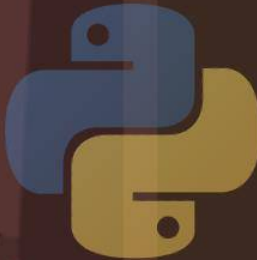




# coding

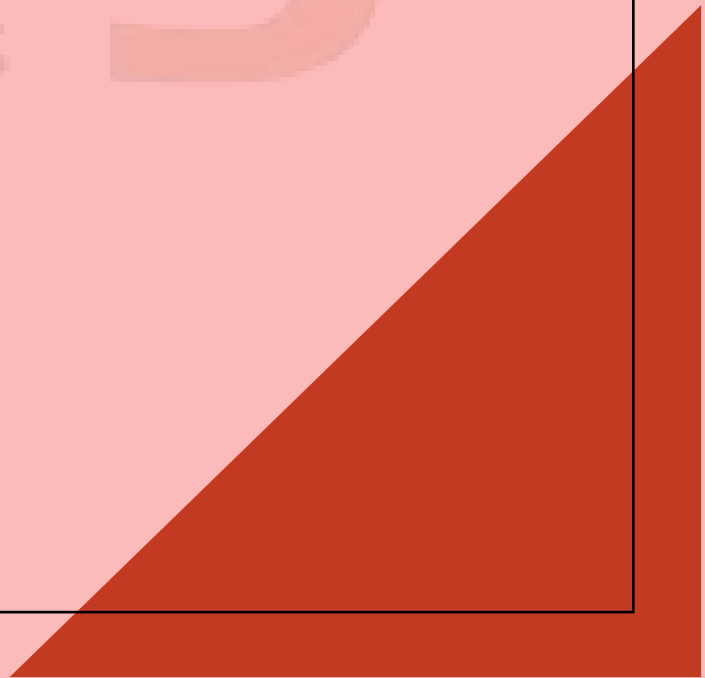
4 MIGRANT WOMEN RETURNERS



# Hotel and Restaurant Management Software

*ADVANCED*

MIGRANT WOMEN RETURNERS



# Activity scenario summary:

In this example we will write code for a project which replicates a Hotel Front Desk Management Software System used by staff working at the front desk and in customer service.

Once this project is completed, the user will have built a real working software system which can allow staff to:

- Check people in and out of rooms
- View vacant rooms
- View Occupied rooms
- Book a meal
- View which rooms need to be cleaned
- View customer bill

# Built into the template...

You should have access to a menu template that looks like this...

- Lines 1-27- There is premade lists for you containing room numbers and food items
- Lines 29-51- Subroutines which will be added to in the different difficulty levels of this project
- Lines 53-84- the main menu which will automatically appear when you run your code for the first time (all you have to do is program each menu option which may link to the subroutine or may not (choices 2 and 3))

```
1 food1=list()
2 price1=list()
3
4 #room details
5 room_avail=[100,103,201,204]
6 room_occp=[101,104,202,203]
7
8 #food details
9 breakfast={"Sandwich-h":5,
10            "Soup-p":3,
11            "Juice-e":2,
12            "Coffee-c":2,
13            "Ham & Egg-g":5,
14            "Pot of Tea-a":2}
15
16 lunch={"Rice & Peas-r":4,
17         "Burger(chick.)-b":6,
18         "Chicken Pizzola-c":5,
19         "Mutton Curry-m":6,
20         "Pot of tea-a":2}
21 dinner={"Salads-s":3,
22          "Steamed Veg.-v":2,
23          "Jerk Chicken-k":6,
24          "Burger(bean)-b":4,
25          "Coffee-c":2,
26          "Juice-j":2}
27
28 #subroutines
29 def clear():
30     print ("\n")
31
32 def bill():
33     print("option not completed- advanced ")
34
35 def booking():
36     print("option not completed- beginner")
37
38 def vacant():
39     print("option not completed- beginner")
40
41 def or_break(ch):
42     print("option not completed- intermediate")
43
44 def or_lunch(ch):
45     print("option not completed- intermediate")
46
47 def or_dinner(ch):
48     print("option not completed- intermediate")
49
50 def food():
51     print("option not completed- intermediate")
52
```

```
53 #main menu
54
55 chc=0
56 while chc !=7:
57     clear()
58     print("-----Menu-----")
59     print("1. Food")
60     print("2. Room Available List")
61     print("3. Room Occupied List")
62     print("4. Book a Room")
63     print("5. Bill")
64     print("6. Vacant a room")
65     print("7. Exit")
66     chc=int(input("Enter your choice: "))
67     if chc==1:
68         food()
69     elif chc==2:
70         print("option not completed- beginner")
71     elif chc==3:
72         print("option not completed- beginner")
73     elif chc==4:
74         booking()
75     elif chc==5:
76         bill()
77     elif chc==6:
78         vacant()
79     elif chc==7:
80         break
81     else:
82         print("-----Wrong Input(1-7 only)-----")
83
```

# The code for the main menu (explained)

- Line 56- the user enters a while loop. This means that the main menu will continue to be shown until the user enters the option "7", which will then break the loop (on line 80)
- Lines 58-65- menu options are displayed
- Line 66- the user is asked to enter an option
- Lines 67-78, depending on which option the user enters, determines which action will be performed by the code. In the intermediate and advanced sections we will learn the theory of subroutines, but for now all the code is written in the main menu itself
- Lines 81-82- if the user does not enter a value between 1 and 7, they are asked to enter a valid input and the code is repeated

```
53 #main menu
54
55 chc=0
56 while chc !=7:
57     clear()
58     print("-----Menu-----")
59     print("1. Food")
60     print("2. Room Available List")
61     print("3. Room Occupied List")
62     print("4. Book a Room")
63     print("5. Bill")
64     print("6. Vacant a room")
65     print("7. Exit")
66     chc=int(input("Enter your choice: "))
67     if chc==1:
68         food()
69     elif chc==2:
70         print("option not completed- beginner")
71     elif chc==3:
72         print("option not completed- beginner")
73     elif chc==4:
74         booking()
75     elif chc==5:
76         bill()
77     elif chc==6:
78         vacant()
79     elif chc==7:
80         break
81     else:
82         print("-----Wrong Input(1-7 only)-----")
83
```

# The Menu:

The menu will look like this.

For the advanced section of this code we will be programming buttons 4, 5 and 6.

```
-----Menu-----  
1. Food  
2. Room Available List  
3. Room Occupied List  
4. Book a Room|  
5. Bill  
6. Vacant a room  
7. Exit  
Enter your choice:
```

## 4. Book a room

```
-----Menu-----  
1. Food  
2. Room Available List  
3. Room Occupied List  
4. Book a Room  
5. Bill  
6. Vacant a room  
7. Exit
```

This button will allow the user to book a room (i.e. move it from the list of available rooms to the list of occupied ones)

# What it will look like..

```
-----Menu-----  
1. Food  
2. Room Available List  
3. Room Occupied List  
4. Book a Room  
5. Bill  
6. Vacant a room  
7. Exit  
Enter your choice: 4  
Available rooms  
[100, 103, 201, 204]  
Enter Room Number for Booking: 103  
Occupied Rooms Now  
[101, 104, 202, 203, 103]  
Available Rooms Now  
[100, 201, 204]
```

- When the user selects option 4, they will be shown the list of available rooms that the user can book
- If the user enters one of the rooms off of this list, it will be moved from the available rooms list to the occupied rooms list
- These two lists will be displayed



# Step 1

Asking the user to enter a room...

The available rooms list will be printed

```
def booking():  
    print("Available rooms\n", room_avail)  
    rb=input("Enter Room Number for Booking: ")
```

The room entered by the user will be stored in the variable "rb"

# Step 2

If the room is in the list...

It is first checked that the room (after being converted to an integer) is stored in the available rooms list

The room entered will be added to the "room\_occp" list. When adding to a list, the .append function is used

The room entered is then deleted from the "room.avail" list using the .remove function

```
def booking():  
    print("Available rooms\n",room_avail)  
    rb=input("Enter Room Number for Booking: ")  
  
    if int(rb) in room_avail:  
        room_occp.append(int(rb))  
        room_avail.remove(int(rb))
```

# Step 3

Displaying the final lists

The final occupied room and available rooms lists will be displayed

If the user did not enter a room that was an option, the room number will be said to have not have been found and the code will return to the main menu

```
def booking():  
    print("Available rooms\n",room_avail)  
    rb=input("Enter Room Number for Booking: ")  
  
    if int(rb) in room_avail:  
        room_occp.append(int(rb))  
        room_avail.remove(int(rb))  
        print("Occupied Rooms Now")  
        print(room_occp)  
        print("Available Rooms Now")  
        print(room_avail)  
    else:  
        print("Room no. not found")
```

## 6. Vacant a room list

-----Menu-----

1. Food
2. Room Available List
3. Room Occupied List
4. Book a Room
5. Bill
6. Vacant a room
7. Exit

This button will allow the user to check out of a room (i.e. move it from the list of occupied rooms to the list of available ones).

This will essentially do the reverse of the book a room option

# What it will look like..

```
-----Menu-----  
1. Food  
2. Room Available List  
3. Room Occupied List  
4. Book a Room  
5. Bill  
6. Vacant a room  
7. Exit  
Enter your choice: 6  
occupied Rooms  
[101, 104, 202, 203]  
Enter Room Number for Vacant: 202  
Occupied Rooms Now  
[101, 104, 203]  
Available Rooms Now  
[100, 103, 201, 204, 202]
```

- The user will be shown the list of occupied rooms and be prompted to enter one to make vacant

Before the solution is shown on the next slide, have a go at programming the option much like how we programmed the book a room option in steps 1, 2 and 3 (in the vacant() subroutine)

# Step 4

Displaying the list

Differences to note:

- Is located in the “vacant()” subroutine
- The occupied room list is the one that will have the room deleted from it this time, and the room will then be appended to the available room list

The two lists will be displayed at the end the same, and if the user enters an invalid room number then the code will return to the main menu the same as in the last option

```
def vacant():  
    print("occupied Rooms\n", room_occp)  
    rb=input("Enter Room Number for Vacant: ")  
    if int(rb) in room_occp:  
        room_avail.append(int(rb))  
        room_occp.remove(int(rb))  
        print("Occupied Rooms Now")  
        print(room_occp)  
        print("Available Rooms Now")  
        print(room_avail)  
    else:  
        print("Room no. not found")
```

# 5. Bill

- ```
-----Menu-----  
1. Food  
2. Room Available List  
3. Room Occupied List  
4. Book a Room  
5. Bill  
6. Vacant a room  
7. Exit
```

This button will calculate the total of all the food logged by the user (coded in the intermediate section in 1. Food option), and will add it to the price of renting the room for X amount of days

# Step 6

How many days in the room?

The following code will be written in the `bill()` subroutine which will be called when the user enters the option 5 in the menu

```
def bill():  
    print("All the Bill amount will be in Pounds")  
    days=int(input("How many days room occupied by the guest"))
```

The user will be prompted to enter the amount of days stayed in the room, which will be stored in the variable `days`, as an integer. This is so we can do calculations with it



# Step 7

Calculating the rental price of the room

The rental cost is calculated from the rate of £100 per day. This means that the amount of days entered by the user will be multiplied by 100 (using the mathematical operator \* for multiplication)

The string version of the number of days is stored in the variable "x" to be outputted at some point later

```
def bill():  
    print("All the Bill amount will be in Pounds")  
    days=int(input("How many days room occupied by the guest"))  
    torent=days*100  
    x=str(days)
```

# Step 8

Displaying the final lists

The food ordered during the running of the program and the prices of this food will be displayed to the user, much how like we displayed lists in the beginner section

```
def bill():  
    print("All the Bill amount will be in Pounds")  
    days=int(input("How many days room occupied by the guest"))  
    totrent=days*100  
    x=str(days)  
  
    print("\n-----Bill-----\n")  
    print("Total food orders with prices")  
    print(food1)  
    print(price1)
```

# Step 9

The totals are added

The total food bill will be calculated using the `sum()` function on the price list, which contains all the prices of all food logged by the user, and this total is stored in the variable "s"

The total bill is calculated from the total food bill, plus the rental cost of the room for the amount of days entered by the user

```
def bill():  
    print("All the Bill amount will be in Pounds")  
    days=int(input("How many days room occupied by the guest"))  
    totrent=days*100  
    x=str(days)  
  
    print("\n-----Bill-----\n")  
    print("Total food orders with prices")  
    print(food1)  
    print(price1)  
    s=sum(price1) #total food bill  
    totalbill=s+totrent
```

# Step 10

Displaying the totals to the user

The total food price will be displayed first ("s")

The user will then be shown the total cost of the room at £100 per day, after being multiplied by the number of days stayed in the room

The total bill will then be displayed, which we calculated in step 9

```
def bill():
    print("All the Bill amount will be in Pounds")
    days=int(input("How many days room occupied by the guest"))
    totrrent=days*100
    x=str(days)

    print("\n-----Bill-----\n")
    print("Total food orders with prices")
    print(food1)
    print(price1)
    s=sum(price1) #total food bill
    totalbill=s+totrent
    print("Total Food Price           : ",s)
    print("Total room rent@100 per day  : ",totrent)
    print("Total bill(Food + ",x," days   : ",totalbill)
```

# What the final code should look like...

```
food1=list()
price1=list()

#room details
room_avail=[100,103,201,204]
room_occp=[101,104,202,203]

#food details
breakfast={"Sandwich-h":5,
           "Soup-p":3,
           "Juice-e":2,
           "Coffee-c":2,
           "Ham & Egg-g":5,
           "Pot of Tea-a":2}

lunch={"Rice & Peas-r":4,
       "Burger(chick.)-b":6,
       "Chicken Pizzola-c":5,
       "Mutton Curry-m":6,
       "Pot of tea-a":2}

dinner={"Salads-s":3,
        "Steamed Veg.-v":2,
        "Jerk Chicken-k":6,
        "Burger(bean)-b":4,
        "Coffee-c":2,
        "Juice-j":2}

#subroutines
def clear():
    print("\n")

def bill():
    print("All the Bill amount will be in Pounds")
    days=int(input("How many days room occupied by the guest"))
    totrent=days*100
    x=str(days)

    print("\n-----Bill-----\n")
    print("Total food orders with prices")
    print(food1)
    print(price1)
    s=sum(price1) #total food bill
    totalbill=s+totrent
    print("Total Food Price      : ",s)
    print("Total room rent@100 per day : ",totrent)
    print("Total bill(Food + ",x," days : ",totalbill)

def booking():
    print("Available rooms\n",room_avail)
    rb=input("Enter Room Number for Booking: ")

    if int(rb) in room_avail:
        room_occp.append(int(rb))
        room_avail.remove(int(rb))
        print("Occupied Rooms Now")
        print(room_occp)
        print("Available Rooms Now")
        print(room_avail)
    else:
        print("Room no. not found")

def vacant():
    print("occupied Rooms\n",room_occp)
    rb=input("Enter Room Number for Vacant: ")
    if int(rb) in room_occp:
        room_avail.append(int(rb))
        room_occp.remove(int(rb))
        print("Occupied Rooms Now")
        print(room_occp)
        print("Available Rooms Now")
        print(room_avail)
    else:
        print("Room no. not found")

def or_break(ch):
    if ch=="h":
        food1.append("Sandwich")
        price1.append(5)
    elif ch=="p":
        food1.append("Soup")
        price1.append(3)
    elif ch=="e":
        food1.append("Juice")
        price1.append(2)
    elif ch=="c":
        food1.append("Coffee")
        price1.append(2)
    elif ch=="g":
        food1.append("Ham & egg")
        price1.append(5)
    elif ch=="a":
        food1.append("Pot of Tea")
        price1.append(2)
    else:
        print("Wrorng Input! Try again")

def or_lunch(ch):
    if ch=="r":
        food1.append("Rice & Peas")
        price1.append(4)
    elif ch=="b":
        food1.append("Burger(Chick.)")
        price1.append(6)
    elif ch=="c":
        food1.append("Chicken Pizzola")
        price1.append(5)
    elif ch=="m":
        food1.append("Mutton Curry")
        price1.append(6)
    elif ch=="a":
        food1.append("Pot of Tea")
        price1.append(2)
    else:
        print("Wrorng Input! Try again")

def or_dinner(ch):
    if ch=="s":
        food1.append("Salads")
        price1.append(3)
    elif ch=="v":
        food1.append("Steamed Veg.")
        price1.append(2)
    elif ch=="k":
        food1.append("Jerk Chicken")
        price1.append(6)
    elif ch=="c":
        food1.append("Coffee")
        price1.append(2)
    elif ch=="b":
        food1.append("Burger(bean)")
        price1.append(4)
    elif ch=="j":
        food1.append("Juice")
        price1.append(2)
    else:
        print("Wrorng Input! Try again")

def food():
    ##---asking for food---
    ch1=input("Breakfast-b Lunch-l,Dinner-d(Enter your cho
    if ch1=="b":
        print("Breakfast\n",breakfast)

    elif ch1=="l":
        print("lunch\n",lunch)

    elif ch1=="d":
        print("dinner\n",dinner)

    else:
        print("Wrong input!")

    chc=0
    while chc !=7:
        clear()
        print("-----Menu-----")
        print("1. Food")
        print("2. Room Available List")
        print("3. Room Occupied List")
        print("4. Book a Room")
        print("5. Bill")
        print("6. Vacant a room")
        print("7. Exit")
        chc=int(input("Enter your choice: "))
        if chc==1:
            food()
        elif chc==2:
            print("Available rooms-->")
            print(room_avail)
        elif chc==3:
            print("Occupied rooms-->")
            print(room_occp)
        elif chc==4:
            booking()
        elif chc==5:
            bill()
        elif chc==6:
            vacant()
        elif chc==7:
            break
    else:
        print("-----Wrong Input(1-7 only)-----")
```

Congratulations you  
have finished this  
project!!!

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