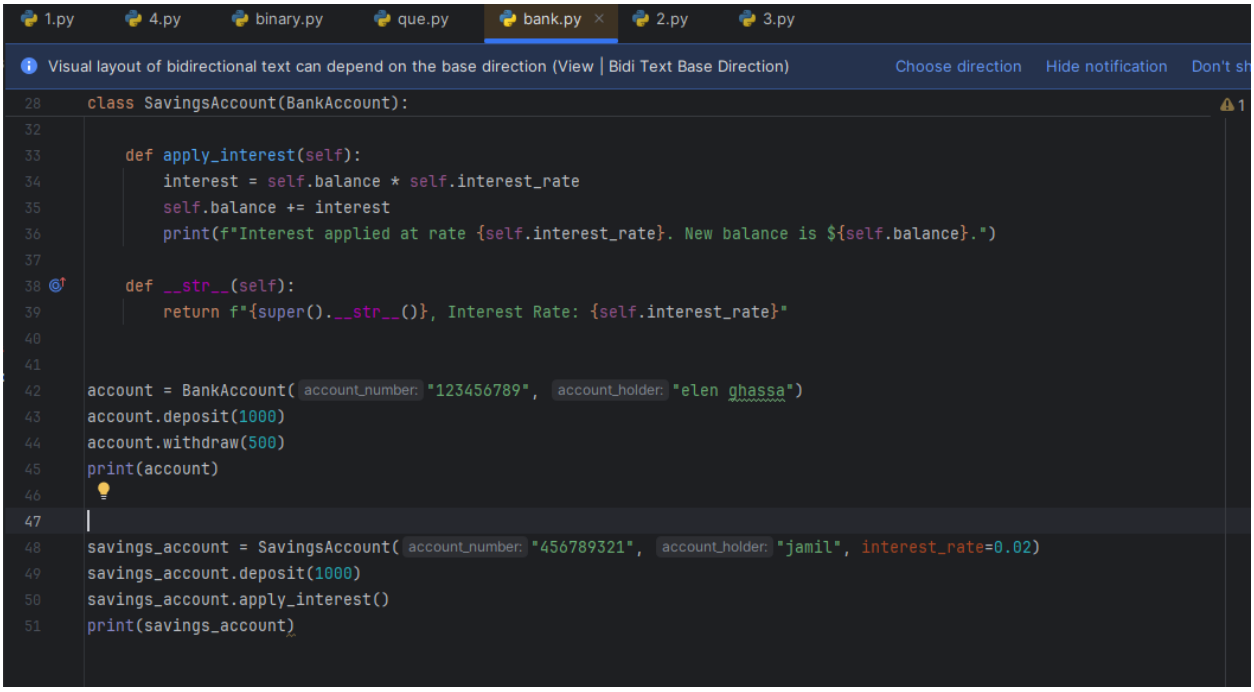
ملف تحرير تنسيق عرض تعليمات

{elen ": 11"}

Question 4:

Object-Oriented Programming - Bank Class Define a class BankAccount with the following attributes and methods: Attributes: account_number (string), account_holder (string), balance (float, initialized to 0.0) Methods:deposit(amount), withdraw(amount) , get_balance() - Create an instance of BankAccount, - Perform a deposit of $1000, - Perform a withdrawal of $500. - Print the current balance after each operation. - Define a subclass SavingsAccount that inherits from BankAccount and adds interest_rate Attribute and apply_interest() method that Applies interest to the balance based on the interest rate. And Override print() method to print the current balance and rate. - Create an instance of SavingsAccount , and call apply_interest() and print() functions




1.py
4.py
binary.py
que.py
bank.py
2.py
3.py
Visual layout of bidirectional text can depend on the base direction (View | Bidi Text Base Direction)
Choose direction
Hide notification
Don't sh
class SavingsAccount(BankAccount):
def apply_interest(self):
interest = self.balance * self.interest_rate
self.balance += interest
print(f"Interest applied at rate {self.interest_rate}. New balance is ${self.balance}.")
def __str__(self):
return f"{super().__str__()}, Interest Rate: {self.interest_rate}"
account = BankAccount(account_number: "123456789", account_holder: "elen ghassa")
account.deposit(1000)
account.withdraw(500)
print(account)
savings_account = SavingsAccount(account_number: "456789321", account_holder: "jamil", interest_rate=0.02)
savings_account.deposit(1000)
savings_account.apply_interest()
print(savings_account)