1. قم بعرض بيانات الطالب الحاصل على أعلى مجموع من الدرجات من قائمة الطلاب التالية كما يلي

Print the information of the student with the highest total percentage like the following.

```
Hossam Yehia has the highest total percentage which is 98.40%
-------------------
Math: 100
English: 94
Science: 98
Arabic: 100
History: 100
```

{codezilla}

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# loop through the students

# get the grades of the current student

# total percentage of the current student

# add the total percentage to the students_total_percentage
dict

# get the student with the highest total percentage

# loop through the students_total_percentage dict

# check if the current student has the highest total percentage

# get the grades of the current student

# loop through the subjects_grades dict
```

{ codezilla }

```python
students = {
    "Mohamed Hassan": {"grades": {
        "math": 100,
        "english": 90,
        "science": 80,
        "arabic": 100,
        "history": 97},
        "school": "Codezilla"
    },
    "Ahmed Kamal": {"grades": {
        "math": 100,
        "english": 95,
        "science": 93,
        "arabic": 100,
        "history": 94},
        "school": "Codezilla"
    },
    "Ali Adel": {"grades": {
        "math": 85,
        "english": 83,
        "science": 87,
        "arabic": 100,
        "history": 90},
        "school": "Al-Azhar"
    },
    "Hossam Yehia": {"grades": {
        "math": 100,
        "english": 94,
        "science": 98,
        "arabic": 100,
        "history": 100},
        "school": "Al-Azhar"
    }
}
```

```python
# dictionary to store the total percentage of each student
students_total_percentage = {}

# loop through the students
for student in students:
    # get the grades of the current student
    subjects_grades = students[student]["grades"]

    # total percentage of the current student
    total_percentage = sum(subjects_grades.values()) / len(subjects_grades)

    # add the total percentage to the students_total_percentage dict
    students_total_percentage[student] = total_percentage


# get the student with the highest total percentage
highest_total_percentage = max(students_total_percentage.values())

# loop through the students_total_percentage dict
for student in students_total_percentage:
    # check if the current student has the highest total percentage
    if students_total_percentage[student] == highest_total_percentage:
        print(f"{student} has the highest total percentage \
                which is {highest_total_percentage:.2f}%")
        print("-"*20)

        # get the grades of the current student
        subjects_grades = students[student]["grades"]

        # loop through the subjects_grades dict
        for subject, grade in subjects_grades.items():
            print(f"{subject.title()}: {grade}")
```

2.قم بعمل برنامج لإدارة الصيدليات حيث يتفاعل مع مسؤول الصيدلية بالشكل التالي

Make pharmacy management program that interacts with the user like the following.

```
1. Add new items
2. Remove items
3. Update items
4. Check Available quantity
5. Print treatment information
6. Exit

Enter your choice: 1
---Entering new item---
Enter item name (press Enter to Exit): codezilla
Enter item price: 150
Enter item quantity: 4
---Entering new item---
Enter item name (press Enter to Exit):
```

{codezi//a}

إذا لم توفق للوصول للحل يمكنك السعي مرة أخرى بمساعدة
الخطوات التالية

```python
# print treatment information

# dictionary to store items

# options

# get items from the user

# print the options

# get the user choice

# if the user choose to add new items

# get items from the user

# add new items to the inventory

# if the user choose to remove items

# get items from the user

# if the user press Enter, exit the loop

# if the item is in the inventory, double check then delete it
```

```
# if the user choose to update items

# get items from the user

# if the user press Enter, exit the loop

# if the item is in the inventory, update the price and
quantity

# if the user choose to check the quantity of items

# get items from the user

# if the user press Enter, exit the loop

# if the item is in the inventory, print the quantity

# if the user choose to print treatment information

# get items from the user

# if the user press Enter, exit the loop

# if the item is in the inventory, print the treatment
information

# if the user choose to exit

# if the user choose an invalid option

# print message to the user
```

```python
inventory = {"Paracetamol": {"price":25, "quantity":10},
             "Aspirin": {"price":15, "quantity":20},
             "Ibuprofen": {"price":20, "quantity":15},
             "Cough Syrup": {"price":30, "quantity":5},
             "Augmentin": {"price":100, "quantity":7},
             "Amoxicillin": {"price":80, "quantity":8},
             "Panadol": {"price":25, "quantity":10},
             "Zinc": {"price":15, "quantity":20},
             "Vitamin C": {"price":20, "quantity":15},
             "Fucidin": {"price":30, "quantity":5},
             "Kolanog": {"price":100, "quantity":2},
             }

# dictionary to store items
new_inventory = {}

# options
options = """1. Add new items
2. Remove items
3. Update items
4. Check Available quantity
5. Print treatment information
6. Exit
"""

```

```python
# get items from the user
while True:
    # print the options
    print(options)

    # get the user choice
    choice = input("Enter your choice: ")

    # if the user choose to add new items
    if choice == "1":
        # get items from the user
        while True:
            print("---Entering new item---")
            item = input("Enter item name (press Enter to Exit): ").title()
            if item == "":
                break
            price = float(input("Enter item price: "))
            quantity = int(input("Enter item quantity: "))
            new_inventory[item] = {"price":price, "quantity":quantity}

        # add new items to the inventory
        inventory = {**inventory, **new_inventory}
```

```python
# if the user choose to remove items
    elif choice == "2":
        # get items from the user
        while True:
            print("---Deleting item---")
            item = input("Enter item name to be deleted \
                         (press Enter to Exit): ").title()

            # if the user press Enter, exit the loop
            if item == "":
                break

            # if the item is in the inventory, double check then delete it
            if item in inventory:
                double_check = input(f"Are you sure you want to delete \
                                     {item}? (y/n): ").lower()
                if double_check == "y":
                    inventory.pop(item)
                    print(f"{item} has been deleted")
            else:
                print("Item not found")
```

```python
 # if the user choose to update items
    elif choice == "3":
        # get items from the user
        while True:
            print("---Updating item---")
            item = input("Enter item name to be updated \
                        (press Enter to Exit): ").title()

            # if the user press Enter, exit the loop
            if item == "":
                break

            # if the item is in the inventory, update the price and quantity
            if item in inventory:
                price = float(input("Enter the new price: "))
                quantity = int(input("Enter the new quantity: "))
                inventory[item]["price"] = price
                inventory[item]["quantity"] = quantity
                print(f"{item} has been updated")
            else:
                print("Item not found")
```

```python
# if the user choose to check the quantity of items
    elif choice == "4":
        # get items from the user
        while True:
            print("---Checking item quantity---")
            item = input("Enter item name to be checked \
                        (press Enter to Exit): ").title()

            # if the user press Enter, exit the loop
            if item == "":
                break

            # if the item is in the inventory, print the quantity
            if item in inventory:
                print(f"We have {inventory[item]['quantity']} {item} units")
            else:
                print("Item not found")
```

```python
# if the user choose to print treatment information
    elif choice == "5":
        # get items from the user
        while True:
            print("---Printing treatment information---")
            item = input("Enter item name (press Enter to Exit): ").title()

            # if the user press Enter, exit the loop
            if item == "":
                break

            # if the item is in the inventory, print the treatment information
            if item in inventory:
                item_info = f"""Item: {item}
Price: {inventory[item]['price']} EGP
Quantity: {inventory[item]['quantity']} units"""
                print(item_info)
            else:
                print("Item not found")
```

```python
# if the user choose to exit
    elif choice == "6":
        break

    # if the user choose an invalid option
    else:
        print("Invalid option")


# print message to the user
print("Have a nice day!")
```