

# **CFP Project- Phase I- Layout**

**Project Title: Hotel Management System**

**Project by:**

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**Requirement:**

You are assigned a unique store/service for which you are required to make a customized program, that keeps record of all the transactions.

You are required to maintain two files, products.txt and sales.txt.

products.txt shall hold the record of all the products available in the shop.

sales.txt should hold the record of all the products sold. (Those who are assigned services will name their files according to the requirement of their service)

Your program should be written in the form of functions, and it must perform the following file handling operations:

display, search, add, update, delete.

## **Layout:**

The receptionist of the hotel operates this program. As such, his access to the sales files is slightly restricted.

- a) Add a Room.
- b) Edit a Room.
- c) Search a Room.
- d) Delete Room
- e) Print all Rooms.
- f) Show all Available Rooms.
- g) Check-in
- h) Check-out
- i) Open Sales File
- j) Erase all Data.
- k) Read Me
- l) Restore to Default.
- m) Exit the program.

### **a) Add a Room:**

This option allows the user to enter a new room. First, the room number is asked of the user. He can enter any room number within a range of 999. The hotel cannot accommodate more than nine floors; thus 999 is the limit. The user also cannot enter any negative values, as it will result in an error. If the user gives an input other than numbers, an error will show. After that, the program will ask the user to enter the name of the new room. A maximum character limit of 50 is allowed for the name of the room. If the user enters a blank value, the program will show an error. After that, the program will ask for the maximum person accommodation of the room.

No room can have more than 99 persons at once. Then the program will ask the user to enter the dimensional area of the room in square meters. No room can have an area of more than 9999. Then, the number of beds in the room will be asked of the user. Sofa bed, twin beds, queen-sized beds, and regular beds all count as a single bed. A room cannot have more than 99 beds. Then the price of a one-night stay will be asked of the user. The maximum cost of a room can be 999999\$, as any more is not possible of any room. The input price value will be deducted by 0.001\$ for convenience. If the user enters 0, only 0 will be displayed. For all these inputs, if the user enters a negative number or exceeds the limit, an error will be displayed. After all the information has been inputted, the program will store the information in the displayed ID. The hotel can support a maximum of 100 rooms.

### **b) Edit a Room:**

This option will ask the user the id of the room to be edited. If the user enters a value greater than 100, 0, or less than 0, the program will display an error. Similarly, only numbers can be inputted. After the ID, the program will ask the user the new room number of the room. After that, the name

of the room will be asked. Then the program will request the new maximum guest accommodation. Then the new area of the room will be asked. Then, the number of beds in the room will be asked. And finally, the price of the room. Same conditions will be applied to these values, as in the function "Add a Room."

#### c) Search a Room:

This option will allow the user to search for a specific room. Upon selecting this option, a menu will be displayed in which the user can choose to search the room by its ID number, name, room number, or go back. If the user selects the ID option, the program will ask the user the ID of the room he is looking for. Upon entering the ID of the room, all information about the room will be displayed. If the ID is not in records, the program will show that no room was found. The user can enter a maximum value of 100. He can only input numbers; if he inputs anything else, the program will display an error. He cannot enter 0 or less than 0. If the user selects the option to search the room by its name, the user will ask the name of the room he would like to find. Upon entering the value, the room will be displayed if it exists. The user can input a maximum value of 50. If the requested room is not found in records, the program will explain it as much.

Similarly, the user can choose to search the room by its room number. The user can enter a maximum value of 10 characters. Any wrong input value will result in an error message. The user can also choose to go back to the main menu by selecting the option "Back."

#### d) Delete Room:

This option allows the user to delete the information of a room. The program will ask the user the ID of the room to be deleted. The user can only input a number; any wrong input will result in an error. After inputting the value, the program will tell the user that the room has been deleted. If the user enters the ID of a room that does not exist or is already deleted, the program will tell the user.

#### e) Print all Rooms:

This option will tell the program to display a list of all the rooms of the hotel and show all their information. This list will show the ID number, the Room number, the Room Name, the maximum person accommodation, the area of the room, The number of beds, the status (booked or available), and the price of the room.

#### f) Show all Available Rooms:

This option will show the same information as in "Print all Rooms," but it will only filter out the rooms that are available for booking.

#### g) Check-in:

This option will allow the user to book a room. Upon selecting this option, a list of all available rooms will be printed so that the user can choose leisurely. The program will ask the user the ID of the room to book. If the room is already booked, a message will display warning the user. If the room does not exist, the message will be displayed. If the user inputs a wrong value, an error message will be displayed. Then the program will ask the user how many days would he like to stay. A person can stay a maximum of 99 days. Then the user will ask the user how many people are staying in the room in question. If the number of the customer's party exceeds the room's maximum accommodation, an error message will be displayed. Then the program will ask the user the name of the customer. The user can enter a maximum of 25 characters. If the person leaves the options blank, an error message will be displayed. Then the program will ask the customer's phone number. The user can enter a

maximum of 15 characters. The user may leave the phone number blank if the user wishes to respect his privacy.

Then a message will be displayed that will tell the user the room has been booked for the specified number of days. All this information will be written in the sales file. The sales file will show the customer name, his phone number, the name of the room he checked in, the room number, the price of the room, the number of days he is staying for, the duration of his stay, the tax, and the total cost of his stay, that is inclusive of tax. If the customer wishes not to share his phone number, it will not be displayed. After the room has been checked in, the status of the room will change from "Available" to "Booked." Any wrong input will display an error message if the user tries to check in to a room that is already "Booked" an error message will be displayed. Similarly, if the record of the room does not exist, an error message will be displayed.

#### h) Check-out:

This option allows the user to check out of a room. The program will ask the user the ID of the room to check out. It will change the status of the room from "Booked" to "Available." Any wrong input will result in an error. If the room is already available, an error message will be displayed.

#### i) Open Sales Files:

This option will open the sales file menu. Only three options are available for the user, to print the sales file, to delete a record, or to go back. The function of the sales files has been limited for the receptionist to avoid any unforeseen inconvenience. If the user chooses to print the sales file, the entirety of the file will be displayed. It will display all the relevant information listed above. If the user decides to delete a record of the sales file, the program will ask the user the ID of the record to delete. If the record does not exist, or if the user inputs wrong value, an error message will be displayed. If the record is successfully deleted, the message will be displayed. If the user chooses to go back, the main menu will be displayed.

#### j) Erase all Data:

This option will allow the user to erase all records of the rooms and the sales record. Warning: The user should select this option with caution.

#### k) Read me:

This option displays some instructions for the user.

It will display the following information:

- 1 No pets allowed.
- 2 No smoking allowed in rooms.
- 3 Editing of sales file is not allowed.
- 4 A person can stay a maximum of 99 days during a single transaction.
- 5 Room number cannot exceed 999.
- 6 Maximum amount of 100 rooms can be supported.
- 7 Maximum price of a room can be 999,999\$
- 8 Maximum area of 9999-meter square can be supported.

- 9     Maximum of 10,000 sales can be supported. Then data will need to be managed.
- 10    If the number of party members exceeds the room size limit, the room cannot be booked.
- 11    Booked rooms cannot be checked-, similarly, free rooms cannot be checked-out.
- 12    A person may choose not to enter his phone number and enter blank; however, the input of name is essential.
- 13    All prices inclusive of tax.

l) Restore to Default:

This option is used to restore the program to its original settings. It will erase the sales record and show the original rooms.

m) Exit the Program:

This option will allow the user to exit the program.