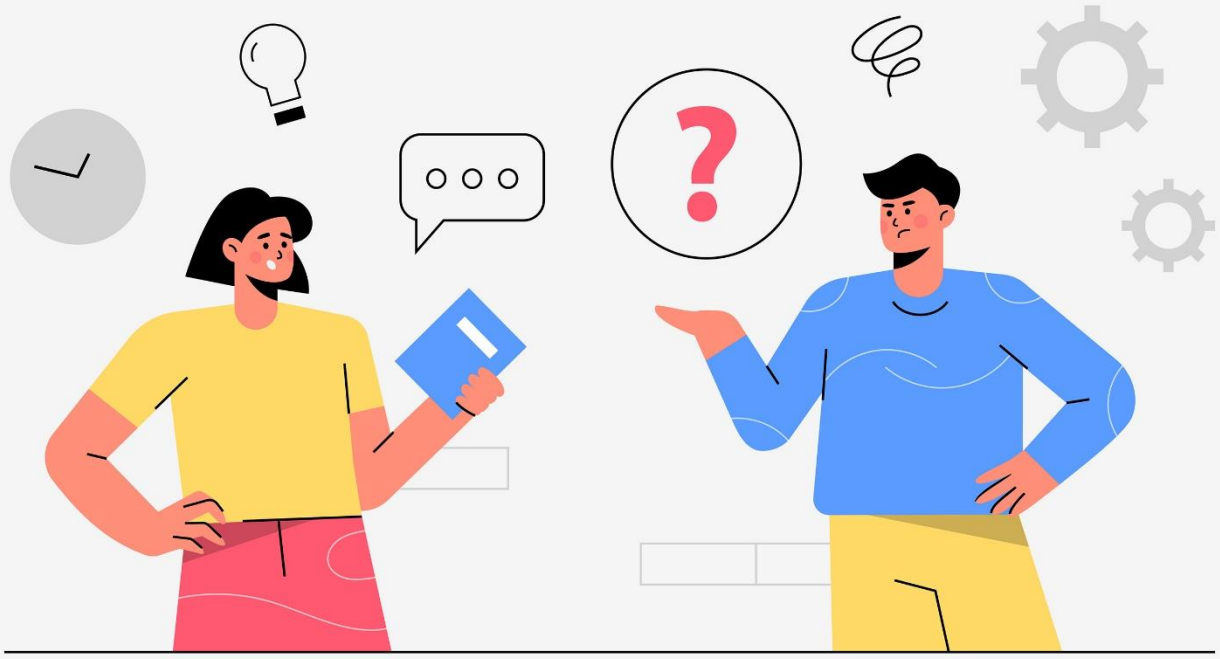
پاسخ سوال برنامه‌نویسی

دوره استادی پایتون درسمن

پایتون پیشرفته



پاسخ تمرین شماره ۱:

```python
import re
# =====================================================
class File:
    def __init__(self, file_Path, file_Mode):
      self.file_Path = file_Path
      self.file_Mode = file_Mode
      self.File_object = None

    def __enter__(self):
        self.file_Object = open(self.file_Path,self.file_Mode)
        return self.file_Object

    def __exit__(self,*exc):
        if self.file_Object:
            self.file_Object.close()
# =====================================================
# file reading
def read_From_Txt_File():
    try:
        with File("information.txt","r") as file1:
            information = file1.read()
            return information
    except Exception as error:
        print("Error is: ",error)
#=====================================================
### finding specific data
### استاندارد بودن شماره موبایل و آدرس پستی در اینجا در نظر گرفته شده است که البته مورد نظر سوال نبود.
def data_Matching(information):
    match = re.findall(r"Name:\w+,Family:\w+,Mobile:0912\d{7},Postal Code:\d{10},city:Tehran",
    information)
    return match
#=====================================================
### solution 1
def data_preparation(match):
    fields_Name = "Name,Family,Mobile,Postal_Code,City\n"
    for person in match:
        comma_Separated_Information = person[0]+","+person[1]+","+person[2]+","+person[3]+","+person[4]
        +"\n"
        fields_Name+=comma_Separated_Information
    return fields_Name

### solution 2
def data_preparation(match):
    fields_Name = "Name,Family,Mobile,Postal_Code,City\n"
    for person in match:
        fields_Name+= re.sub(r"Name:(\w+),Family:(\w+),Mobile:(0912\d+),Postal Code:(\d+),city:(Tehran)
        ",'\g<1>,\g<2>,\g<3>,\g<4>,\g<5>',person)+"\n"
    return fields_Name
#=====================================================
### saving data to csv
def write_To_Csv_File(fields):
    with File("data.csv","w") as file2:
        file2.write(fields)
# -------------------------- main program -----------------------------
information = read_From_Txt_File()
match = data_Matching(information)
fields = data_preparation(match)
write_To_Csv_File(fields)
```

پاسخ تمرین شماره ۲:

```python
import json
import requests
from bs4 import BeautifulSoup
# ----------------------------------------------------------------------------------------------------
### تعریف کلاس برای محصول برای اینکه داده های مربوط به یک محصول را در کنار هم داشته باشیم و ذخیره کنیم.
class Product:
    def __init__(self, name, price):
      self.name = name
      self.price = price

    def __str__(self):
        return f"Name: {self.name},Price: {self.price}"
# ----------------------------------------------------------------------------------------------------
result= requests.get("https://www.entekhabcenter.com/product-category/product/audio-video/television")
# print(result.status_code)
soup = BeautifulSoup(result.content,"html.parser")

### all products in one page
def product_Data_Scrapping():
    products = soup.select("li.col-lg-3.col-md-3.archive-card-m.col-sm-12.product-item")
    return products
# ----------------------------------------------------------------------------------------------------
### product name and product price
def name_Price_Scrapping(products):
    product_Dict_List = []
    for product in products:
        product_Name = product.h5.a.text.strip()
        product_Price = product.ins.text.strip()
        product = Product(product_Name,product_Price)
        product_Dict_List.append(product.__dict__)
    return product_Dict_List
# ---------------------------------- main program ----------------------------------------
products = product_Data_Scrapping()
# ========================================================

### در اینجا می توان برای مدیریت فایل، کلاس فایل را هم تعریف کرد ###
try:
    with open("tv.json1","w",encoding="utf-8") as file1:
        json.dump(name_Price_Scrapping(products),file1,ensure_ascii=False,indent=4)
except Exception as error:
    print("Error: ",error)
finally:
    file1.close()

#encoding="utf-8" کدگذاری به روشی که همه کاراکترها را شامل بشود
#ensure_ascii=False در فایل جیسون کاراکترها به یونیکد تبدیل نشوند
```