

# Simple Hotel Management System

Zero Phase :

Idea is : **Simple Hotel Management System**

First Phase :

Description of this management system :

Hotel Management System is designed to make guests able to reserve rooms easily and make this process like a piece of cake .

1. Guest is able to reserve one or more rooms , he also can specify a room type which is either single or double ( single is assigned for one person , but double is assigned for two persons ).
2. Each and every guest has an ID number in addition to the general information such as (name , gender and phone number)
3. The room has an ID number which is a unique number
4. Room is reserved for one or two persons which depends on the type of room.

Second Phase :

Converting this description or a scenario into an ER diagram

## 1. Entities

- Guest
- Room

## 2. Attributes

- Guest

(guest name , guest ID [**PK**] , guest gender , guest phone)

- Room

(room ID [**PK**] , room type)

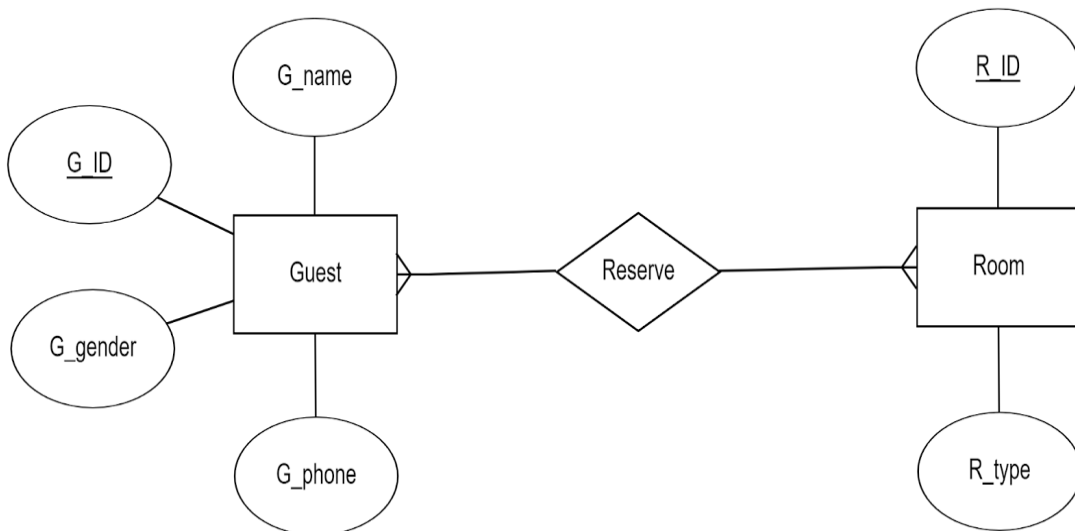
## 3. Relationships

- Guest reserve rooms

\* one or more guest can reserve a room

\* the room is reserved by one or more

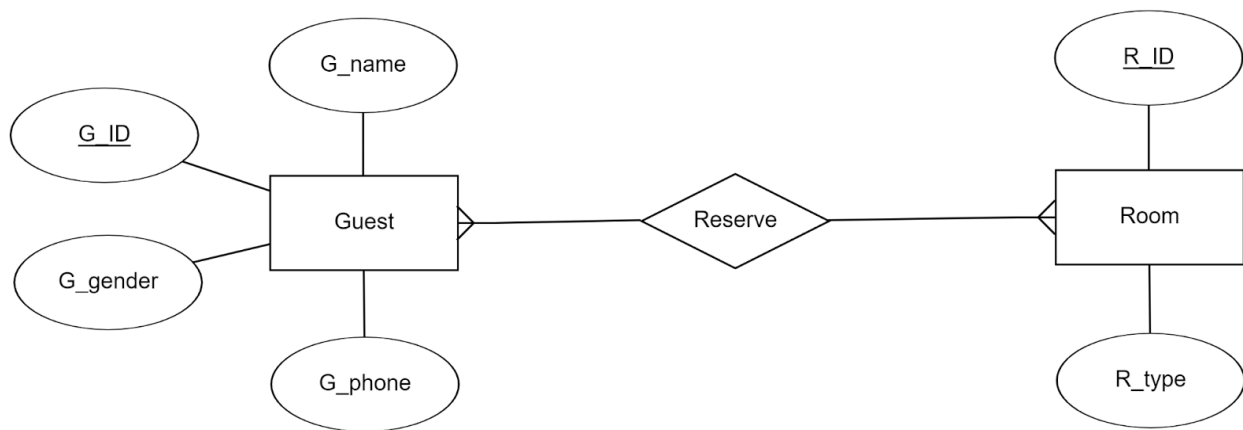
## ER Diagram



Third Phase :

Converting **ERD** to **Schema**

## ERD



Two ways of extracting schema :

1. Manually
2. Using DBMS like Microsoft SQL Server Management

Schema : manually

Guest

G_name	G_ID	G_gender	G_phone
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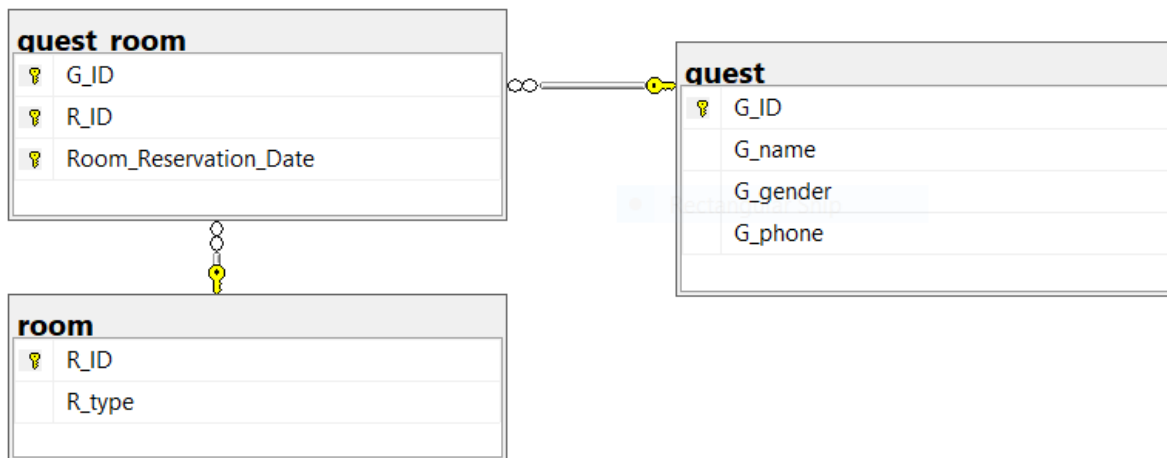
Guest\_Room

G_name	R_name	Room_Reservation_Date
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Room

R_ID	R_type
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## Schema : Database diagram in SQL Server



### Fourth Phase :

### Converting the DB Schema into physical tables

### Schema :

Guest			
G_name	G_ID	G_gender	G_phone

Guest_Room		
G_name	R_name	Room_Reservation_Date

Room	
R_ID	R_type

## DB Script / Physical tables

```
USE [Reservation]
GO
/***** Object:  Database [Reservation]    Script Date: 7/24/2022 4:23:33 PM
*****/
CREATE DATABASE [Reservation]
    CONTAINMENT = NONE
    ON PRIMARY
( NAME = N'Reservation', FILENAME = N'C:\Program Files\Microsoft SQL
Server\MSSQL15.SQLEXPRESS\MSSQL\DATA\Reservation.mdf' , SIZE = 8192KB , MAXSIZE =
UNLIMITED, FILEGROWTH = 65536KB )
    LOG ON
( NAME = N'Reservation_log', FILENAME = N'C:\Program Files\Microsoft SQL
Server\MSSQL15.SQLEXPRESS\MSSQL\DATA\Reservation_log.ldf' , SIZE = 8192KB , MAXSIZE
= 2048GB , FILEGROWTH = 65536KB )
    WITH CATALOG_COLLATION = DATABASE_DEFAULT
GO
ALTER DATABASE [Reservation] SET COMPATIBILITY_LEVEL = 150
GO
IF (1 = FULLTEXTSERVICEPROPERTY('IsFullTextInstalled'))
begin
EXEC [Reservation].[dbo].[sp_fulltext_database] @action = 'enable'
end
GO
ALTER DATABASE [Reservation] SET ANSI_NULL_DEFAULT OFF
GO
ALTER DATABASE [Reservation] SET ANSI_NULLS OFF
GO
ALTER DATABASE [Reservation] SET ANSI_PADDING OFF
GO
ALTER DATABASE [Reservation] SET ANSI_WARNINGS OFF
GO
ALTER DATABASE [Reservation] SET ARITHABORT OFF
GO
ALTER DATABASE [Reservation] SET AUTO_CLOSE OFF
GO
ALTER DATABASE [Reservation] SET AUTO_SHRINK OFF
GO
ALTER DATABASE [Reservation] SET AUTO_UPDATE_STATISTICS ON
GO
ALTER DATABASE [Reservation] SET CURSOR_CLOSE_ON_COMMIT OFF
GO
ALTER DATABASE [Reservation] SET CURSOR_DEFAULT GLOBAL
GO
ALTER DATABASE [Reservation] SET CONCAT_NULL_YIELDS_NULL OFF
GO
```

```

ALTER DATABASE [Reservation] SET NUMERIC_ROUNDABORT OFF
GO
ALTER DATABASE [Reservation] SET QUOTED_IDENTIFIER OFF
GO
ALTER DATABASE [Reservation] SET RECURSIVE_TRIGGERS OFF
GO
ALTER DATABASE [Reservation] SET  DISABLE_BROKER
GO
ALTER DATABASE [Reservation] SET AUTO_UPDATE_STATISTICS_ASYNC OFF
GO
ALTER DATABASE [Reservation] SET DATE_CORRELATION_OPTIMIZATION OFF
GO
ALTER DATABASE [Reservation] SET TRUSTWORTHY OFF
GO
ALTER DATABASE [Reservation] SET ALLOW_SNAPSHOT_ISOLATION OFF
GO
ALTER DATABASE [Reservation] SET PARAMETERIZATION SIMPLE
GO
ALTER DATABASE [Reservation] SET READ_COMMITTED_SNAPSHOT OFF
GO
ALTER DATABASE [Reservation] SET HONOR_BROKER_PRIORITY OFF
GO
ALTER DATABASE [Reservation] SET RECOVERY SIMPLE
GO
ALTER DATABASE [Reservation] SET  MULTI_USER
GO
ALTER DATABASE [Reservation] SET PAGE_VERIFY CHECKSUM
GO
ALTER DATABASE [Reservation] SET DB_CHAINING OFF
GO
ALTER DATABASE [Reservation] SET FILESTREAM( NON_TRANSACTED_ACCESS = OFF )
GO
ALTER DATABASE [Reservation] SET TARGET_RECOVERY_TIME = 60 SECONDS
GO
ALTER DATABASE [Reservation] SET DELAYED_DURABILITY = DISABLED
GO
ALTER DATABASE [Reservation] SET ACCELERATED_DATABASE_RECOVERY = OFF
GO
ALTER DATABASE [Reservation] SET QUERY_STORE = OFF
GO
USE [Reservation]
GO
/***** Object: Table [dbo].[guest]    Script Date: 7/24/2022 4:23:33 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[guest](
    [G_ID] [int] NOT NULL,
    [G_name] [varchar](100) NOT NULL,

```

```

        [G_gender] [char](1) NULL,
        [G_phone] [int] NOT NULL,
PRIMARY KEY CLUSTERED
(
    [G_ID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
GO
/***** Object: Table [dbo].[guest_room]    Script Date: 7/24/2022 4:23:33 PM
*****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[guest_room](
    [G_ID] [int] NOT NULL,
    [R_ID] [int] NOT NULL,
    [Room_Reservation_Date] [date] NOT NULL,
PRIMARY KEY CLUSTERED
(
    [G_ID] ASC,
    [R_ID] ASC,
    [Room_Reservation_Date] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
GO
/***** Object: Table [dbo].[room]    Script Date: 7/24/2022 4:23:33 PM *****/
SET ANSI_NULLS ON
GO
SET QUOTED_IDENTIFIER ON
GO
CREATE TABLE [dbo].[room](
    [R_ID] [int] NOT NULL,
    [R_type] [varchar](100) NOT NULL,
PRIMARY KEY CLUSTERED
(
    [R_ID] ASC
)WITH (PAD_INDEX = OFF, STATISTICS_NORECOMPUTE = OFF, IGNORE_DUP_KEY = OFF,
ALLOW_ROW_LOCKS = ON, ALLOW_PAGE_LOCKS = ON, OPTIMIZE_FOR_SEQUENTIAL_KEY = OFF) ON
[PRIMARY]
) ON [PRIMARY]
GO
ALTER TABLE [dbo].[guest_room] WITH CHECK ADD CONSTRAINT [my_Guest_ID] FOREIGN
KEY([G_ID])
REFERENCES [dbo].[guest] ([G_ID])
GO

```

```
ALTER TABLE [dbo].[guest_room] CHECK CONSTRAINT [my_Guest_ID]
GO
ALTER TABLE [dbo].[guest_room] WITH CHECK ADD CONSTRAINT [my_Room_ID] FOREIGN
KEY([R_ID])
REFERENCES [dbo].[room] ([R_ID])
GO
ALTER TABLE [dbo].[guest_room] CHECK CONSTRAINT [my_Room_ID]
GO
ALTER TABLE [dbo].[guest] WITH CHECK ADD CHECK (([G_gender]='F' OR
[G_gender]='M'))
GO
USE [master]
GO
ALTER DATABASE [Reservation] SET READ_WRITE
GO
```