420-LS3-AS
C2_SCRIPTING LANGUAGE

Python Final Project.

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Local Inn Reservation system(LIRS)

Python Project requirement :

1- python 3

2- database (MySql)

3- A given text file named reservation_file.txt

Project introduction

There is a small local Inn near to the ocean named **Pacific Inn** that offers accommodation services to the customers. They need a reservation system to handle their business. You as

A developer is responsible to create a project based on Pacific Inn requirements.

First, Pacific Inn has 4 types of rooms:

1- Standard rooms (S)

2- Premium rooms(P)

3- Ocean view rooms(O)

4- Economy rooms(E)

Pacific has 1 Standard rooms, 5 Premium rooms,9 Economy rooms and 5 Ocean view ones.

In this project you have number of costumers with their desire accommodation information that you need to make a reservation and complete check-in/out for Pacific Inn

This project has following main functionalities

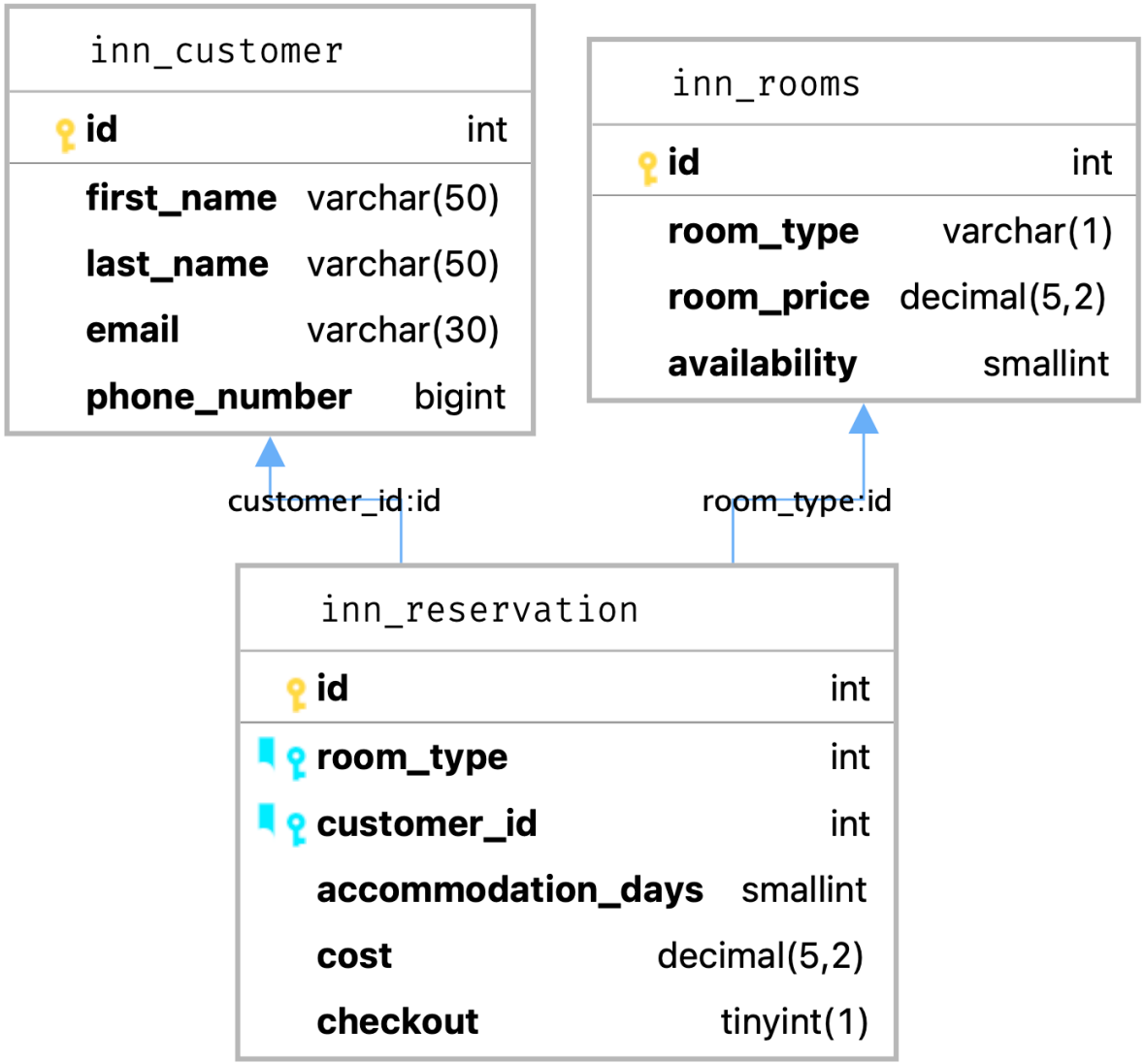
1- Some costumers make their reservation by phone and a receptionist saved customer request in a text file. So, the project must reserve room by reading a reservation information from a given file and save records in a database named Inn_reservation

2- When a customer wants to Check-out then LIRS must print out the customer accommodation information and free his/her room in the system.

3- It should have a mechanism to Check-in new customer with interactive question from console and save a new reservation in its database.

4- If all rooms are full, check-in process must be locked as if the user is not able to choose check-in option.

In the next page you will see the schema of LIRS database that you will implement with MySql db.



Inn_rooms *table stores all room information.*
Inn_customer *table store costumer information.*

Inn_reservation *is the most important table.*
It has relationships with 2 other tables.
room_type *and* ***costumer_id*** *are* ***foreign keys***
In inn_reservation table.

checkout data type in inn_reservation is ***tinyint*** *that gets either 0 or 1 values.*
If value is 0 means the costumer has not been checked-out and he/she needs to pay for the service.
If Value is 1 means the costumer has been successfully checked-out and he/she already paid for all services.
Look at next page to see some records in each table.

inn_room table
You need to add the same data with a **sql script**.

	id	room_type	room_price	availability
1	1	S	100.00	10
2	2	P	150.00	5
3	3	O	200.00	5

inn_customer table example

	id	first_name	last_name	email	phone_number
1	1	Leo	Page	leo.page@gmail.com	5141111110
2	2	Mike	Jackson	mike.jackson@gmail.com	3651111110

inn_reservation table example

	id	room_type	customer_id	accommodation_days	cost	checkout
1	1	1	1	3	300.00	0

reservation_file.txt description

- Each line represents customer data, room type and accommodation days.
- There are 12 lines in this file
- Each piece of data separated with comma (comma separator)

```
Leo,Page,leo.page@gmail.com,5141111110,S,4
Mike,Jackson,mike.jakson@gmail.com,3651111110,P,2
Hiro,Mutto,hiro.mutto@gmail.com,4321110000,O,5,
Hiro,Mutto,hiro.mutto1@gmail.com,43265432,E,5
Emma,Smith,emma.smith@gmail.com,7259874321,S,6
Sophia,Johnson,sophia.johnson@gmail.com,6247890123,P,3
Liam,Williams,liam.williams@gmail.com,8176543210,O,7
Olivia,Jones,olivia.jones@gmail.com,9365487120,S,1,
Olivia,Jones,olivia1.jones@gmail.com,432456434,E,1
Noah,Brown,noah.brown@gmail.com,2457896321,P,9
Ava,Davis,ava.davis@gmail.com,7630147852,O,8
William,Miller,william.miller@gmail.com,6314789023,S,2
```

You will need to create a python project and complete the following requirement.

1- Read the ***reserevation_file.txt*** added to the project directory in order to reserve rooms if your program starts. Having said, all records will be saved in db in the related tables.

2- Your code must have an interactive mode that communicate with user(receptionist) to select 2 different options. He/she either makes a Check-in or Check-out based on a selected option. Look at the next page to see the result of check-out in the console

Check-in process:

If there is check-in process, it must add reservation and reduce the availability number in **inn_room** table.

Check-out process:

If there is a check-out process , it must change field in inn reservation to value 1 and increase the availability field in inn_room table.

3- if your python read the text file, you should remove if from project directory and if there is no file, it will go to the next step which is select options.

4- your program should not exit until you press ctrl+z or have an option for exit from user.(This is up to you to implement what you prefer)

Check-out process

```
          **********Wellcome to the LIRS system **********


Please enter a number related to following option to continue:


_____________________________________
                Check-out: 1
                Check-in: 2
_____________________________________
your option: 1
*************** checkout process ***************
         Please give your phone number : 5141110000
checkout in progress .....

------------------- Pacific Inn ---------------------

Your invoce information is :
        Name: Leo Page
        Accommodation: 4 days
        Room type: Standard
        Total Cost: 400.00 $

----------------Thank you and See you next tim -----------------
```

How to evaluate your project:

1- Creating schema of database (25 points)

2- connecting to the database with python program (10 points)

3- Reading files and save in **inn_reservation** db (25 points)

4- Complete Check-out option (15 points)

5- Complete Check-in process (15 points)

6- running program until exit request comes from user (10 points)

7- Bonus points (10 points):

Your project should not allow user to select check-in option if there are no available rooms.

Project Delivery and rules:

Delivery data is 2024-April-20, and you will submit via Omnivox your project including database scripts and python project.

Maximum Number of students in a group: 2 students.