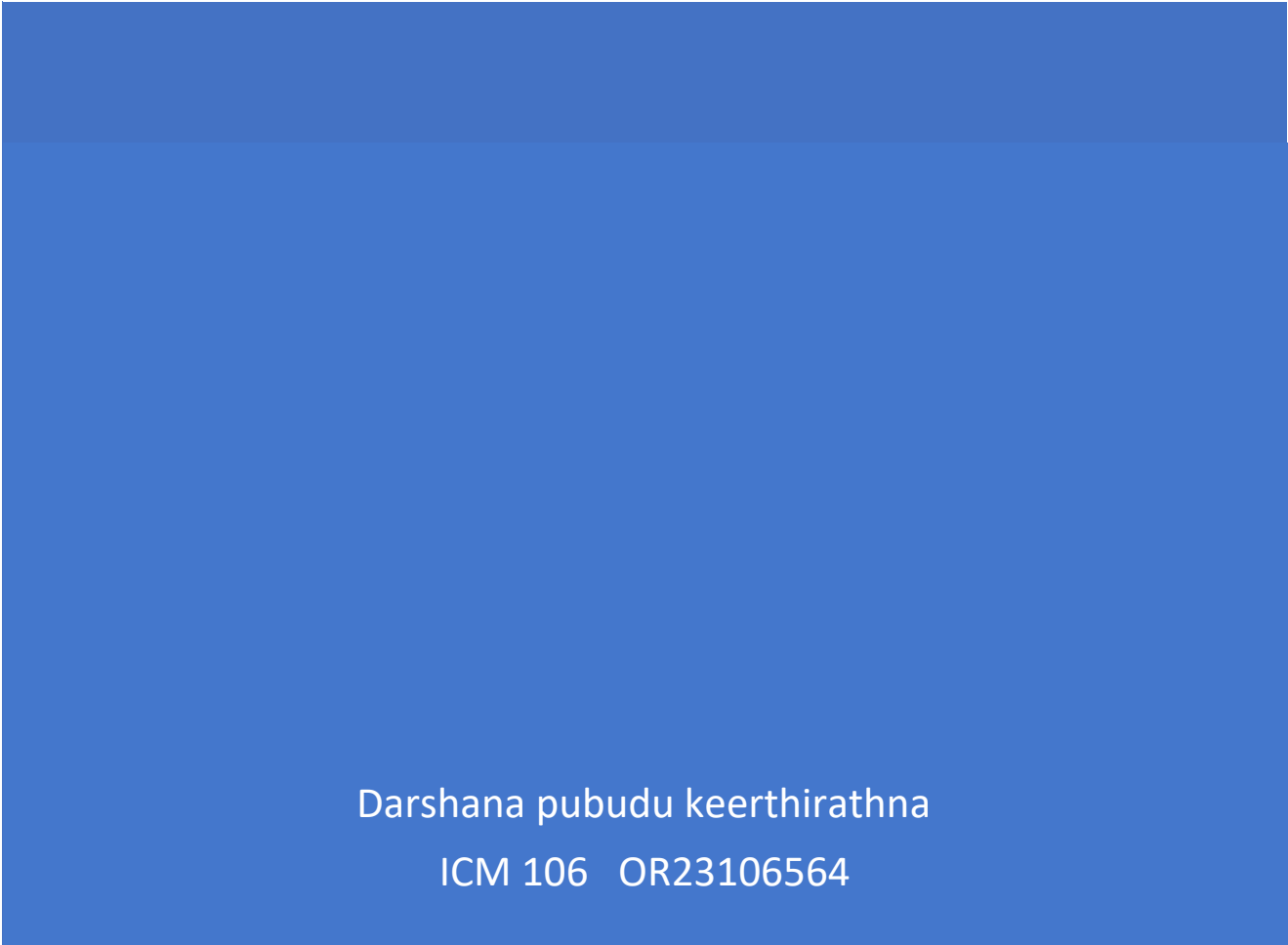





DATABASE MANAGEMENT SYSTEM – FINAL COURSEWORK 01



Darshana pubudu keerthirathna
ICM 106 OR23106564



Question 01

Guest

Guest is the one of the most important entity in this sinario. Its linking to the Booking Preferences entity.

Booking Preferences

this is most important entity and its linking to the other several entites such as Cancellation Details, Receptionist Staff, Cancellation Details, final bill,

Cancellation Details

This scenario describes there may be a cancellation of the Booking Preferences. And also mentioned they keep the records of the cancellation. So it can be idintified as a entity.

Room Information

In This scenario describes there are total 100 rooms. And its link to the the Booking Preferences as well as Room Type entities. So it can be idintified as a one of most important entity.

Room Type

In This scenario describes there are several room types. And it can be linked to the Room Information entity as well. And new entity called room views.

Room views

I idintified extra entity called room views. This is not discribes in the scenario. Since there is the way to check the room informations by guest him self, this information may valuable.

Final bill

Final bill is one of the most important part of this operation and it can be idintified as a a main entity. And several entities can be link to this entity such as Financial Staff, Payment methods, and discount information.

Discount information

In This scenario discribe about the Discount information for the final bill. So it can be idintified as a entity.

Payment methods

This scenario discribes about the Payment methods mention tn final bill and discount information records.

Financial Staff

This scenario describes about Financial Staff which linked to the final billing management. So it can be identified as an entity.

Receptionist Staff

Booking Preferences is managed by the Receptionist Staff. So it can be identified as a main entity.

Housekeeping Staff

This scenario describes about Housekeeping Staff and its duties. So it can be linked to room information.

software maintain information

scenario describes about the IT related information. So it can be identified as a main entity.

IT Staff

IT staff related to the software related tasks. So it can be linked to software maintain information entity.

Question 02

Guest - Booking Preferences

One Guest have at least one or many Booking Preferences and Booking Preferences have only one guest and must have one a guest.

Booking Preferences - Cancellation Details

One Booking Preferences have zero or one Cancellation Details and Cancellation Details have only one Booking Preferences and must have one a Booking Preferences

Receptionist staff - Booking Preferences

One receptionist staff manages the at least one or many Booking Preferences and one many Booking Preferences manage by only one receptionist staff and must have one

Housekeeping staff - Room Information

Many housekeeping staff manages the at least one or many Room Information and many Room Information manage by at least one or many housekeeping staff. (Many to many relationship) Associated entity with 'duty' attribute.

Room Information - Booking Preferences

One Room Information have zero or many Booking Preferences and one Booking Preferences have only one Room Information and must have one a Room Information

Room Information - Room views

Many Room Information has at least one or many Room views and many room view have at least one or many room information as well. (Many to many relationship) only joining table.

Room type - Room information

One room type has at least one or Many room information and one room information belong to only one room type and at least have one room type

Booking Preferences - final bill

One Booking Preferences have optional or one final bill and final bill only have one Booking Preferences and must have one.

payment method - final bills

One payment method has at least one or many final bills and final bill belong to only one payment method and must have one.

Discount information - Final bills

One discount information has zero or many final bills and final bill only have one discount information and its optional.

Payment method - Discount information

One payment method has at least one or many discount information and discount information belong to only one payment method and must have one.

Financial staff - Final bills

One financial staff manages the at least one or many final bills and one final bill manage by only one financial staff and must have one.

Many IT - Software Maintains

Many IT staff manages the at least one or many software maintains and many software maintains manage by at least one or many It staff. (Many to many relationship) – Associated entity with 'duty' attribute.

Question 03

Guest

guest_id, name, address, contry, Gender, user_name,password

Booking Preferences

booking_id, booking_create_date, expected_arrival_date, checkin_date, checkout_date, cancelation?

Cancellation Details

Cancellation_id, cancellation_date, reason

Room Information

room_id, avalable?, room_area, has_balcony?

Room Information - Housekeeping Staff associated entity

Duties

Room Information - Room views associated entity

room_id, view_id (primary keys only)

Room Type

room_type_id, room_type_name, has_bathtub?, has_kicthen?, has_tv?, has_internet?, has_hot_tub?, has_fridge?, has_Microwave?, number_of_guests, total_double_beds, total_single_beds

Room views

view_id, view

Final bill

final_bill_id, bill_date, final_amount

Discount information

discount_info_id, discount_name,discount_presentage

Payment methods

payment_method_id, payment_method_name

Financial Staff

financial_staff_id, name, phone, user_name, passowrd

Receptionist Staff

receptionist_staff_id, name, phone, user_name, passowrd

Housekeeping Staff

housekeeping_staff_id, name, phone, user_name, passowrd

IT Staff

it_staff_id, name, phone, user_name, passowrd

Software maintains information

report_id, description

Question 04

Guest

No foreign keys

Booking Preferences

guest_id, receptionist_staff_id, room_id,

Cancellation Details

booking_id,

Room Information

room_type_id

Housekeeping Staff

No foreign keys

Room Information - Housekeeping Staff associated entity

room_id, housekeeping_staff_id (also composite primary keys)

Room views

No foreign keys

Room Information - Room views associated entity

room_id, view_id (also composite primary keys)

Room Type

No foreign keys

Final bill

booking_id, payment_method_id, financial_staff_id, discount_info_id

Discount information

payment_method_id

Payment methods

No foreign keys

Financial Staff

No foreign keys

Receptionist Staff

No foreign keys

Housekeeping Staff

No foreign keys

IT Staff

No foreign keys

Software maintains information

No foreign keys

Software maintains information - IT Staff associated entity

it_staff_id, report_id (also composite primary keys)

