Inventory management system using python

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Contents

Introduction

Now days because of COVID-19 we must all have the personal protective equipment and ministry of Health of course going to need a system which arrange their inventory and this what I am doing today

Assumptions

- The information in this program is specific only for the people how works in it
- There are 3 suppliers, and each supplier gives 2 Items
- There is 3 Hospitals
- All the items are in boxes and the program counting boxes not individual item
- Every supplier can supply specific items and cannot supply any another item except his items
- The program starts with amount of 100 box foe each item in the inventory

Program Strategy: Pseudocode

```
# LOAI_RAMADAN_ALI_ABDELMOTLEB_SAADIA
# TP066952


IMPORT datetime

DEFINE FUNCTION hospital(index,itemCode,itemQuantity)
    SET list_H TO open("hospitals.txt","r").readlines()
    SET list_H[index] TO list_H[index].strip().split(",")
    IF itemCode EQUALS "HC" THEN
        SET list_H[index][2] TO str(int(list_H[index][2]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ELSEIF itemCode EQUALS "FS" THEN
        SET list_H[index][4] TO str(int(list_H[index][4]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ELSEIF itemCode EQUALS "MS" THEN
        SET list_H[index][6] TO str(int(list_H[index][6]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ELSEIF itemCode EQUALS "GL" THEN
        SET list_H[index][8] TO str(int(list_H[index][8]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ELSEIF itemCode EQUALS "GW" THEN
        SET list_H[index][10] TO str(int(list_H[index][10]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ELSEIF itemCode EQUALS "SC" THEN
        SET list_H[index][12] TO str(int(list_H[index][12]) +int(itemQuantity))
        SET list_H[index] TO ",".join(list_H[index])+"\n"
    ENDIF
    SET h_l TO open("hospitals.txt","w")
    h_l.writelines(list_H)
    h_l.close
ENDFINE
```

```
DEFINE FUNCTION update()
    SET choiceUpdate TO False
    DOWHILE choiceUpdate EQUALS False
        OUTPUT("""
    ( 1 )Add Items
    ( 2 )Take Items
    ( 3 )Back
        """)
        SET choice TO INPUT("\nPlease enter choice: ")
        IF choice EQUALS "1" or choice  EQUALS "2" or choice EQUALS "3"  THEN
            IF choice EQUALS "1" THEN
                SET item TO False
                DOWHILE item EQUALS False
                    SET itemCode TO INPUT("\nEnter Item Code: ")
                    IF itemCode EQUALS "HC" or itemCode EQUALS "FS" or itemCode EQUALS "MS" or itemCode EQUALS "GL" or itemCode EQUALS "GW" or itemCode EQUALS "GL" or itemCode EQUALS "SC" THEN
                        SET item TO True
                    ELSE
                        OUTPUT("\nincoreect code")
                    ENDIF
                ENDDO
                SET suppleir TO False
                DOWHILE suppleir EQUALS False
                            SET suppleir_code TO INPUT("\nenter your SUP code: ")
                            IF suppleir_code EQUALS "SUP11" or suppleir_code EQUALS "SUP22" or suppleir_code EQUALS "SUP33" THEN
                                IF suppleir_code EQUALS "SUP11" THEN
                                    IF itemCode EQUALS "HC" or itemCode EQUALS "FS" THEN
                                        SET suppleir TO True
                                    ELSE
                                        OUTPUT("\nincorrect Supplier Code")
                                    ENDIF
                                ELSEIF suppleir_code EQUALS "SUP22" THEN
                                    IF itemCode EQUALS "MS" or itemCode EQUALS "GL" THEN
                                        SET suppleir TO True
                                    ELSE
                                        OUTPUT("\nincorrect Supplier Code")
                                    ENDIF
                                ELSEIF suppleir_code EQUALS "SUP33" THEN
                                    IF itemCode EQUALS "GW" or itemCode EQUALS "SC" THEN
                                        SET suppleir TO True
                                    ELSE
                                        OUTPUT("\nincorrect Supplier Code")
                                    ENDIF
                                ENDIF
                            ELSE
                                OUTPUT("\nincorrect Code")
                            ENDIF
                ENDDO
                SET quantity TO False
                DOWHILE quantity EQUALS False
```

```
        ENDDO
        SET quantity TO False
        DOWHILE quantity EQUALS False
            SET itemQuantity TO INPUT("\nenter quantity: ")
            IF itemQuantity.isnumeric() EQUALS True THEN
                SET quantity TO True
            ELSE
                OUTPUT("\nplease put a number")
            ENDIF
        ENDDO
        SET list TO open("ppe.txt","r").readlines()
        SET count TO 0
        FOR index IN list
            SET index TO index.strip().split(",")
            IF index[0] EQUALS itemCode THEN
                SET index[2] TO str(int(index[2])+int(itemQuantity))+"\n"
                SET newLine TO ",".join(index)
                SET list[count] TO newLine
            count +=1
        ENDFOR
        SET file TO open("ppe.txt","w")
        file.writelines(list)
        CLOSE file
        list_S= open("supplier.txt","r").readlines()
        IF suppleir_code EQUALS "SUP11" THEN
            SET list_S[0] TO list_S[0].strip().split(",")
            IF itemCode EQUALS "HC" THEN
                SET list_S[0][2] TO str(int(list_S[0][2]) +int(itemQuantity))
                SET list_S[0] TO ",".join(list_S[0])+"\n"
            ELSEIF itemCode EQUALS "FS" THEN
                SET list_S[0][4] TO str(int(list_S[0][4]) +int(itemQuantity))
                SET list_S[0] TO ",".join(list_S[0])+"\n"
            ENDIF
        ELSEIF suppleir_code EQUALS "SUP22" THEN
            SET list_S[1] TO list_S[1].strip().split(",")
            IF itemCode EQUALS "MS" THEN
                SET list_S[1][2] TO str(int(list_S[1][2]) +int(itemQuantity))
                SET list_S[1] TO ",".join(list_S[1])+"\n"
            ENDIF
            ELSEIF itemCode EQUALS "GL" THEN
                SET list_S[1][4] TO str(int(list_S[1][4]) +int(itemQuantity))
                SET list_S[1] TO ",".join(list_S[1])+"\n"
        ELSEIF suppleir_code EQUALS "SUP33" THEN
            SET list_S[2] TO list_S[2].strip().split(",")
            IF itemCode EQUALS "GW" THEN
                SET list_S[2][2] TO str(int(list_S[2][2]) +int(itemQuantity))
                SET list_S[2] TO ",".join(list_S[2])+"\n"
            ELSEIF itemCode EQUALS "SC" THEN
                SET list_S[2][4] TO str(int(list_S[2][4]) +int(itemQuantity))
                SET list_S[2] TO ",".join(list_S[2])+"\n"
            ENDIF
```

```
                SET list_S[2] TO ",".join(list_S[2])+"\n"
            ENDIF
        ENDIF
        SET list_z TO open("supplier.txt","w")
        list_z.writelines(list_S)
        list_z.close
        SET dates TO str(datetime.date.today())
        SET dist TO open("distribution.txt","a")
        dist.write("\n"+suppleir_code+","+itemCode+","+itemQuantity+","+dates)
        dist.close
        SET choiceUpdate TO True
    ELSEIF choice EQUALS "2" THEN
        SET hospitalCode TO False
        DOWHILE hospitalCode EQUALS False:
            SET hospital_INPUT TO INPUT("\nEnter Hospital Code: ")
            IF hospital_INPUT EQUALS "HOS11" or hospital_INPUT EQUALS "HOS22" or hospital_INPUT EQUALS "HOS33" THEN
                SET hospitalCode TO True
            ELSE
                OUTPUT("\nincorrect Hospital Code")
            ENDIF
        ENDDO
        SET itemCode4HOS TO False
        DOWHILE itemCode4HOS EQUALS False
            SET itemCode TO INPUT("\nEnter Item Code: ")
            IF itemCode EQUALS "HC" or itemCode EQUALS "FS" or itemCode EQUALS "MS" or itemCode EQUALS "GL" or itemCode EQUALS "GW" or itemCode EQUALS "GL" or itemCode EQUALS "SC" THEN
                SET itemCode4HOS TO True
            else :
                OUTPUT("\nIncorrect Code")
            ENDIF
        ENDDO
        SET correct TO False
        DOWHILE correct EQUALS False:
            SET itemQuantity TO INPUT("\nenter quantity: ")
            IF itemQuantity.isnumeric() EQUALS True THEN
                SET correct TO True
            ELSE
                OUTPUT("pleas put a numper!!")
            ENDIF
        ENDDO
```

```
                ENDDO
                SET list TO open("ppe.txt","r").readlines()
                SET count TO 0
                FOR index IN list
                    SET index TO index.strip().split(",")
                    IF index[0] EQUALS itemCode THEN
                        IF (int(index[2])-int(itemQuantity)) >= 0 THEN
                            SET index[2] TO str(int(index[2])-int(itemQuantity))+"\n"
                            SET newLine TO ",".join(index)
                            SET list[count] TO newLine
                            IF hospital_INPUT EQUALS "HOS11" THEN
                                hospital(0,itemCode,itemQuantity)
                            ELSEIF hospital_INPUT EQUALS "HOS22" THEN
                                hospital(1,itemCode,itemQuantity)
                            ELSEIF hospital_INPUT EQUALS "HOS33" THEN
                                hospital(2,itemCode,itemQuantity)
                            ENDIF
                            SET dates TO str(datetime.date.today())
                            SET dist_hos TO open("distribution.txt","a")
                            dist_hos.write("\n"+hospital_INPUT+","+itemCode+","+itemQuantity+","+dates)
                            dist_hos.close
                        ELSE
                            OUTPUT("You have "+index[2]+". You cannot take "+itemQuantity)
                        SET choiceUpdate TO False
                        ENDIF
                ENDFOR
                SET file TO open("ppe.txt","w")
                file.writelines(list)
                file.close
                SET choiceUpdate TO True
            ELSEIF choice EQUALS "3" THEN
                SET choiceUpdate TO True
        ELSE
            OUTPUT("\nIncorrect INPUT!")
        ENDIF
    ENDDO
ENDFINE
```

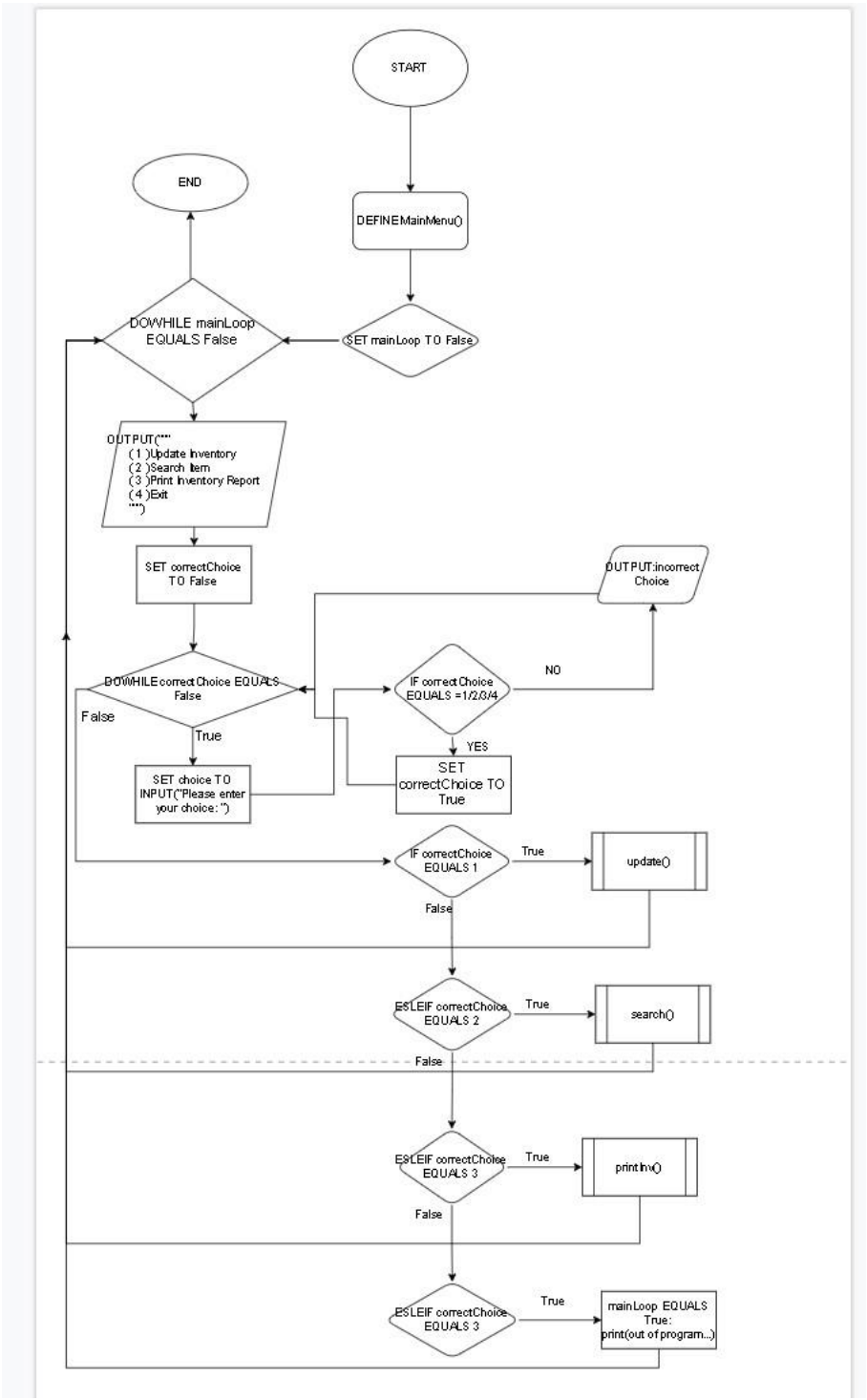
```
DEFINE FUNCTION search()
    SET file_s TO open("supplier.txt","r").readlines()
    SET file_h TO open("hospitals.txt","r").readlines()
    SET file_d TO open("distribution.txt","r").readlines()
    SET ChoiceSearch TO False
    DOWHILE ChoiceSearch EQUALS False
        OUTPUT("""
        ( 1 ) Search By Supplier Code
        ( 2 ) Search By Hospital Code
        ( 3 ) Search By Item Code
        ( 4 ) Back
        """)
        SET choice TO INPUT("\ntype your Choice: ")
        IF choice =="1" THEN
            SET sup TO False
            DOWHILE sup EQUALS False:
                SET SupplierCode TO INPUT("\nEnter Your Supplier Code: ")
                IF SupplierCode EQUALS "SUP11" or SupplierCode EQUALS "SUP22" or SupplierCode EQUALS "SUP33" THEN
                    SET sup TO True
                ELSE
                    OUTPUT ("Incorrect Supplier Code!")
                ENDIF
            ENDDO
            FOR index IN file_d
                SET index TO index.strip().split(",")
                IF index[0] EQUALS SupplierCode THEN
                    OUTPUT("\n"+index[0] + " added " + index[2] + " of " + index[1] + " at " + index[3])
                ENDIF
            ENDFOR
            FOR index IN file_s
                SET index TO index.strip().split(",")
                IF index[0] EQUALS SupplierCode THEN
                    OUTPUT("\n"+index[0] + " gave IN total " + index[2] + " of " + index[1] + " and " + index[4]+ " of " + index[3])
                ENDIF
            ENDFOR
        ELSEIF choice EQUALS "2" THEN
            SET hos TO False
            DOWHILE hos EQUALS False
                SET HospitalCode TO INPUT("\nEnter Your Hospital Code: ")
                IF HospitalCode EQUALS "HOS11" or HospitalCode EQUALS "HOS22" or HospitalCode EQUALS "HOS33 THEN
                    SET hos TO True
                ELSE
                    OUTPUT ("Incorrect Hospital Code!!")
                ENDIF
            ENDDO
```

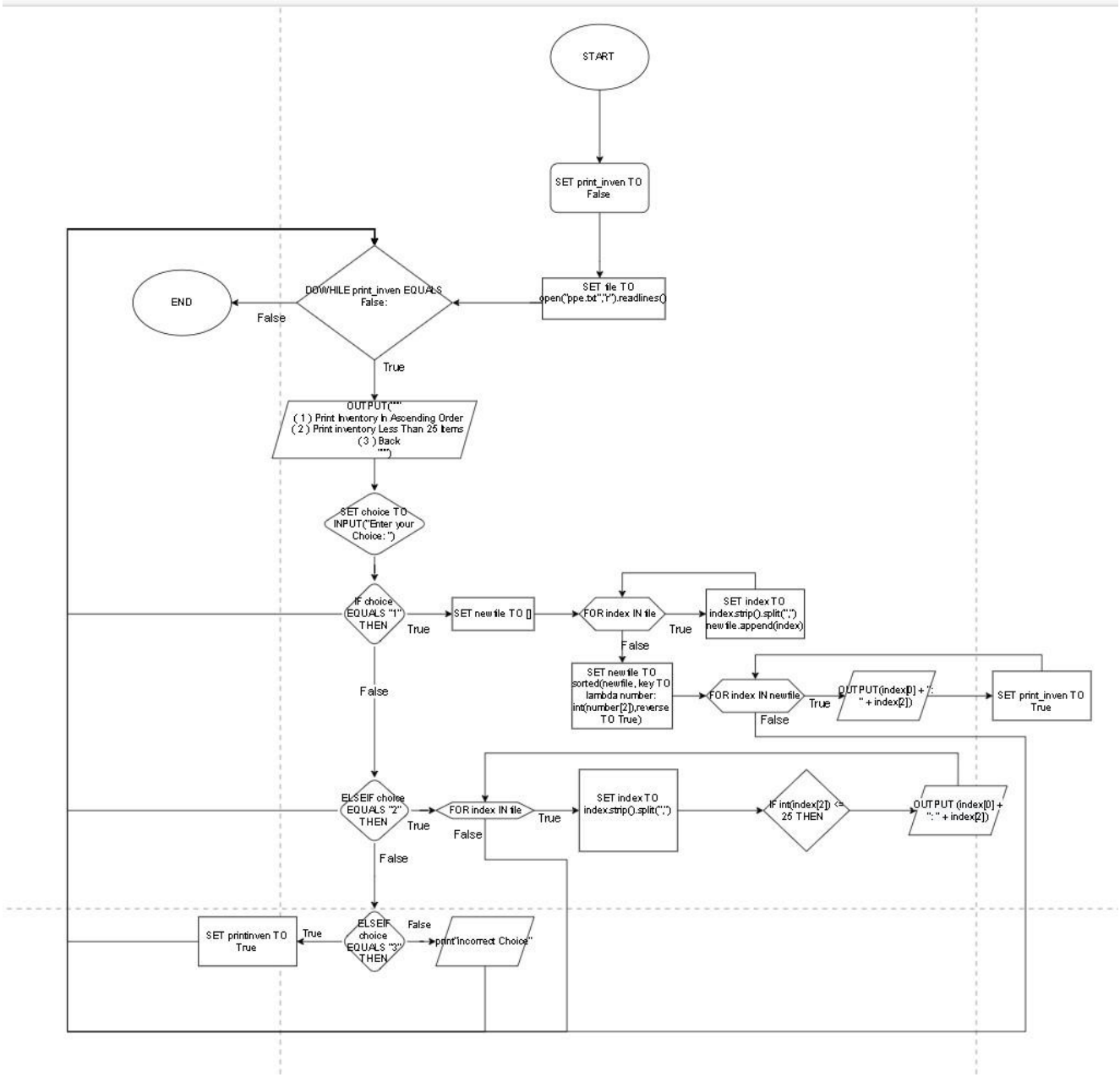
```
            ENDDO
            FOR index IN file_d
                SET index TO index.strip().split(",")
                IF index[0] EQUALS HospitalCode THEN
                    OUTPUT("\n"+index[0] + " took " + index[2] + " of " + index[1] + " at " + index[3])
                ENDIF
            ENDFOR
            FOR index IN file_h
                SET index TO index.strip().split(",")
                IF index[0] EQUALS HospitalCode THEN
                    OUTPUT("\n"+index[0] + " has " + index[1] + ": " + index[2] , index[3] + ": " + index[4] , index[5] + ": " + index[6] , index[7] + ": " + index[8] , index[9] + ": " + index[10] , index[11] + ": " + index[12])
                ENDIF
            ENDFOR
        ELSEIF choice EQUALS "3" THEN
            SET item TO False
            DOWHILE item EQUALS False:
                SET itemCode TO INPUT("\nEnter Your Item Code: ")
                IF itemCode EQUALS "HC" or itemCode EQUALS "FS" or itemCode EQUALS "MS" or itemCode EQUALS "GL" or itemCode EQUALS "SC" or itemCode EQUALS "GW" THEN
                    SET item TO True
                ELSE
                    OUTPUT ("Incorrect Item Code!!")
                ENDIF
            ENDDO
            FOR index IN file_d
                SET index TO index.strip().split(",")
                IF index[1] EQUALS itemCode THEN
                    OUTPUT(index[1]+" was added/taken by "+index[0]+" with the amount of "+index[2]+" at "+index[3])
                ENDIF
            ENDFOR
        ELSEIF choice EQUALS "4" THEN
            SET ChoiceSearch TO True
        ENDIF
        ELSE
            OUTPUT("Incorrect Choice")
    ENDDO
ENDFINE
```

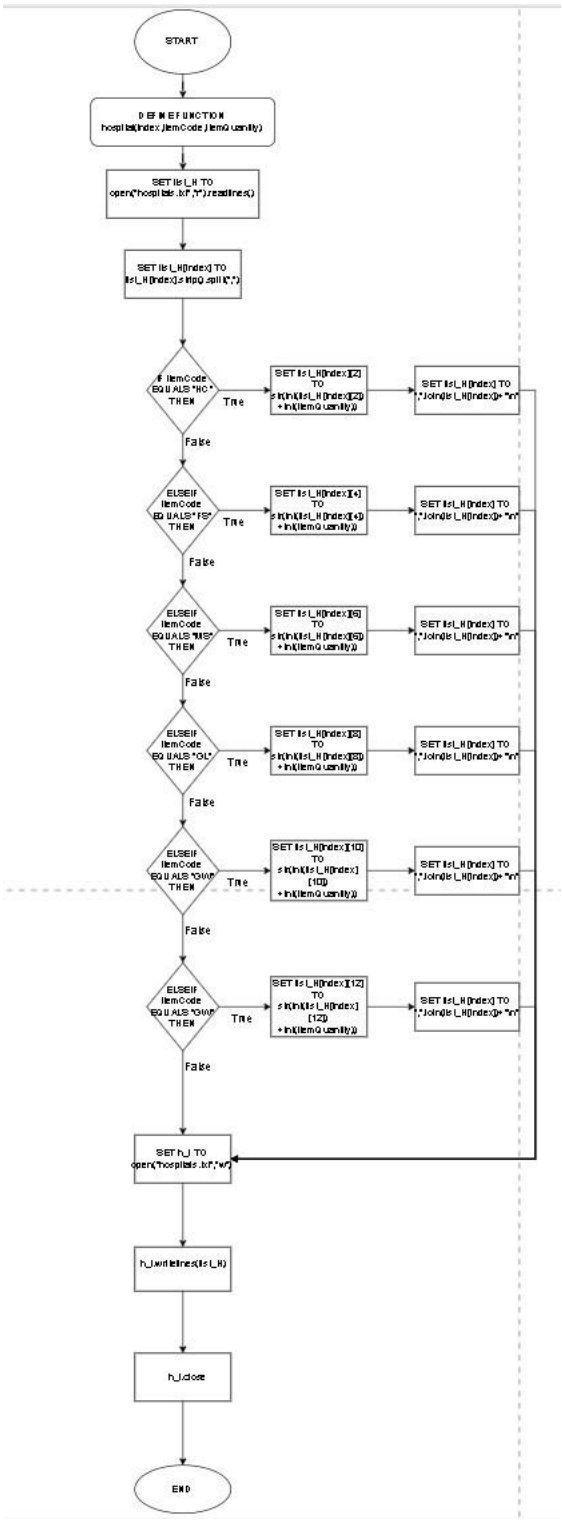
```
DEFINE FUNCTION printInv():
    SET file TO open("ppe.txt","r").readlines()
    SET print_inven TO False
    DOWHILE print_inven EQUALS False:
        OUTPUT("""
    ( 1 ) Print Inventory In Ascending Order
    ( 2 ) Print inventory Less Than 25 Items
    ( 3 ) Back
        """)
        SET choice TO INPUT("Enter your Choice: ")
        IF choice EQUALS "1" THEN
            SET newfile TO []
            FOR index IN file
                SET index TO index.strip().split(",")
                newfile.append(index)
            ENDFOR
            SET newfile TO sorted(newfile, key TO lambda number: int(number[2]),reverse TO True)
            FOR index IN newfile
                    OUTPUT(index[0] + ": " + index[2])
                    SET OUTPUT_inven TO True
            ENDFOR
        ELSEIF choice EQUALS "2" THEN
            FOR index IN file
                SET index TO index.strip().split(",")
                IF int(index[2]) <= 25 THEN
                    OUTPUT (index[0] + ": " + index[2])
                ENDIF
                SET OUTPUT_inven TO True
            ENDFOR
        ELSEIF choice EQUALS "3" THEN
            SET printinven TO True
        ELSE
            OUTPUT ("incorrect Choice")
            SET printinven TO False
        ENDIF
    ENDDO
ENDFINE
```

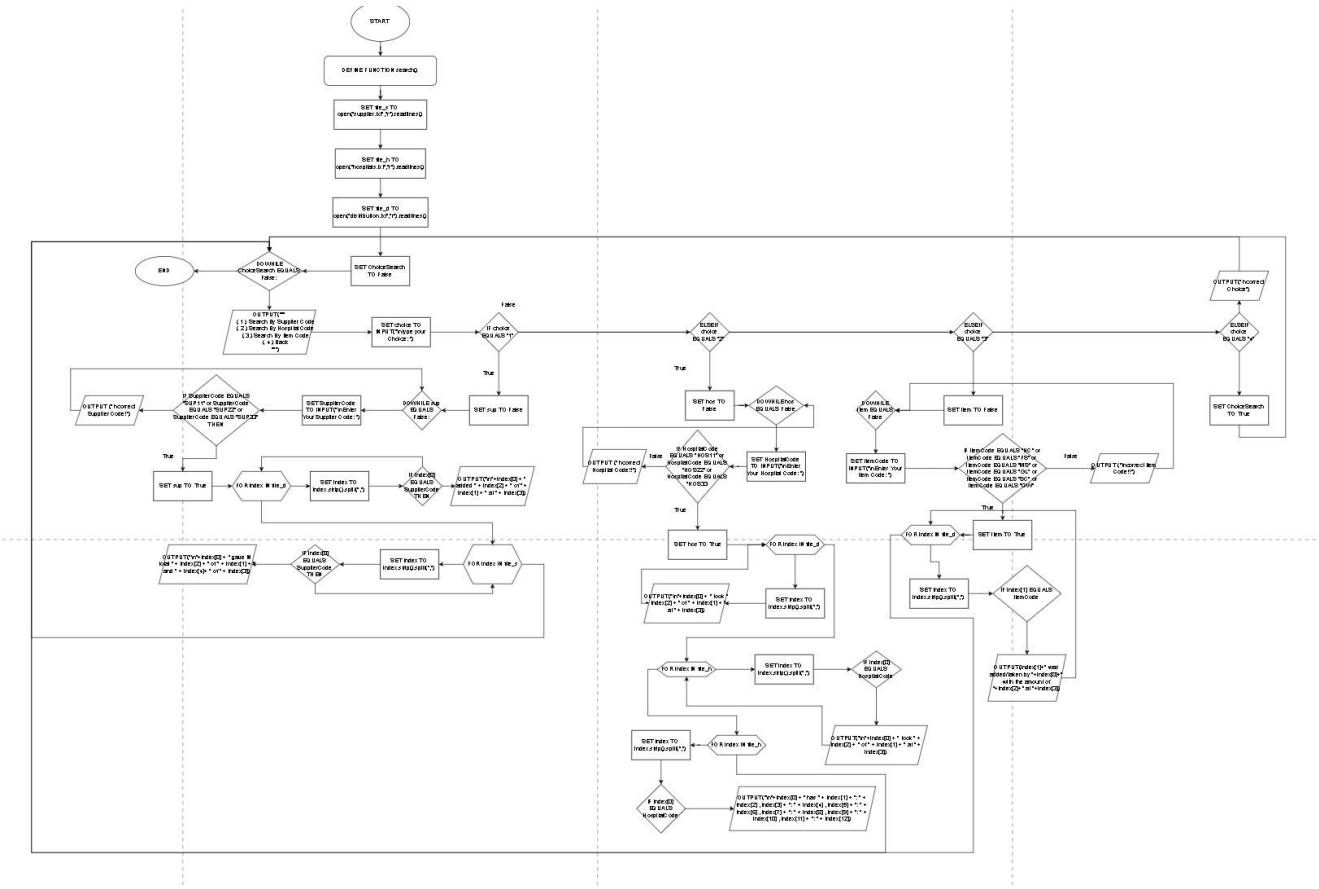
```
DEFINE FUNCTION MainMenu()
    SET mainLoop TO False
    DOWHILE mainLoop EQUALS False:
        OUTPUT("""
        ( 1 )Update Inventory
        ( 2 )Search Item
        ( 3 )Print Inventory Report
        ( 4 )Exit
        """)
        SET correctChoice TO False
        DOWHILE correctChoice EQUALS False:
            SET choice TO INPUT("Please enter your choice: ")
            IF choice EQUALS "1" or choice EQUALS "2" or choice EQUALS "3" or choice EQUALS "4" THEN
                SET correctChoice TO True
            ELSE
                OUTPUT("Incorrect Choice!")
            ENDIF
        IF choice EQUALS "1 THEN
            update()
        ELSEIF choice EQUALS "2" THEN
            search()
        ELSEIF choice EQUALS "3" THEN
            printInv()
        ELSEIF choice EQUALS "4" THEN
            SET mainLoop TO True
        ENDIF
        ENDDO
    ENDDO
ENDFINE

MainMenu()
END
```

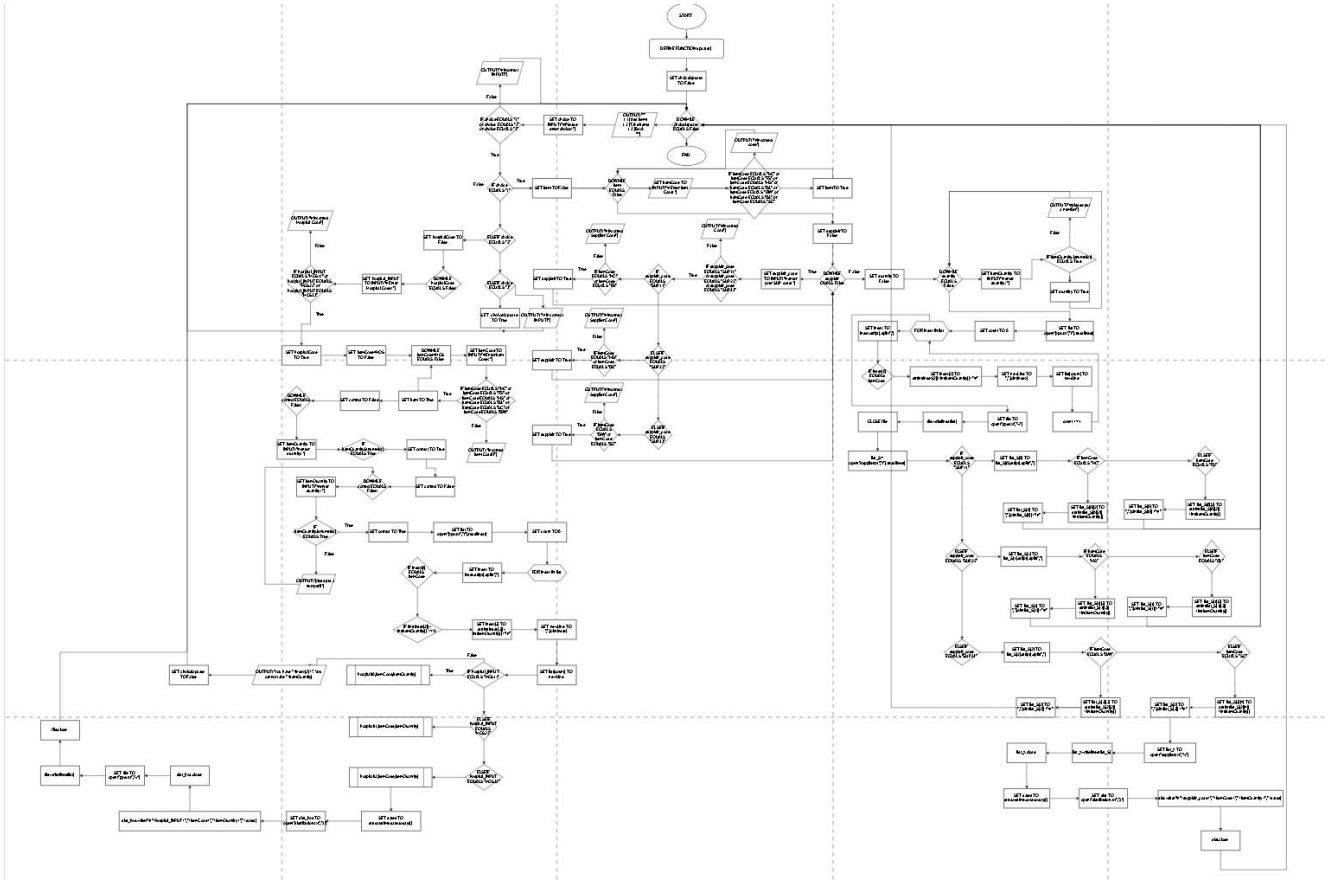
Program Strategy: Flowchart




START
SET print_inven TO False
SET file TO open("ppe.txt","r").readlines()
DOWHILE print_inven EQUALS False:
END
False
True
OUTPUT(""" (1) Print Inventory In Ascending Order (2) Print inventory Less Than 25 Items (3) Back """)
SET choice TO INPUT("Enter your Choice: ")
IF choice EQUALS "1" THEN
True
SET newfile TO []
FOR index IN file
True
SET index TO index.strip().split(",") newfile.append(index)
False
SET newfile TO sorted(newfile, key TO lambda number: int(number[2]),reverse TO True)
FOR index IN newfile
True
OUTPUT(index[0] + ": " + index[2])
False
SET print_inven TO True
False
ELSEIF choice EQUALS "2" THEN
True
FOR index IN file
True
SET index TO index.strip().split(",")
IF int(index[2]) <= 25 THEN
OUTPUT (index[0] + ": " + index[2])
False
False
ELSEIF choice EQUALS "3" THEN
True
SET printinven TO True
False
print"Incorrect Choice"


START
DEFINE FUNCTION hospitals(Index,ItemCode,ItemQuantity)
SET lis_H TO open("hospitals.txt","r").readlines()
SET lis_H[Index] TO lis_H[Index].strip().split(",")
If ItemCode EQUALS "HC" THEN
True
SET lis_H[Index][2] TO str(int(lis_H[Index][2]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
ELSEIF ItemCode EQUALS "FS" THEN
True
SET lis_H[Index][4] TO str(int(lis_H[Index][4]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
ELSEIF ItemCode EQUALS "MS" THEN
True
SET lis_H[Index][6] TO str(int(lis_H[Index][6]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
ELSEIF ItemCode EQUALS "GL" THEN
True
SET lis_H[Index][8] TO str(int(lis_H[Index][8]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
ELSEIF ItemCode EQUALS "SW" THEN
True
SET lis_H[Index][10] TO str(int(lis_H[Index][10]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
ELSEIF ItemCode EQUALS "OW" THEN
True
SET lis_H[Index][12] TO str(int(lis_H[Index][12]) + int(ItemQuantity))
SET lis_H[Index] TO ",".join(lis_H[Index])+ "\n"
False
SET h_l TO open("hospitals.txt","w")
h_l.writelines(lis_H)
h_l.close
END


START
DEFINE FUNCTION Searching()
SET file_c TO open("Supplier.txt","r").readlines()
SET file_h TO open("Hospitals.txt","r").readlines()
SET file_d TO open("Distribution.txt","r").readlines()
DO WHILE ChoiceSearch EQUALS false
SET ChoiceSearch TO False
END
OUTPUT ""
(1) Search By Supplier Code
(2) Search By Hospital Code
(3) Search By Item Code
(4) Back
""
SET choice TO INPUT("Enter your Choice: ")
If choice EQUALS "1"
False
True
ELSEIF choice EQUALS "2"
ELSEIF choice EQUALS "3"
ELSEIF choice EQUALS "4"
OUTPUT "Incorrect Choice"
SET ChoiceSearch TO True
SET sup TO False
DO WHILE sup EQUALS false
SET SupplierCode TO INPUT("Enter your Supplier Code: ")
If SupplierCode EQUALS "Supplier Code" or SupplierCode EQUALS "SUPPLIER" THEN
OUTPUT ("Incorrect Supplier Code!")
SET sup TO True
IO R Index IN file_c
SET Index TO Index.strip().split(",")
If index[0] EQUALS SupplierCode THEN
OUTPUT("\n"+ Index[0] + " sales in total " + Index[2] + " on" + Index[1] + " at" + Index[3])
FOR Index IN file_c
If index[0] EQUALS SupplierCode THEN
SET Index TO Index.strip().split(",")
OUTPUT("\n"+ Index[0] + " has " + Index[1] + "," + Index[2] + "," + Index[3] + "," + Index[4] + "," + Index[5] + "," + Index[6] + "," + Index[7] + "," + Index[8] + "," + Index[9] + "," + Index[10] + "," + Index[11] + "," + Index[12])
SET hos TO False
DO WHILE Ehos EQUALS False
OUTPUT ("Incorrect Hospital Code!")
SET HospitalCode TO INPUT("Enter your Hospital Code: ")
If HospitalCode EQUALS "HOS1" or HospitalCode EQUALS "HOS2" or HospitalCode EQUALS "HOS3"
SET hos TO True
IO R Index IN file_h
SET Index TO Index.strip().split(",")
If index[0] EQUALS HospitalCode
OUTPUT("\n"+ Index[0] + " took " + Index[2] + " on" + Index[1] + " at" + Index[3])
SET item TO False
DO WHILE item EQUALS False
SET ItemCode TO INPUT("Enter your Item Code: ")
If ItemCode EQUALS "IC" or ItemCode EQUALS "ISP" or ItemCode EQUALS "ISC" or ItemCode EQUALS "IWP"
OUTPUT ("Incorrect Item Code!")
SET item TO True
IO R Index IN file_d
SET Index TO Index.strip().split(",")
If index[1] EQUALS ItemCode
OUTPUT("\n"+ str(Index[0]) + " was ordered/taken by " + Index[2] + " with the amount of " + Index[3] + " at" + Index[4])



Program Strategy: Source Code

```
import datetime
```

Date time Function it’s a build in function in python and his job is reading the date of today

```
def hospital(index,itemCode,itemQuantity):
    list_H = open("hospitals.txt","r").readlines()
    list_H[index] = list_H[index].strip().split(",")
    if itemCode == "HC":
        list_H[index][2] = str(int(list_H[index][2]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    elif itemCode == "FS":
        list_H[index][4] = str(int(list_H[index][4]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    elif itemCode == "MS":
        list_H[index][6] = str(int(list_H[index][6]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    elif itemCode == "GL":
        list_H[index][8] = str(int(list_H[index][8]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    elif itemCode == "GW":
        list_H[index][10] = str(int(list_H[index][10]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    elif itemCode == "SC":
        list_H[index][12] = str(int(list_H[index][12]) +int(itemQuantity))
        list_H[index] = ",".join(list_H[index])+"\n"
    h_l = open("hospitals.txt","w")
    h_l.writelines(list_H)
    h_l.close
```

Hospital function: this function I made it for short to much if statements into just these six if statements and at the first I am when I am calling this function in the code, I put which line are the hospital code on it and thin sprit and split that line by commas and if the itemCode which is an input in the program equals to HC the program take the itemQuantity which is input too from the user and put it next to the (HC) and the same thing for all the items and the changing by changing the hospital code and the last three lines I opened the hospitals txt in write mode and after the editing I closed it to save and we will see it working after few seconds

```
def update():
    choiceUpdate = False
    while choiceUpdate == False:
        print("""
    ( 1 )Add Items
    ( 2 )Take Items
    ( 3 )Back
        """)
        choice = input("\nPlease enter choice: ")
        if choice == "1" or choice  == "2" or choice == "3" :
            if choice == "1":
                item = False
                while item == False:
                    itemCode = input("\nEnter Item Code: ")
                    if itemCode == "HC" or itemCode == "FS" or itemCode == "MS" or itemCode == "GL" or itemCode == "GW" or itemCode == "GL" or itemCode == "SC":
                        item = True
                    else:
                        print("\nincoreect code")
                suppleir = False
                while suppleir ==False:
                            suppleir_code = input("\nenter your Supplier code: ")
                            if suppleir_code == "SUP11" or suppleir_code == "SUP22" or suppleir_code == "SUP33":
                                if suppleir_code == "SUP11":
                                    if itemCode == "HC" or itemCode == "FS":
                                        suppleir = True
                                    else:
                                        print("\nincorrect Supplier Code")
                                elif suppleir_code == "SUP22":
                                    if itemCode == "MS" or itemCode == "GL":
                                        suppleir = True
                                    else:
                                        print("\nincorrect Supplier Code")
                                elif suppleir_code == "SUP33":
                                    if itemCode == "GW" or itemCode == "SC":
                                        suppleir = True
                                    else:
                                        print("\nincorrect Supplier Code")
                            else :
                                print("\nincorrect Code")
```

The second function is the updating function for inventory update at the first a declared a variable for the first while loop(choiceUpdate) I declared a variable which is (choice) for the input form the user and I made an if statement for it and its for if the puts another number except (1,2,3) this while loop will repeat again and again until he closes the program or put a number from the upper numbers

After this if statement I made anther some if statements inside it and started with (if choice == “1”)

At the first I am going to start what will happen if the user choices number 1 which is (add items) as we see in the menu and this choice for the suppliers and the program will ask him for some details then I started with declaring a variable for a new while loop inside the if statement which is (item) and declared another variable for an input which Is (itemCode) for the item code from the user and I made another if statement for this input because if the user entered anything except the correct item codes the program will not execute and will show (incorrect code)

After this I declared a variable for another while loop for the supplier code input because if the user inputs a wrong supplier code the program will show him (incorrect code)

```
if suppleir_code == "SUP11":
    if itemCode == "HC" or itemCode == "FS":
        suppleir = True
    else:
        print("\nincorrect Supplier Code")
elif suppleir_code == "SUP22":
    if itemCode == "MS" or itemCode == "GL":
        suppleir = True
    else:
        print("\nincorrect Supplier Code")
elif suppleir_code == "SUP33":
    if itemCode == "GW" or itemCode == "SC":
        suppleir = True
    else:
        print("\nincorrect Supplier Code")
```

Lest say another supplier wants to supply items except his items the program will not execute because of the few lines.

For example, for supplier one his code is (SUP11) and he supplies head cover (HC) and face mask (FS)

If another supplier putted his code and want to supply these items, the program will show (incorrect Supplier code). And here there is no supplier can supply another item except his items

```
quantity = False
while quantity == False:
    itemQuantity = input("\nenter quantity: ")
    if itemQuantity.isnumeric() == True:
        quantity = True
    else:
        print("\nplease put a number")
list = open("ppe.txt","r").readlines()
count = 0
for index in list :
    index = index.strip().split(",")
    if index[0] == itemCode:
        index[2] = str(int(index[2])+int(itemQuantity))+"\n"
        newLine = ",".join(index)
        list[count] = newLine
    count +=1
```

These lines for the how much quantity the supplier want to supply.

As usual I stated with declaring a variable for the while loop(quantity) and a while loop and then another variable for the quantity input from the user (itemQuantity) (isnumeric) is a command in python that makes the only acceptable input from the user are numbers not alphabets and if the user puts any another thing the program will show (please put a number)

After that I declared a variable (list)to open the (ppe.txt) file with (open) command in read mode(r) then I put (readlines) command to read all the lines in the text file after that a declared variable as (count = 0) and this variable for the (for loop) then I started the for loop, I command it to make split

and strip with comma (,) foe every line in the (pp.txt) file and then search in every line for the item code that the user putted it and when he find it put the quantity next to the item code

```
file = open("ppe.txt","w")
file.writelines(list)
file.close
```

And these few lines I declared a variable to open the (ppe.txt) in write mode to write the data on and then close it to save it

```
list_S= open("supplier.txt","r").readlines()
if suppleir_code == "SUP11":
    list_S[0] = list_S[0].strip().split(",")
    if itemCode == "HC":
        list_S[0][2] = str(int(list_S[0][2]) +int(itemQuantity))
        list_S[0] = ",".join(list_S[0])+"\n"
    elif itemCode == "FS":
        list_S[0][4] = str(int(list_S[0][4]) +int(itemQuantity))
        list_S[0] = ",".join(list_S[0])+"\n"
elif suppleir_code == "SUP22":
    list_S[1] = list_S[1].strip().split(",")
    if itemCode == "MS":
        list_S[1][2] = str(int(list_S[1][2]) +int(itemQuantity))
        list_S[1] = ",".join(list_S[1])+"\n"
    elif itemCode == "GL":
        list_S[1][4] = str(int(list_S[1][4]) +int(itemQuantity))
        list_S[1] = ",".join(list_S[1])+"\n"
elif suppleir_code == "SUP33":
    list_S[2] = list_S[2].strip().split(",")
    if itemCode == "GW":
        list_S[2][2] = str(int(list_S[2][2]) +int(itemQuantity))
        list_S[2] = ",".join(list_S[2])+"\n"
    elif itemCode == "SC":
        list_S[2][4] = str(int(list_S[2][4]) +int(itemQuantity))
        list_S[2] = ",".join(list_S[2])+"\n"
list_z = open("supplier.txt","w")
list_z.writelines(list_S)
list_z.close
```

In these lines of code, I made the program to write in the (suppliers.txt) for each item and calculate the quantity that user put it in and the quantity that was already in the file and after calculating it put it again in the (suppliers.txt) and save the new updates which are calculated numbers

```
dates = str(datetime.date.today())
dist = open("distribution.txt","a")
dist.write("\n"+suppleir_code+","+itemCode+","+itemQuantity+","+dates)
dist.close
choiceUpdate = True
```

These lines to make the program record the operation in the (distribution.txt) with the date (year month and day) and the last line to break the main while loop and go out of the function

```
elif choice == "2":
    hospitalCode = False
    while hospitalCode == False:
        hospital_input = input("\nEnter Hospital Code: ")
        if hospital_input == "HOS11" or hospital_input == "HOS22" or hospital_input == "HOS33":
            hospitalCode = True
        else :
            print("\nincorrect Hospital Code")
    itemCode4HOS = False
    while itemCode4HOS == False:
        itemCode = input("\nEnter Item Code: ")
        if itemCode == "HC" or itemCode == "FS" or itemCode == "MS" or itemCode == "GL" or itemCode == "GW" or itemCode == "GL" or itemCode == "SC":
            itemCode4HOS = True
        else :
            print("\nIncorrect Code")
    correct = False
    while correct == False:
        itemQuantity = input("\nenter quantity: ")
        if itemQuantity.isnumeric() == True:
            correct = True
        else:
            print("pleas put a numper!!")
```

Now let's see if the user choses number 2 which is for hospitals this(elif) means if the user didn't choose 1 and chose 2 the program will execute the lines after this (elif)

I started with a variable (hospitalCode) and a while loop and then variable (hospital_input) for the hospital code and after that if statement because if the user entered another code except the correct hospital codes and we can see an else part in the code this for if the user entered a wrong hospital code the program will show (incorrect hospital code) and if it true the program will go the next lines and skip the else part because the input is correct, after this another variable(itemCode4HOS) and another while loop for the item code input and this while loop will make the same job which every while did in the previous explanation and then a variable (correct)with a while loop for the quantity input that the hospital want and the same(isnumeric) command doing his job

```
list = open("ppe.txt","r").readlines()
count = 0
for index in list :
    index = index.strip().split(",")
    if index[0] == itemCode:
        if (int(index[2])-int(itemQuantity)) >= 0:
            index[2] = str(int(index[2])-int(itemQuantity))+"\n"
            newLine = ",".join(index)
            list[count] = newLine
            if hospital_input == "HOS11":
                hospital(0,itemCode,itemQuantity)
            elif hospital_input == "HOS22":
                hospital(1,itemCode,itemQuantity)
            elif hospital_input == "HOS33":
                hospital(2,itemCode,itemQuantity)
            dates = str(datetime.date.today())
            dist_hos = open("distribution.txt","a")
            dist_hos.write("\n"+hospital_input+","+itemCode+","+itemQuantity+","+dates)
            dist_hos.close
        else:
            print("You have "+index[2]+". You cannot take "+itemQuantity)
        choiceUpdate = False
```

In these lines made the program to record what the hospitals took and record it in the (ppr.txt) by subtraction what was in the in the (ppe.txt) from what the hospital took and put it again in the (ppe.txt) file and I used here the hospital function as a explained I called it and putted the line place the index and after that I opened the (distribution.txt) in append mode to record the operation in the file

And if the quantity in the inventory less than what the hospital wants the program will say that there is not enough in the inventory and the function will start over again

```
            elif choice == "3":
                choiceUpdate = True
```

if you chose 3 you just go out of the function and go back to the main menu

```
def search():
    file_s = open("supplier.txt","r").readlines()
    file_h = open("hospitals.txt","r").readlines()
    file_d = open("distribution.txt","r").readlines()
    ChoiceSearch = False
    while ChoiceSearch == False:
        print("""
        ( 1 ) Search By Supplier Code
        ( 2 ) Search By Hospital Code
        ( 3 ) Search By Item Code
        ( 4 ) Back
        """)
        choice = input("\ntype your Choice: ")
        if choice =="1":
            sup = False
            while sup == False:
                SupplierCode = input("\nEnter Your Supplier Code: ")
                if SupplierCode == "SUP11" or SupplierCode == "SUP22" or SupplierCode == "SUP33":
                    sup = True
                else:
                    print ("Incorrect Supplier Code!")
            for index in file_d:
                index = index.strip().split(",")
                if index[0] == SupplierCode:
                    print("\n"+index[0] + " added " + index[2] + " of " + index[1] + " at " + index[3])
            for index in file_s:
                index = index.strip().split(",")
                if index[0] == SupplierCode:
                    print("\n"+index[0] + " gave in total " + index[2] + " of " + index[1] + " and " + index[4]+ " of " + index[3])
        elif choice == "2":
            hos = False
            while hos == False:
                HospitalCode = input("\nEnter Your Hospital Code: ")
                if HospitalCode == "HOS11" or HospitalCode == "HOS22" or HospitalCode == "HOS33":
                    hos = True
                else:
                    print ("Incorrect Hospital Code!!")
            for index in file_d:
                index = index.strip().split(",")
                if index[0] == HospitalCode:
                    print("\n"+index[0] + " took " + index[2] + " of " + index[1] + " at " + index[3])
            for index in file_h:
                index = index.strip().split(",")
                if index[0] == HospitalCode:
                    print("\n"+index[0] + " has " + index[1] + ": " + index[2] , index[3] + ": " + index[4] , index[5] + ": " + index[6] , index[7] + ": " + index[8] , index[9] + ": " + index[10] , index[11] + ": " + index[12])
        elif choice == "3":
            item = False
            while item == False:
                itemCode = input("\nEnter Your Item Code: ")
                if itemCode == "HC" or itemCode == "FS" or itemCode == "MS" or itemCode == "GL" or itemCode == "SC" or itemCode == "GW":
                    item = True
                else :
                    print ("Incorrect Item Code!!")
            for index in file_d:
                index = index.strip().split(",")
                if index[1] == itemCode:
                    print(index[1]+" was added/taken by "+index[0]+" with the amount of "+index[2]+" at "+index[3])
        elif choice == "4":
            ChoiceSearch = True
        else :
            print("Incorrect Choice")
```

In this function (search) I opened all the files I opened all the files and made a for loops to check every input from the user.

For example, if the user wants to search by the supplier code the program will show him how many he gave to the inventory every time and when he gave these items and how much he gave in total from each item , and if the user want to search with hospital code the program will print how many the hospital take in what time and how many the hospital have in total from which item from the (hospitals.txt) and the program will not accept any wrong codes.

```
def printInv():
    file = open("ppe.txt","r").readlines()
    print_inven = False
    while print_inven == False:
        print("""
    ( 1 ) Print Inventory In Ascending Order
    ( 2 ) Print inventory for items Less Than 25 boxes
    ( 3 ) Back
        """)
        choice = input("Enter your Choice: ")
        if choice == "1":
            newfile = []
            for index in file :
                index = index.strip().split(",")
                newfile.append(index)
            newfile = sorted(newfile, key = lambda number: int(number[2]),reverse = False)
            for index in newfile:
                    print(index[0] + ": " + index[2])
                    print_inven = True
        elif choice == "2":
            for index in file:
                index = index.strip().split(",")
                if int(index[2]) <= 25:
                    print (index[0] + ": " + index[2])
                print_inven = True
        elif choice == "3":
            print_inven = True
        else :
            print ("incorrect Choice")
            print_inven = False
```

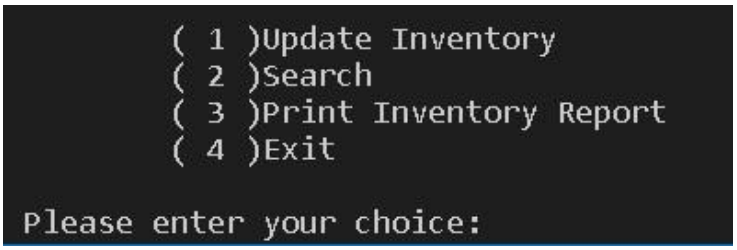
In this function (printInv) this functions job is printing the inventory and have 3 options which are (Print Inventory in Ascending Order, Print inventory Less Than 25 Items and back)

In this function the user can see all the items in the inventory and how much in it I used for loops in this function to search and arrange for the ascending and to search for the items which are less than 25 boxes in the (ppe.txt) file

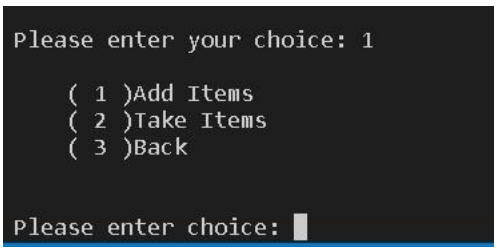
```
def MainMenu():
    mainLoop = False
    while mainLoop == False:
        print("""
        ( 1 )Update Inventory
        ( 2 )Search
        ( 3 )Print Inventory Report
        ( 4 )Exit
        """)
        correctChoice = False
        while correctChoice == False:
            choice = input("Please enter your choice: ")
            if choice == "1" or choice == "2" or choice == "3" or choice == "4":
                correctChoice = True
            else:
                print("Incorrect Choice!")
        if choice == "1":
            update()
        elif choice == "2":
            search()
        elif choice == "3":
            printInv()
        elif choice == "4":
            print("Out Of The Program...")
            mainLoop = True

MainMenu()
```

At the end the Menu Function (MainMenu) in this function you will see the menu of the for what you want to do you want to update the inventory by taking or giving or want to search about a specific item or supplier code or hospital code and then according to your choice the program will call the function if you want to search about a specific item and track it when it was putted in the inventory and when it took you will choose option (2) and then the program will call the function

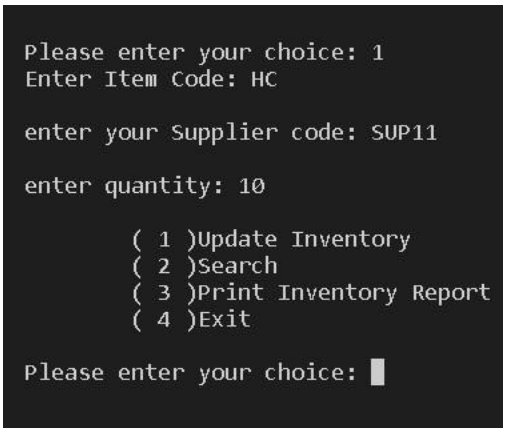
Screen Shoots how the program working



First look when running the program



if the user chooses number 1



And here id the user chooses number 1 again which is add items the program will ask for some details and will check for every single detail if it's true it will execute if its not the program will ask again

And as we see the program wrote in ppe supplier and distribution text files

```
Please enter your choice: 1

    ( 1 )Add Items
    ( 2 )Take Items
    ( 3 )Back


Please enter choice: 2

Enter Hospital Code: HOS11

Enter Item Code: HC

enter quantity: 10
```

```
HOS11,HC,10,FS,0,MS,0,GL,0,GW,0,SC,0
```

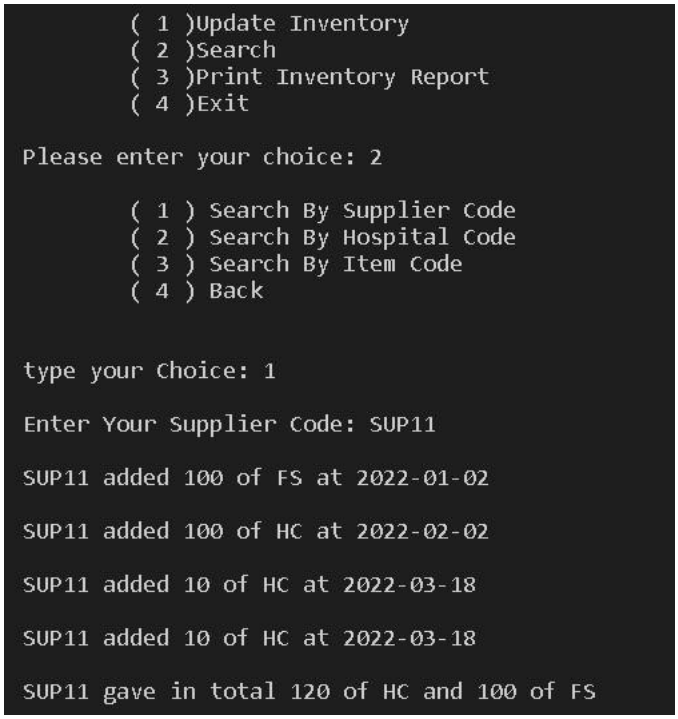
```
HC,SUP11,100
```

```
HOS11,HC,10,2022-03-18
```

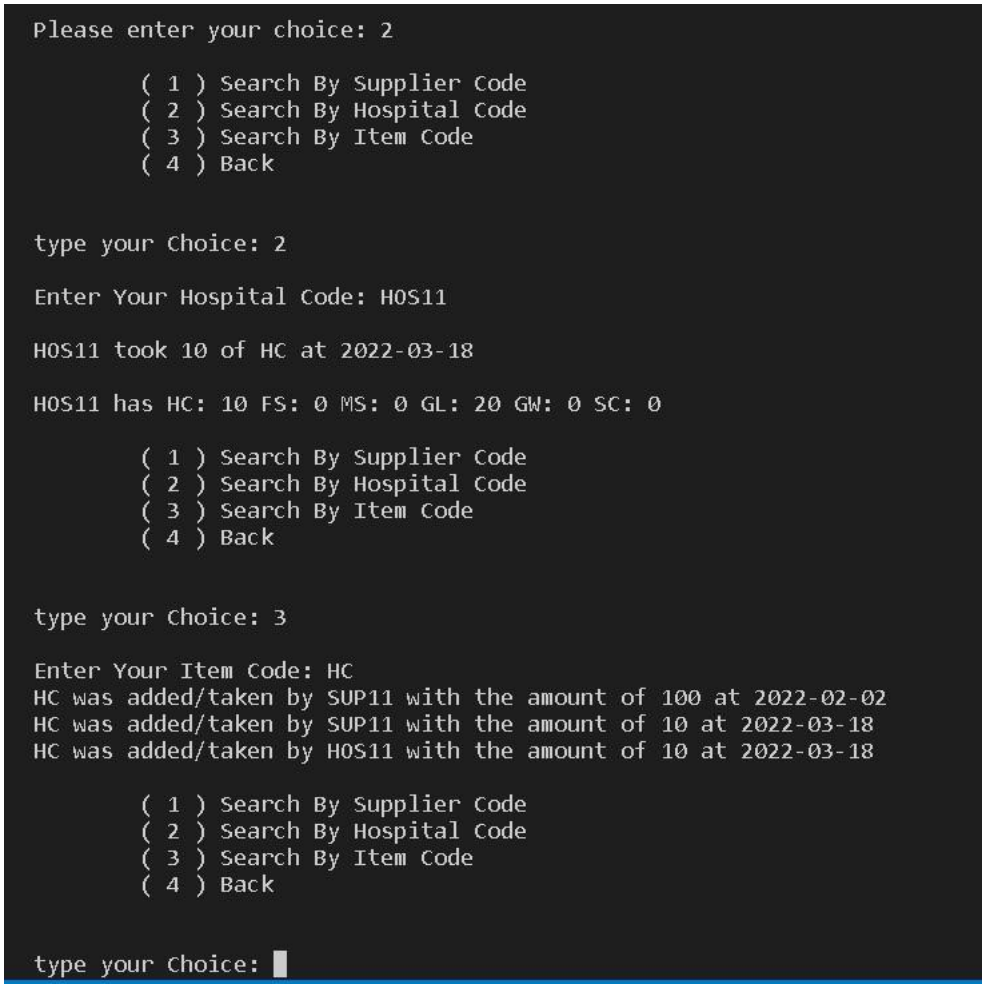
And if the user shoes number 2 the program will ask for some details and then will check for all the information and after checking it is all correct it will execute, and everything will be recorded in the text files

```
    ( 1 )Add Items
    ( 2 )Take Items
    ( 3 )Back


Please enter choice: 1

Enter Item Code: asdf

incoreect code

Enter Item Code: HC

enter your Supplier code: Sasd

incorrect Code

enter your Supplier code: SUP11

enter quantity: asd

please put a number

enter quantity: 10
```

Like we see the program gives an incorrect statement every time the user input incorrect code until he input the correct code only in this time the program will execute



now if you want to search about anything the files this what the program will show you like in screen shoot, I used supplier code for example and all the details shown how many gave from what item in when he gave it and the same for the rest of options



and this screen shoot to see how it look like if the user searched by supplier code or item code

```
        ( 1 )Update Inventory
        ( 2 )Search
        ( 3 )Print Inventory Report
        ( 4 )Exit

Please enter your choice: 3

    ( 1 ) Print Inventory In Ascending Order
    ( 2 ) Print inventory for items Less Than 25 boxes
    ( 3 ) Back

Enter your Choice: 1
HC: 10
FS: 20
MS: 50
GW: 55
GL: 57
SC: 95

        ( 1 )Update Inventory
        ( 2 )Search
        ( 3 )Print Inventory Report
        ( 4 )Exit

Please enter your choice: 3

    ( 1 ) Print Inventory In Ascending Order
    ( 2 ) Print inventory for items Less Than 25 boxes
    ( 3 ) Back

Enter your Choice: 2
HC: 10
FS: 20

        ( 1 )Update Inventory
        ( 2 )Search
        ( 3 )Print Inventory Report
        ( 4 )Exit

Please enter your choice:
```

And here we can see how the print function working

```
        ( 1 )Update Inventory
        ( 2 )Search
        ( 3 )Print Inventory Report
        ( 4 )Exit

 Please enter your choice: 4
 Out Of The Program...
```

And here if the user wants to go out of the program

Conclusion

At the end this program made to make inventory management easier, and everything be recorded and organized.