PROJECT REPORT

On

“HOTEL MANAGEMENT SYSTEM”

Submitted By:

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(An Autonomous Institute, Affiliated to RTMNU, Nagpur)

2022-2023

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CHAPTER 1

INTRODUCTION

Hotel database management system was designed to simplify front desk office tasks, enhance management functions, improve the experience of customers and guest reservations. With the software, a hotel can improve efficiency and effectively manage operations such as check-ins, check out and confirmation of reservations.

A hotel management system is a crucial component in efficiently managing various operations within a hotel or hospitality establishment. It involves handling reservations, guest check-ins and check-outs, room assignments, billing, inventory management, and other administrative tasks. To streamline these operations and enhance overall guest experience, a well-designed database is essential.

The database for a hotel management system serves as a central repository for storing and organizing data related to hotel properties, room types, reservations, guest profiles, staff information, and financial records. It allows hotel managers to retrieve, update, and analyze information efficiently, enabling better decision-making and optimizing resource allocation.

Hospitality management software systems are programmed to avoid double bookings and overbookings. Thanks to task automation, they also help prevent errors when front desk staff are inputting important customer data like name, passport details, and card numbers.

A comprehensive hotel management system database typically consists of multiple interconnected tables that store various types of data, such as hotel details (e.g., hotel name, address, contact information), room types (e.g., room category, capacity, price), room information (e.g., room number, availability, status), guest profiles (e.g., name, contact details), booking details (e.g., check-in date, check-out date), and more. The relationships between these tables ensure data integrity and enable efficient retrieval and manipulation of information.

Entity:

To develop a database for a hotel management system, you need to identify the entities involved and define their attributes. Here's an example of how you can structure the entities and their attributes for a basic hotel management system:
Entity: Hotel
Attributes: hotel_id (primary key), name, address, city, state, country, phone_number, email
Entity: Room
Attributes: room_id (primary key), hotel_id (foreign key referencing Hotel), room_number, type, capacity, price_per_night, availability
Entity: Guest
Attributes: guest_id (primary key), first_name, last_name, address, city, state, country, phone_number, email
Entity: Reservation
Attributes: reservation_id (primary key), guest_id (foreign key referencing Guest), room_id (foreign key referencing Room), check_in_date, check_out_date, total_price
Entity: Employee
Attributes: employee_id (primary key), first_name, last_name, address, city, state, country, phone_number, email, position, salary
Entity: Payment
Attributes: payment_id (primary key), reservation_id (foreign key referencing Reservation), amount, payment_date, payment_method
These are just the basic entities and attributes needed for a hotel management system. Depending on

your specific requirements, you may need to include additional entities and attributes. Once you have defined the entities and their attributes, you can proceed to create the necessary tables in your SQL database and establish the appropriate relationships between them using primary keys and foreign keys.

E R Diagram:

Fig.1.1 "E R Diagram"

CHAPTER 2

TOOLS/PLATFORMS

2.1 SOFTWARE REQUIREMENT

To develop a database for a hotel management system, you will need the following software requirements:
Relational Database Management System (RDBMS): Choose a reliable RDBMS software to manage your database. Popular options include:
MySQL
Oracle Database
Microsoft SQL Server
PostgreSQL
SQLite

a) Relational Database Management Systems (RDBMS): RDBMS platforms like MySQL, Oracle, PostgreSQL, and Microsoft SQL Server are widely used for creating and managing hotel management system databases. They provide robust features for data storage, retrieval, and manipulation, along with strong support for enforcing data integrity through relationships, indexes, and constraints.
b) SQL (Structured Query Language): SQL is the standard language for managing relational databases. It allows developers to define the database structure, create tables, insert, update, and retrieve data using various SQL statements. SQL is supported by most RDBMS platforms and offers a consistent and powerful way to interact with the database.
c) Oracle Live SQL Introduction:
Oracle Live SQL is an online platform that provides a cloud-based environment for developers and database enthusiasts to learn, practice, and experiment with Oracle Database. It offers a browser-based SQL development environment where users can write and execute SQL queries, create database objects, and explore various features of Oracle Database.
With Oracle Live SQL, users can create database schemas, tables, views, indexes, and other database objects. They can write SQL queries, stored procedures, functions, and triggers to manipulate and retrieve data. The platform also allows for the execution of anonymous PL/SQL blocks and provides a collaborative environment where users can share their SQL scripts and engage in discussions.

Oracle Live SQL offers a convenient and accessible way to explore and learn Oracle Database without the need for local installations. It is a valuable resource for developers, students, and professionals looking to gain hands-on experience with Oracle Database and SQL programming.

Software Requirements

Number	Description	Type
1	Operating System	Windows XP / Windows
2	Language	PHP
3	Database	MySQL
4	IDE	Visual Code
5	Browser	Google Chrome

CHAPTER 3

SOURCE CODE

```
-- Create the Guests table
CREATE TABLE Guests (GuestID INT PRIMARY KEY,Name VARCHAR(255),Email VARCHAR(255),Phone VARCHAR(15),Address VARCHAR(255));
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(1, 'Vaishnavi', 'Vaishnavi@example.com', '1234567890', 'Nagpur');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(2, 'Minal', 'Minal@example.com', '9876543210', 'mumbai');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(3, 'Atharva', 'Atharva@gmail.com', '9632545889', 'kolkata');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(4, 'Amit', 'Amit@example.com', '8578965256', 'saoner');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(5, 'Aman', 'Aman@example.com', '9145279635', 'amravati');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(6, 'pranav', 'pranav@example.com', '2457851255', 'delhi');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(7, 'prathamesh', 'prathamesh@example.com', '9858854565', 'akola');
INSERT INTO Guests (GuestID, Name, Email, Phone, Address)VALUES(8, 'khushi', 'khushi@example.com', '9851551565', 'pune');

select * from Guests;

-- Create the Rooms table
CREATE TABLE Rooms (RoomNumber INT PRIMARY KEY,RoomType VARCHAR(255),Capacity INT,Rate INT,Availability VARCHAR2(30));
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(101, 'Standard', 2, 100.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(102, 'Standard', 2, 100.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(201, 'Deluxe', 4, 200.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(103, 'Standard', 2, 100.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(104, 'Standard', 2, 100.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(202, 'Deluxe', 4, 200.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(107, 'Standard', 2, 100.00, 'true');
INSERT INTO Rooms (RoomNumber, RoomType, Capacity, Rate, Availability)VALUES(109, 'Standard', 2, 100.00, 'true');

select *from Rooms;
```

```
-- Create the Reservations table
CREATE TABLE Reservations (ReservationID INT PRIMARY KEY, GuestID INT, RoomNumber INT, CheckInDate VARCHAR(20), CheckOutDate VARCHAR(20), NumAdults INT, NumChildren INT);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(1, 2, 101, '2023-02-20' , '2023-02-25' ,4,3);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(2, 2, 201, '2023-06-10', '2023-06-15', 2, 2);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(3, 4, 101, '2023-05-2', '2023-05-5', 2, 1);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(4, 3, 201, '2023-06-1', '2023-06-8', 2, 2);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(5, 7, 101, '2023-05-22', '2023-05-25', 2, 1);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(6, 6, 201, '2023-06-11', '2023-06-15', 2, 2);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(7, 8, 101, '2023-05-23', '2023-05-25', 2, 1);
INSERT INTO Reservations (ReservationID, GuestID, RoomNumber, CheckInDate, CheckOutDate, NumAdults, NumChildren)VALUES(8, 5, 201, '2023-06-16', '2023-06-18', 2, 2);

select * from Reservations;

-- Create the Bookings table
CREATE TABLE Bookings (BookingID INT PRIMARY KEY,ReservationID INT,EmployeeID INT,BookingDate VARCHAR(20),TotalAmount DECIMAL(10, 2));
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(1, 1, 1, '2023-05-19', 500.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(2, 2, 2, '2023-06-05', 1000.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(3, 6, 3, '2023-05-19', 500.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(4, 3, 4, '2023-06-05', 1000.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(5, 4, 8, '2023-05-19', 500.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(6, 5, 7, '2023-06-05', 1000.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(7, 8, 6, '2023-05-19', 500.00);
INSERT INTO Bookings (BookingID, ReservationID, EmployeeID, BookingDate, TotalAmount)VALUES(8, 7, 5, '2023-06-05', 1000.00);

select * from Bookings;

-- Create the Employees table
CREATE TABLE Employees (EmployeeID INT PRIMARY KEY,Name VARCHAR(255),Email VARCHAR(255),Phone VARCHAR(15),DepartmentID INT);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(1, 'Vaishnavi', 'Vaishnavi@example.com', '5551234567', 1);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(2, 'Minal',
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'Minal@example.com', '5559875543', 2);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(3, 'Atharva', 'Atharva@example.com', '5551634567', 3);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(4, 'Amit', 'Amit@example.com', '5558876543', 4);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(5, 'Aman', 'Aman@example.com', '55512355546',5);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(6, 'pranav', 'pranav@example.com', '5589876543', 6);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(7, 'prathamesh', 'prathamesh@example.com', '5951234567', 8);
INSERT INTO Employees (EmployeeID, Name, Email, Phone, DepartmentID)VALUES(8, 'khushi', 'khushi@example.com', '5759876543', 7);

select * from Employees ;

-- Create the Departments table
CREATE TABLE Departments (DepartmentID INT PRIMARY KEY,DepartmentName VARCHAR(255));
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(1, 'Front Desk');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(2, 'Housekeeping');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(3, 'Front Desk');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(4, 'Housekeeping');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(5, 'Front Desk');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(6, 'Housekeeping');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(7, 'Front Desk');
INSERT INTO Departments (DepartmentID, DepartmentName)VALUES(8, 'Housekeeping');

select * from Departments;

-- Create the Services table
CREATE TABLE Services (ServiceID INT PRIMARY KEY,ServiceName VARCHAR(255),Rate DECIMAL(10, 2));
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(1, 'Laundry', 10.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(2, 'Room Service', 15.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(3, 'Laundry', 20.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(4, 'Room Service', 35.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(5, 'Laundry', 28.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(6, 'Room Service', 30.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(7, 'Laundry', 40.00);
INSERT INTO Services (ServiceID, ServiceName, Rate)VALUES(8, 'Room Service', 45.00);

select * from Services ;

-- Create the Payments table
CREATE TABLE Payments (PaymentID INT NOT NULL PRIMARY KEY,BookingID INT,PaymentDate VARCHAR(20),Amount DECIMAL(10, 2));
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(1, 3, '2023-05-19', 500.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(2, 2, '2023-06-

```
05', 1000.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(3, 4, '2023-05-
19', 500.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(4, 5, '2023-06-
05', 1000.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(5, 1, '2023-05-
19', 500.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(6, 7, '2023-06-
05', 1000.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(7, 8, '2023-05-
19', 500.00);
INSERT INTO Payments (PaymentID, BookingID, PaymentDate, Amount)VALUES(8, 26, '2023-06-
05', 1000.00);

select * from Payments;

-- 1 query change name of guests from Minal to Mansi.
UPDATE Guests set name ='Mansi'where name ='Minal';
select * from Guests;

--2 query FIND THE standard room type in table rooms.
select * from Rooms where RoomType LIKE 'Standard';

--3 query find the Payments whose Amount greater than 500.
select * from Payments where (Amount>500.00);

--4 query find the all Employees having EmployeeID less than 5.
select * from Employees where EmployeeID<5;

--5 query FIND THE Housekeeping DepartmentName in table Departments.
select * from Departments where DepartmentName LIKE 'Housekeeping';

--6 query find the laundry service name in table service.
select * from Services where ServiceName LIKE 'Laundry';

--7 query find  the rooms whose rate greater than 10.00.
SELECT * FROM Rooms where (Rate>10.00);

--8 query Retrieve the list of rooms along with their availability status.
SELECT RoomNumber, RoomType, Availability FROM Rooms;

--9 query Retrieve the average occupancy rate for a specific hotel.
SELECT AVG(RoomNumber) AS average_occupancy FROM Rooms ;

--10 find the name of Employees name from Employees table.
select EmployeeID from Employees ;
```

CHAPTER 4

OUTPUT

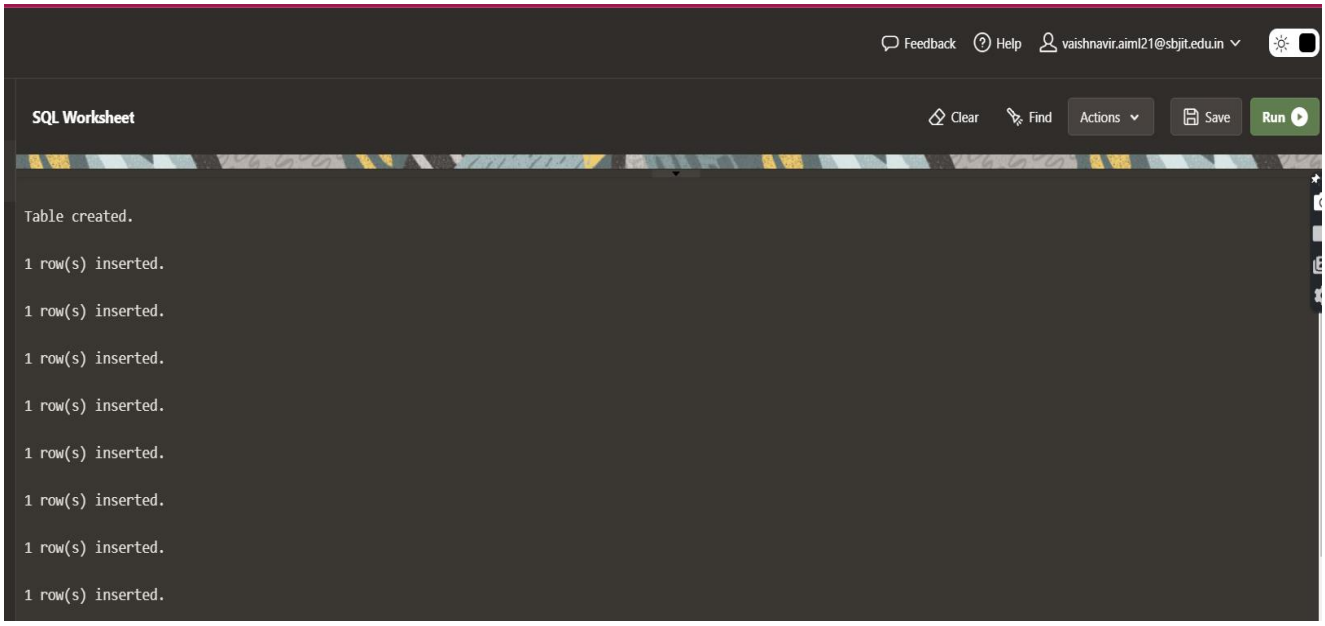
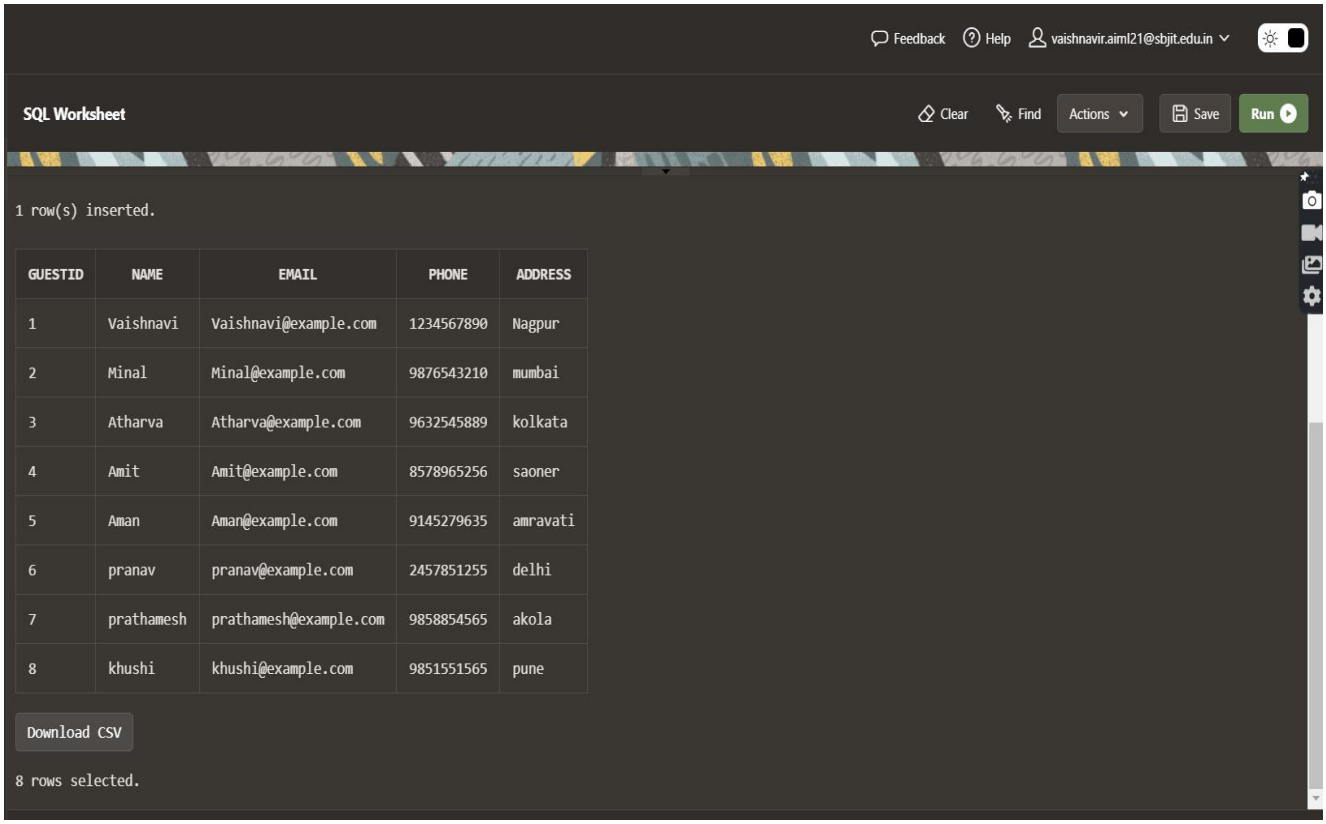


Fig.4.1 “Create Guests table”



GUESTID	NAME	EMAIL	PHONE	ADDRESS
1	Vaishnavi	Vaishnavi@example.com	1234567890	Nagpur
2	Minal	Minal@example.com	9876543210	mumbai
3	Atharva	Atharva@example.com	9632545889	kolkata
4	Amit	Amit@example.com	8578965256	saoner
5	Aman	Aman@example.com	9145279635	amravati
6	pranav	pranav@example.com	2457851255	delhi
7	prathamesh	prathamesh@example.com	9858854565	akola
8	khushi	khushi@example.com	9851551565	pune

Fig.4.2 “Create Guests table”

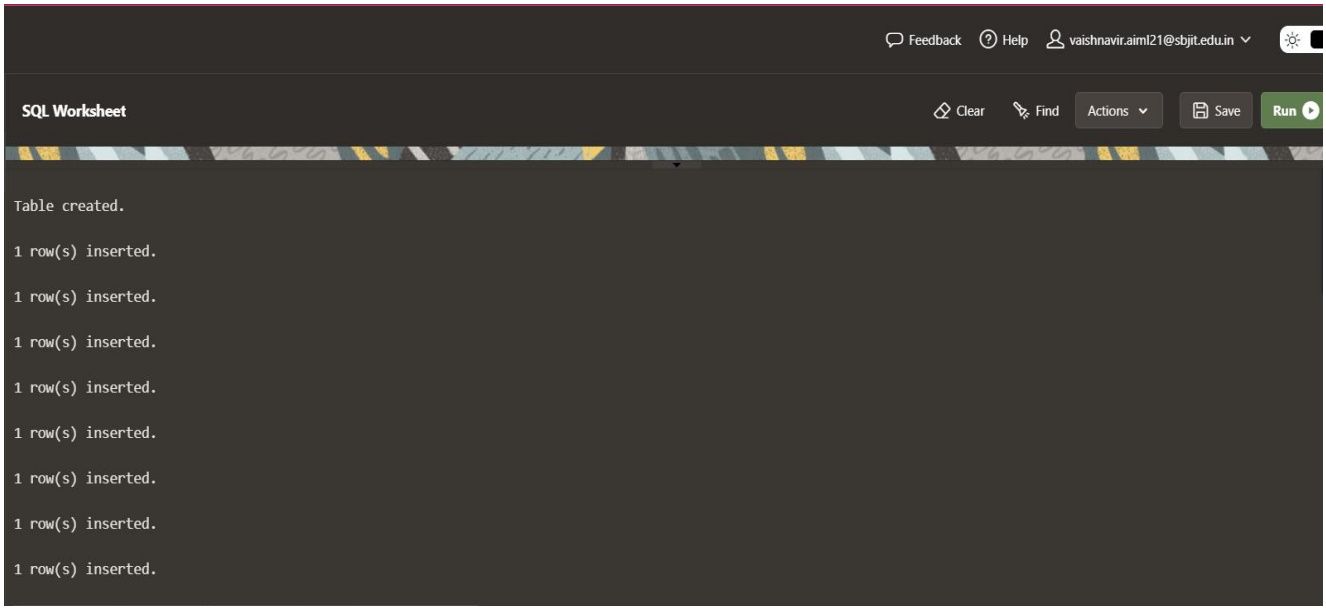


Fig.4.3 “Create Rooms table”

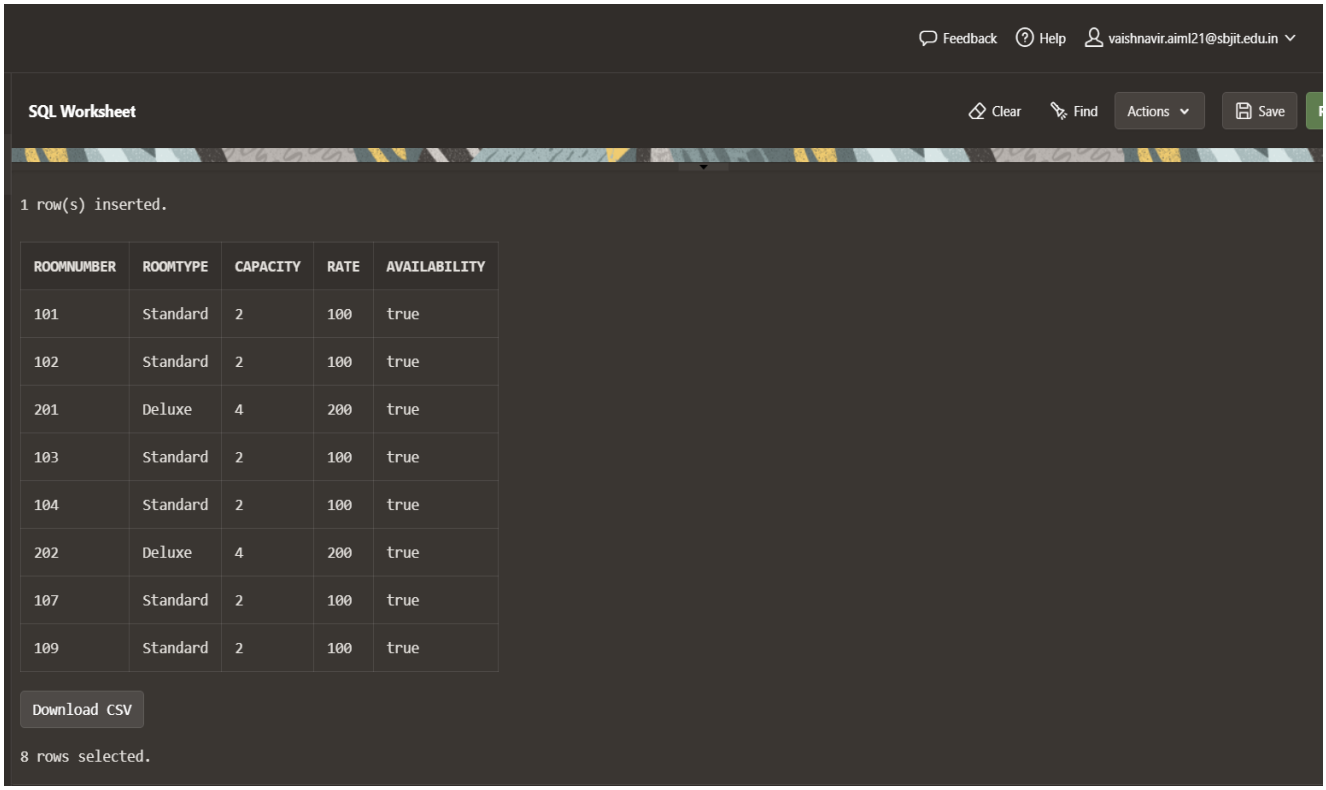


Fig.4.4 “Create Rooms table”

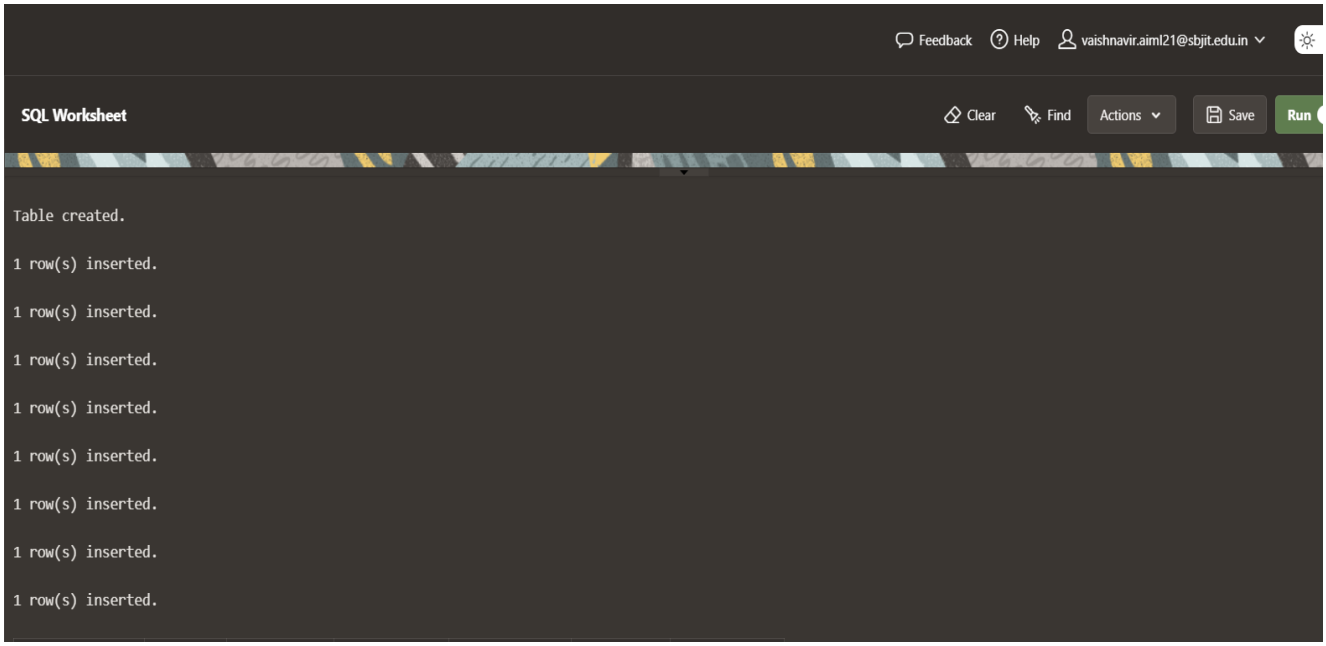


Fig.4.5 “Create Reservations table”

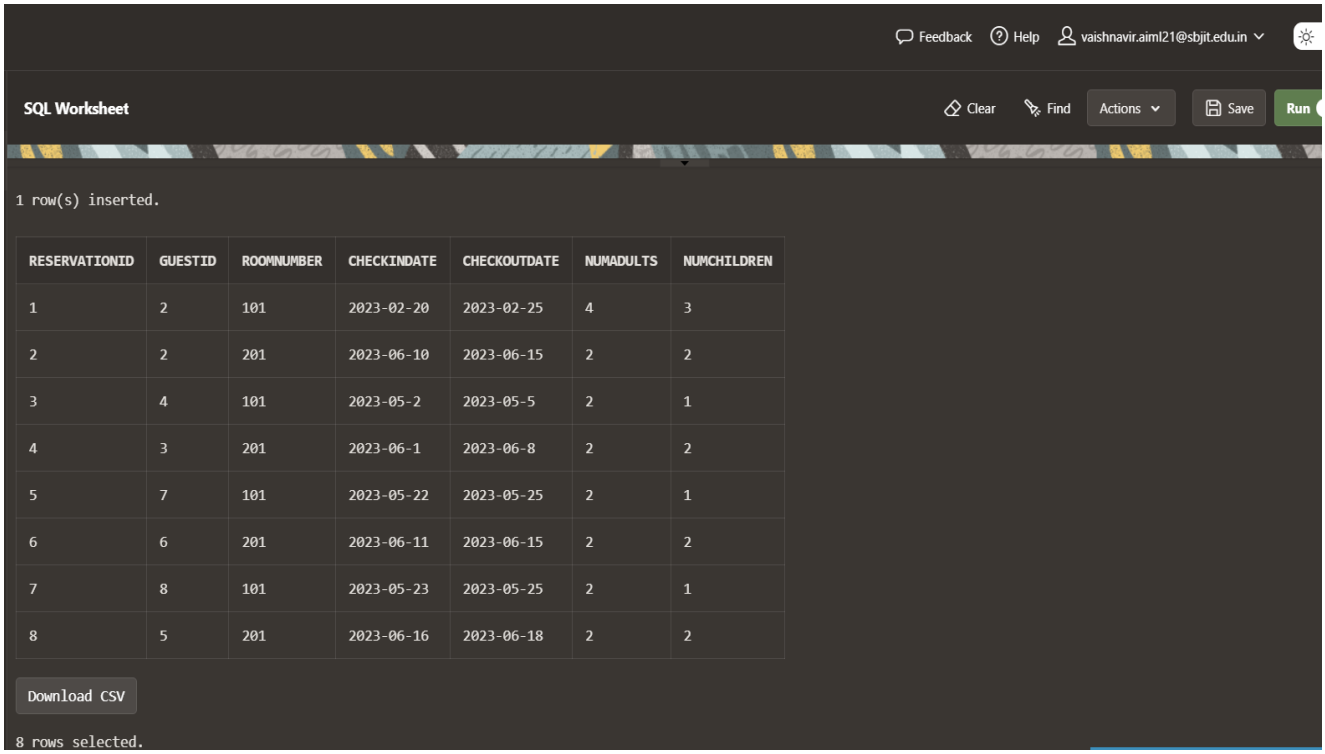


Fig.4.6 “Create Reservations table”

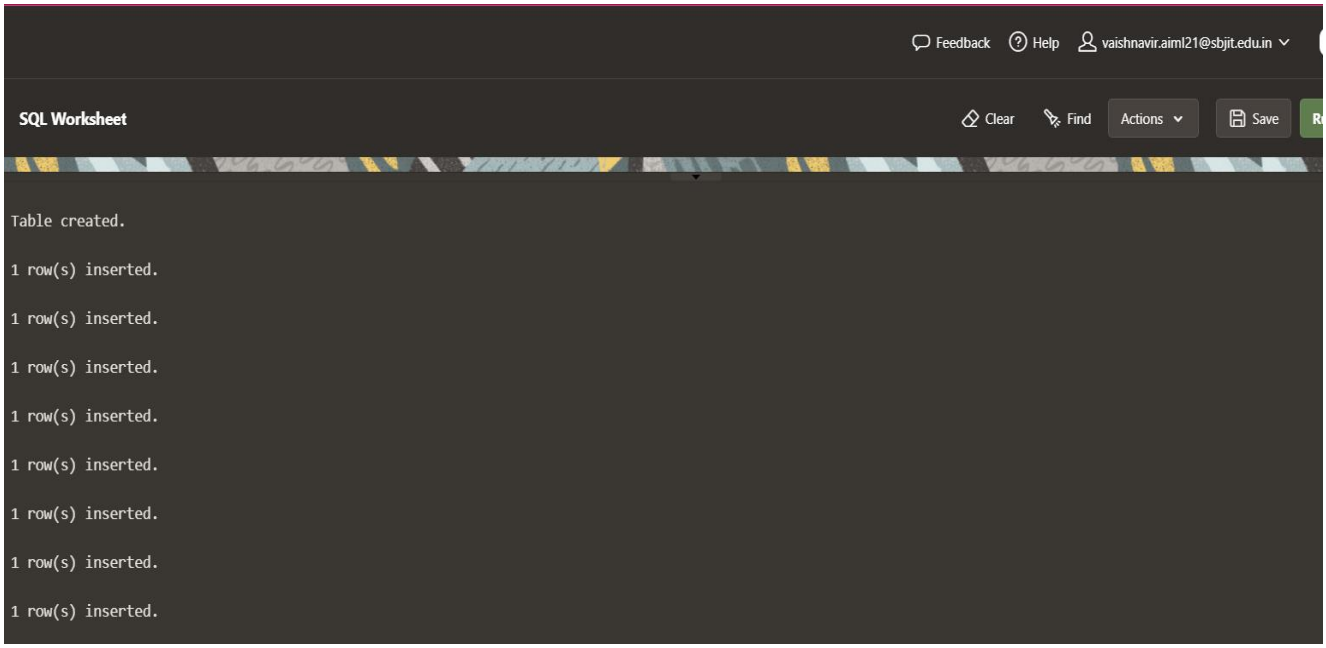


Fig.4.7 “Create Bookings table”

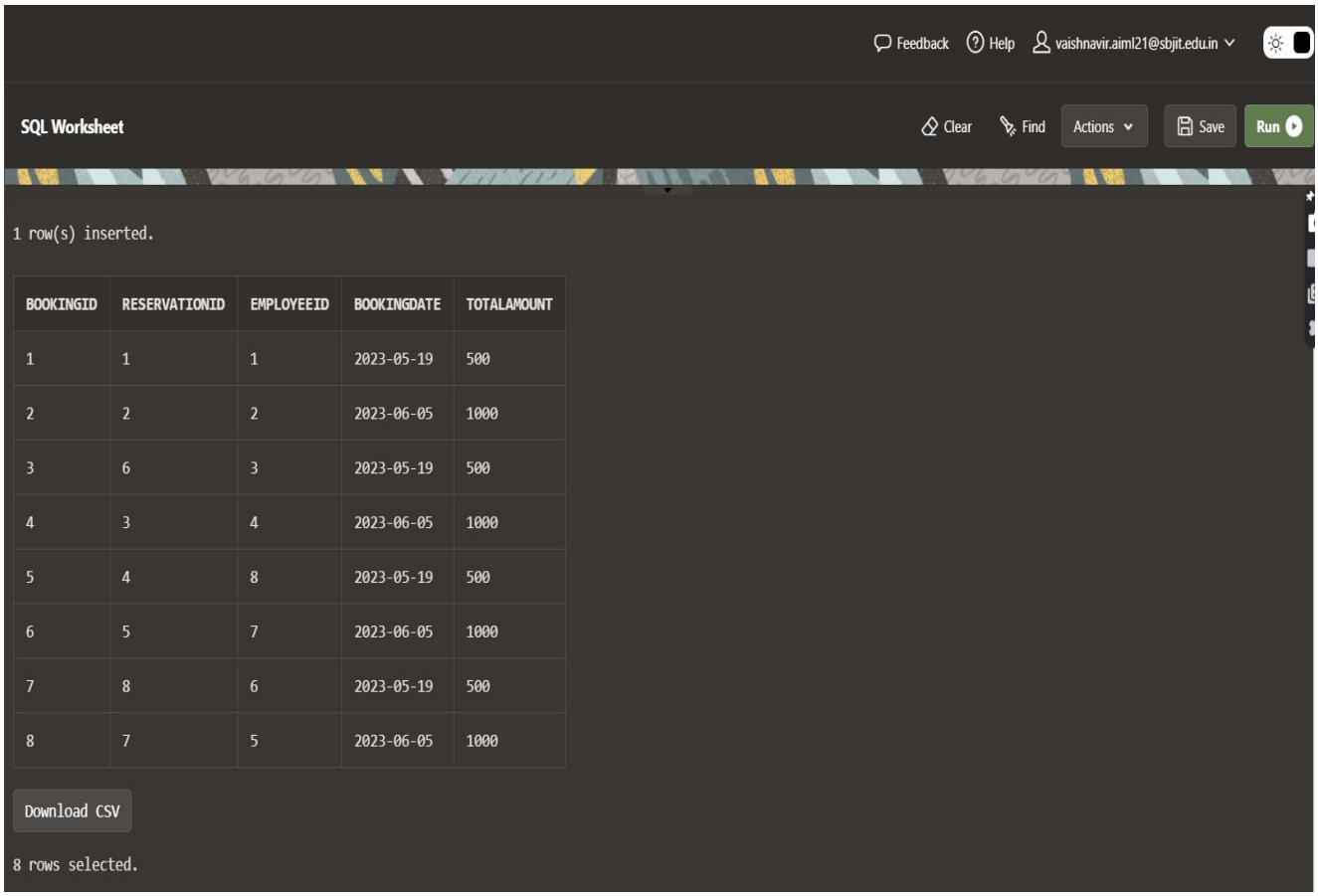


Fig.4.8 “Create Bookings table”

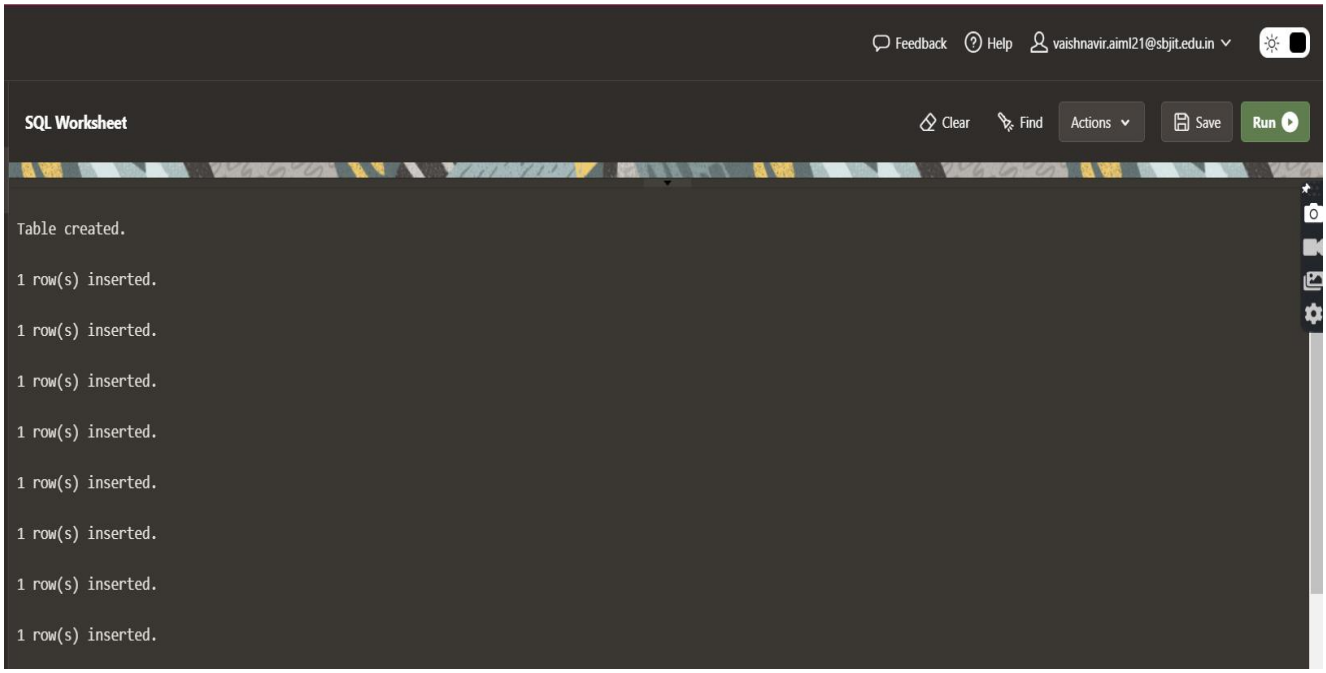


Fig.4.9 “Create Employees table”

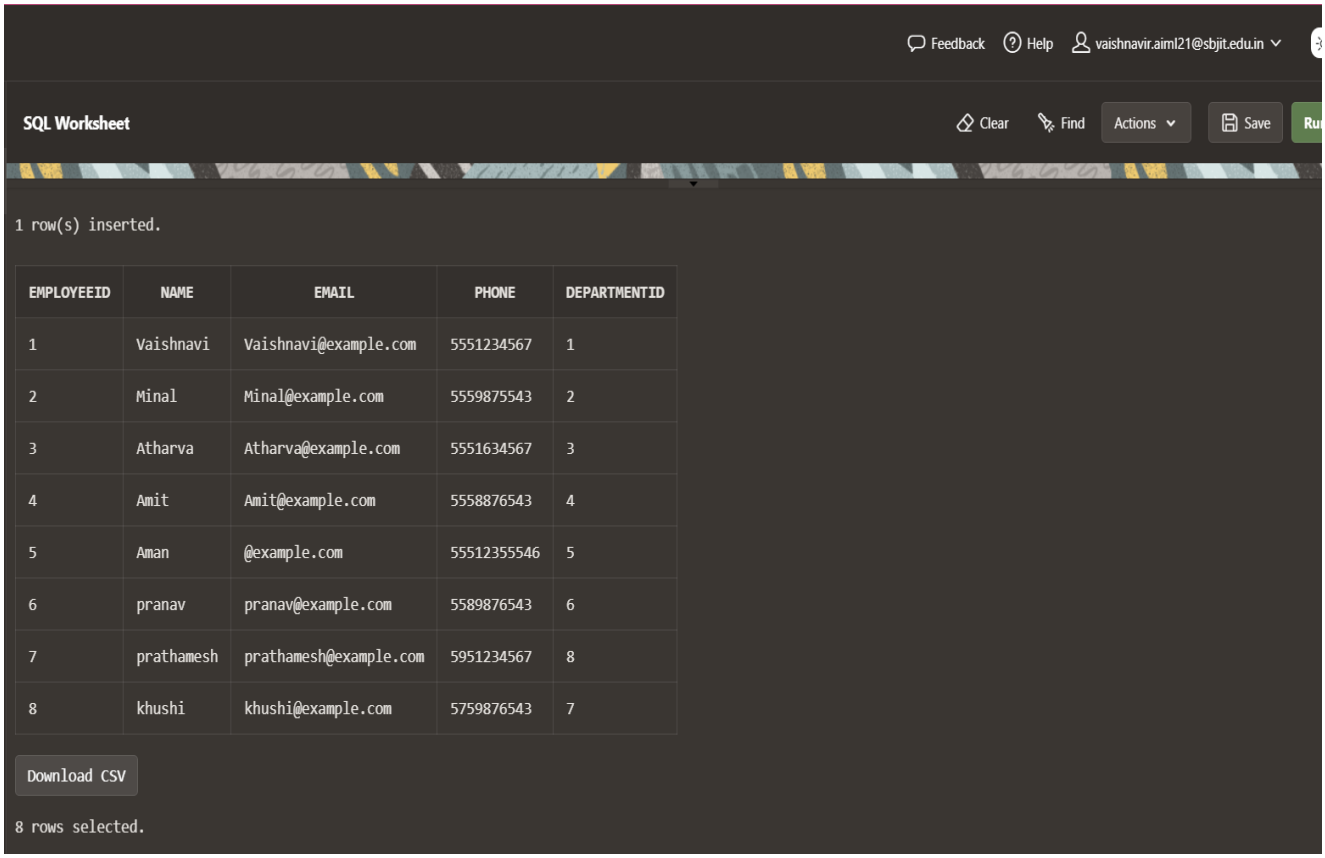


Fig.4.10 “Create Employees table”

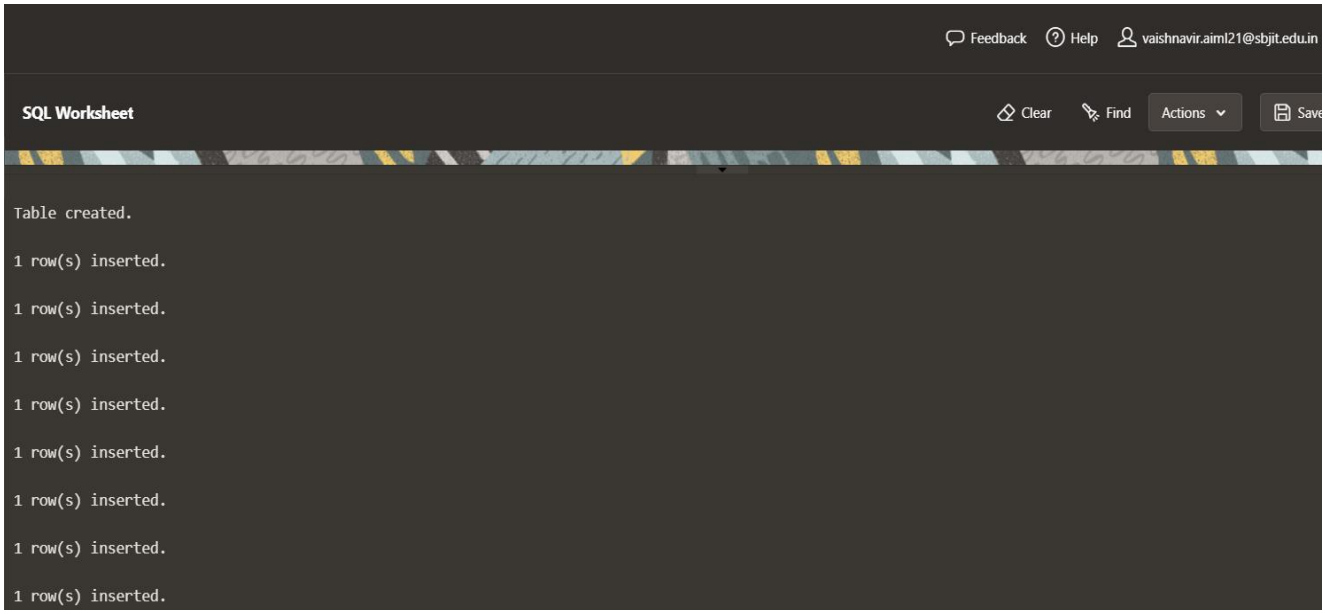


Fig.4.11 “Create Departments table”

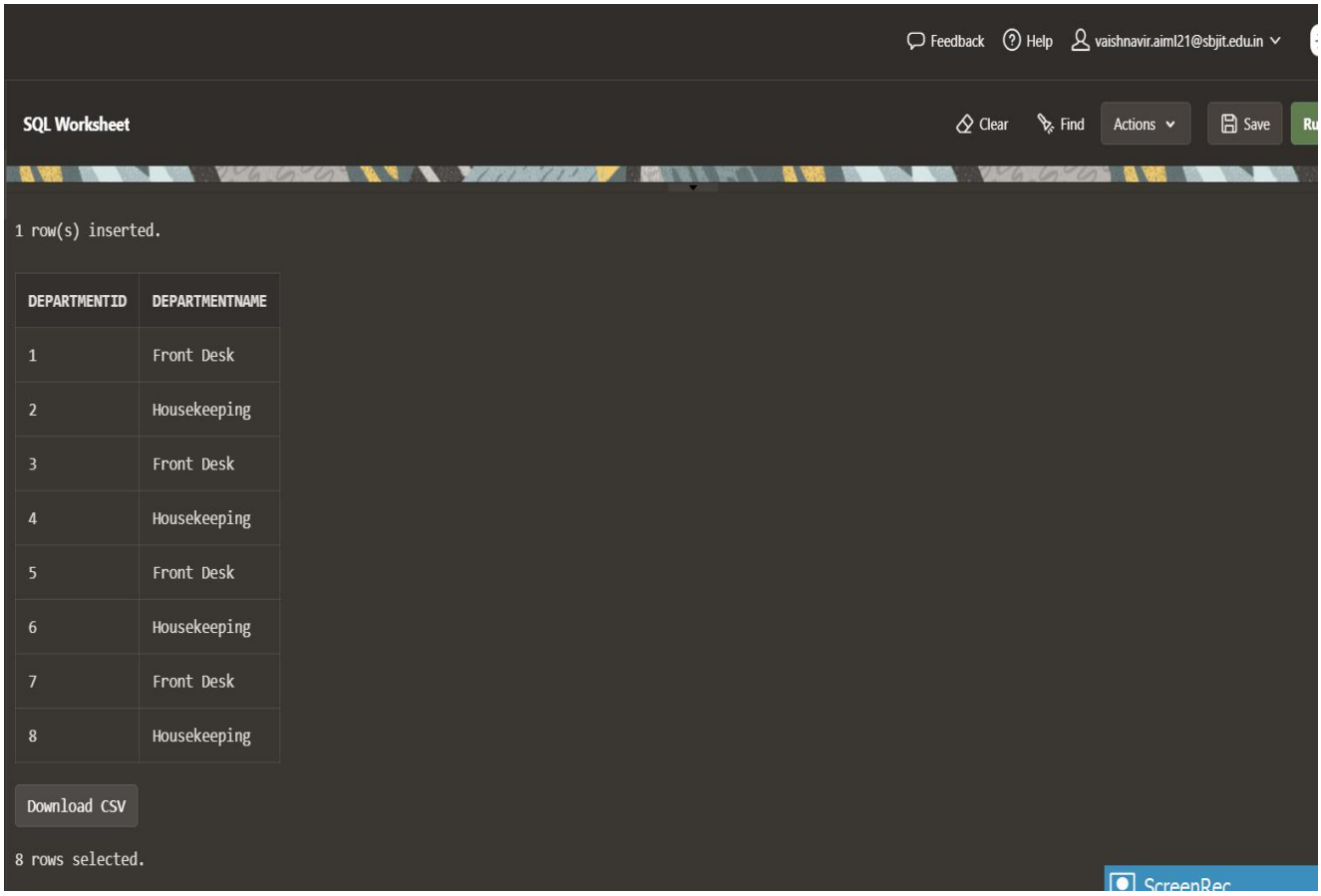


Fig.4.12 “Create Departments table”

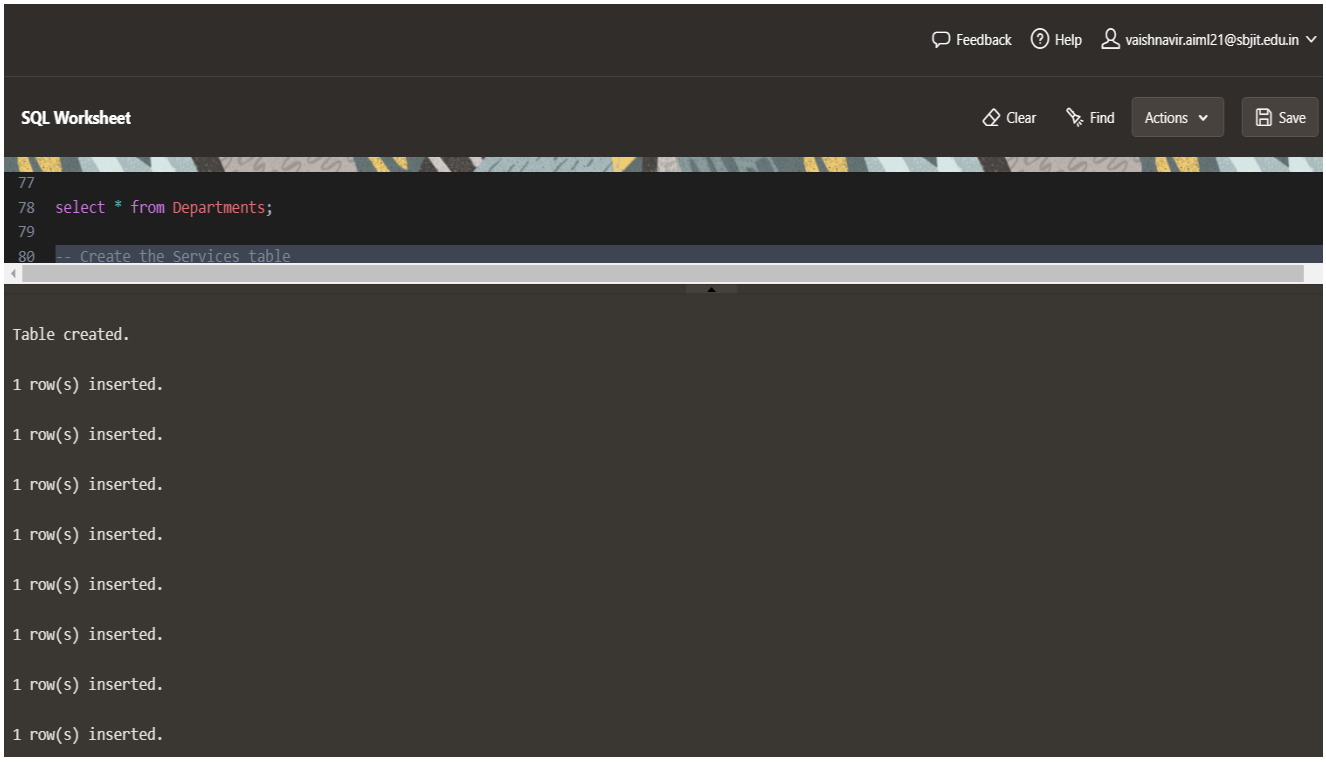


Fig.4.13 “Create Services table”

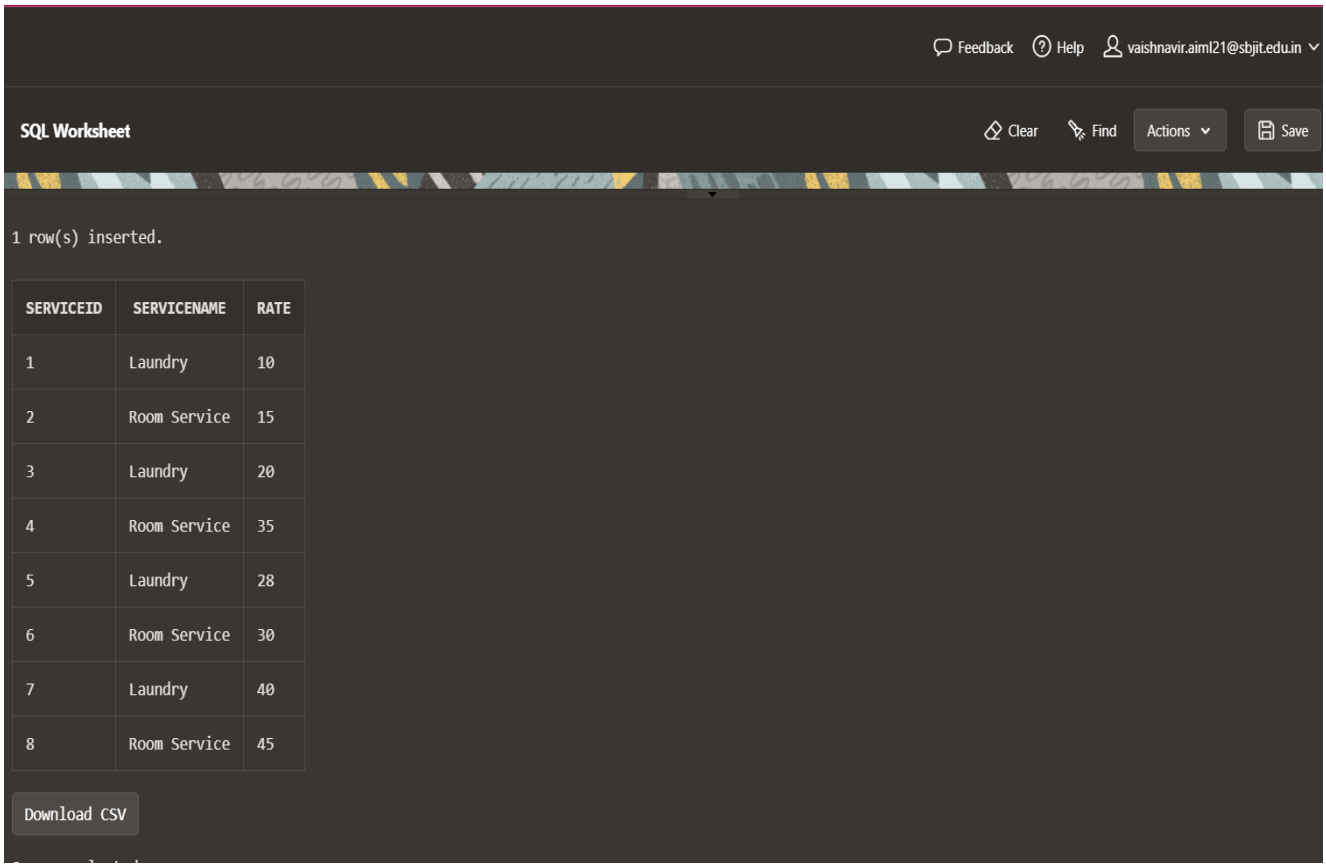


Fig.4.14 “Create Services table”

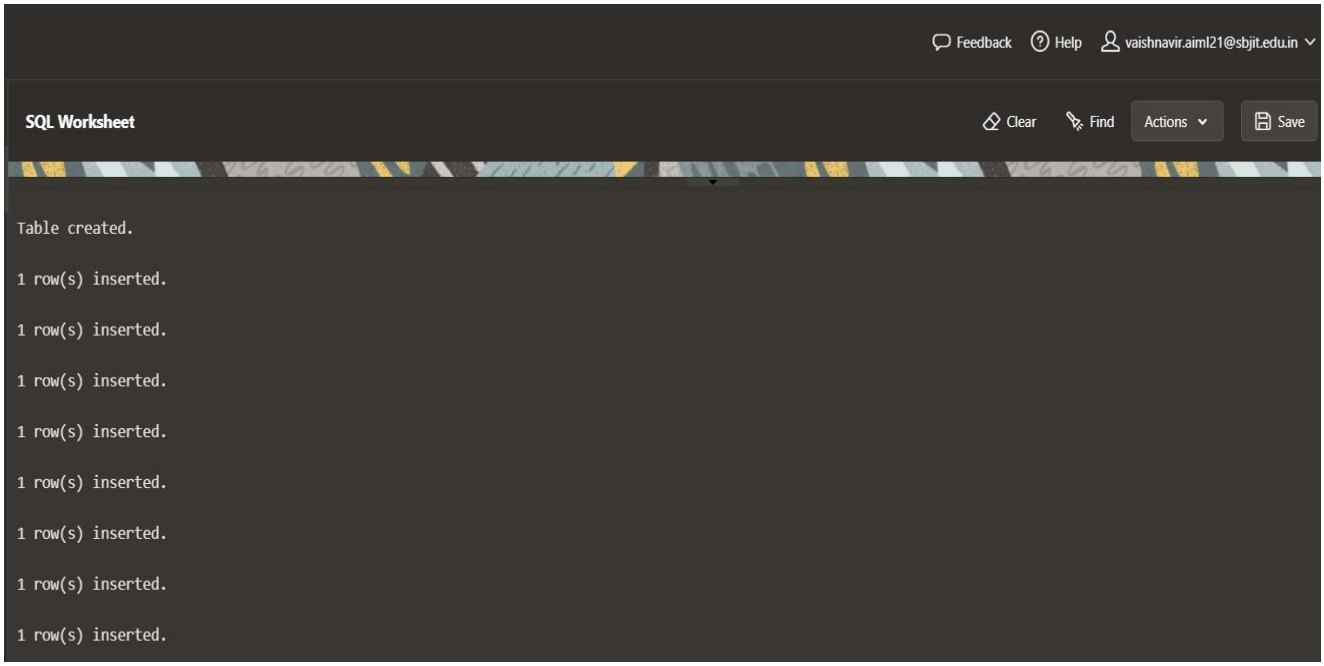


Fig.4.15 “Create Payments table”

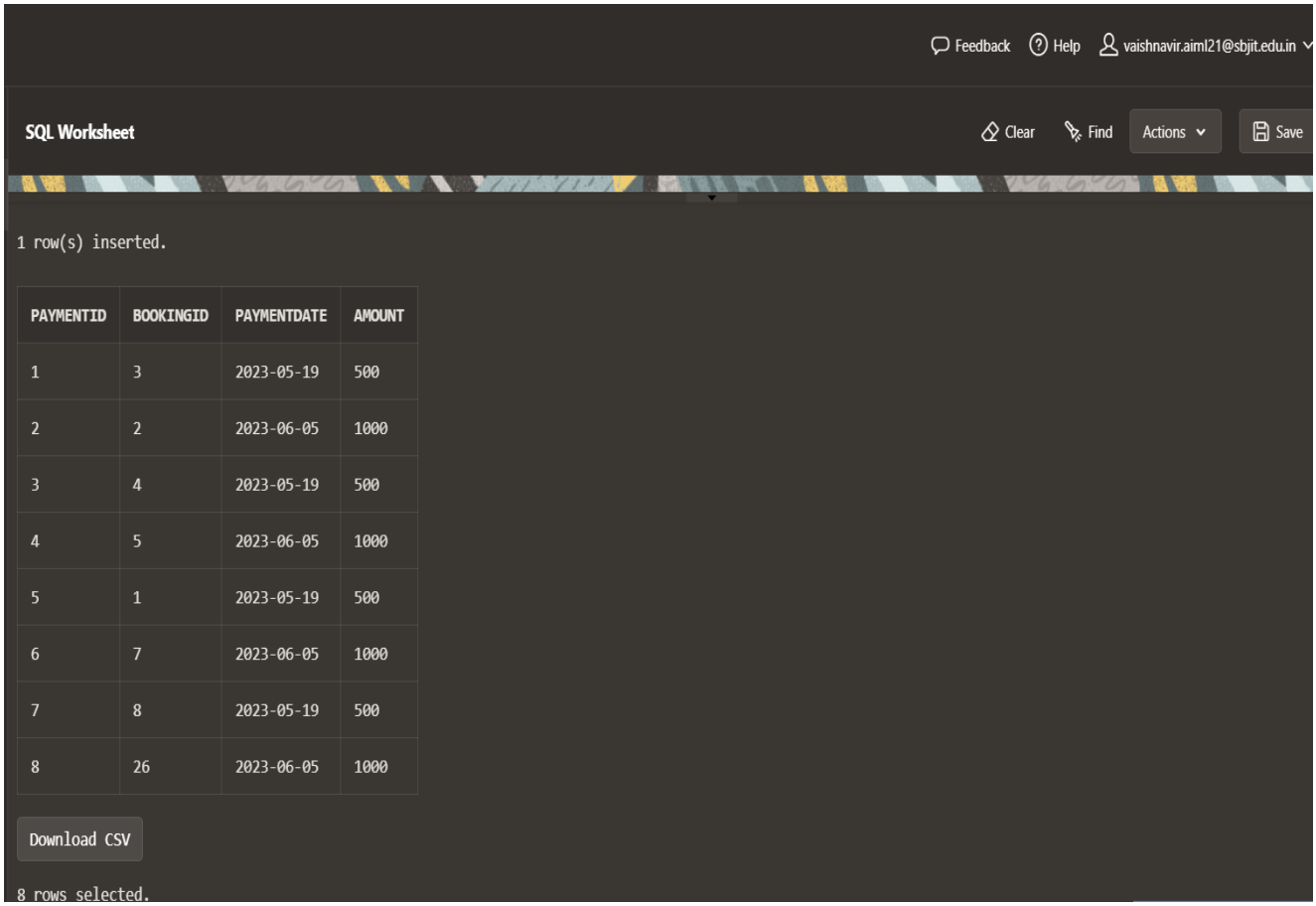


Fig.4.16 “Create Payments table”

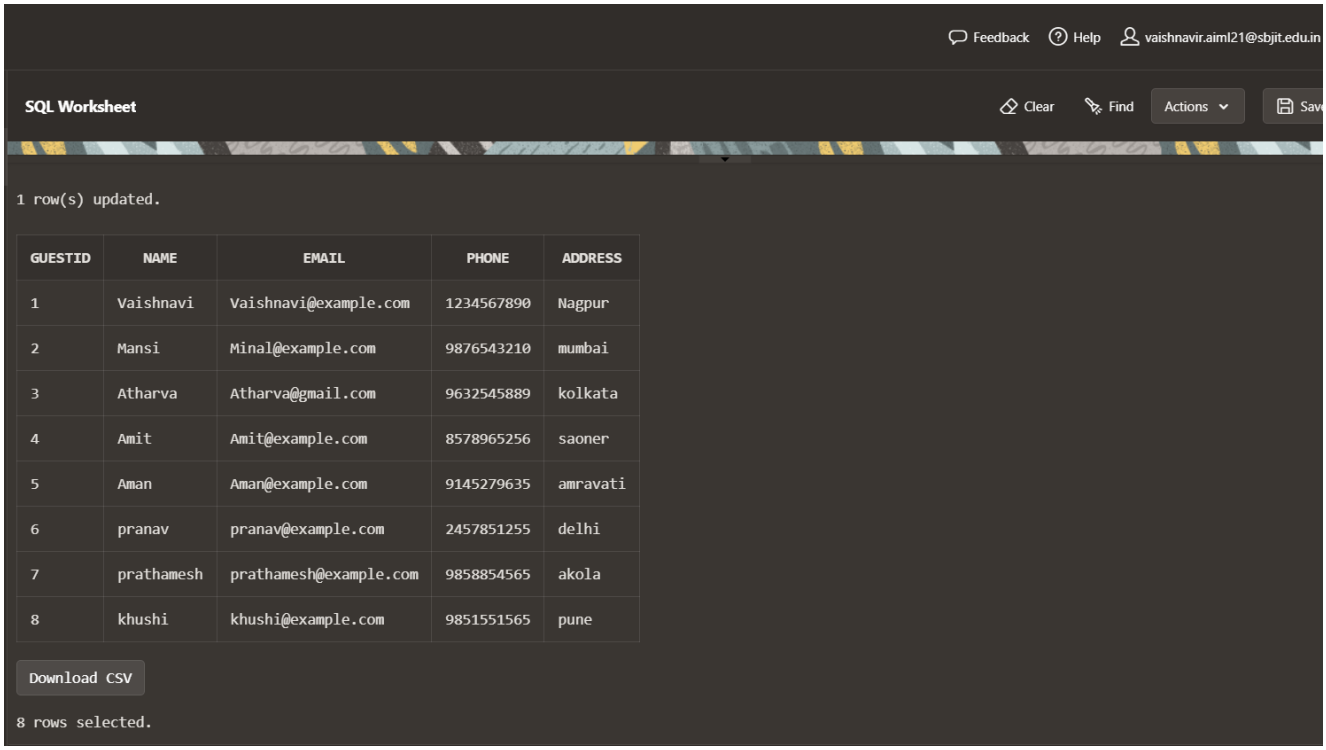


Fig.4.17 " change name of guests from Minal to Mansi"

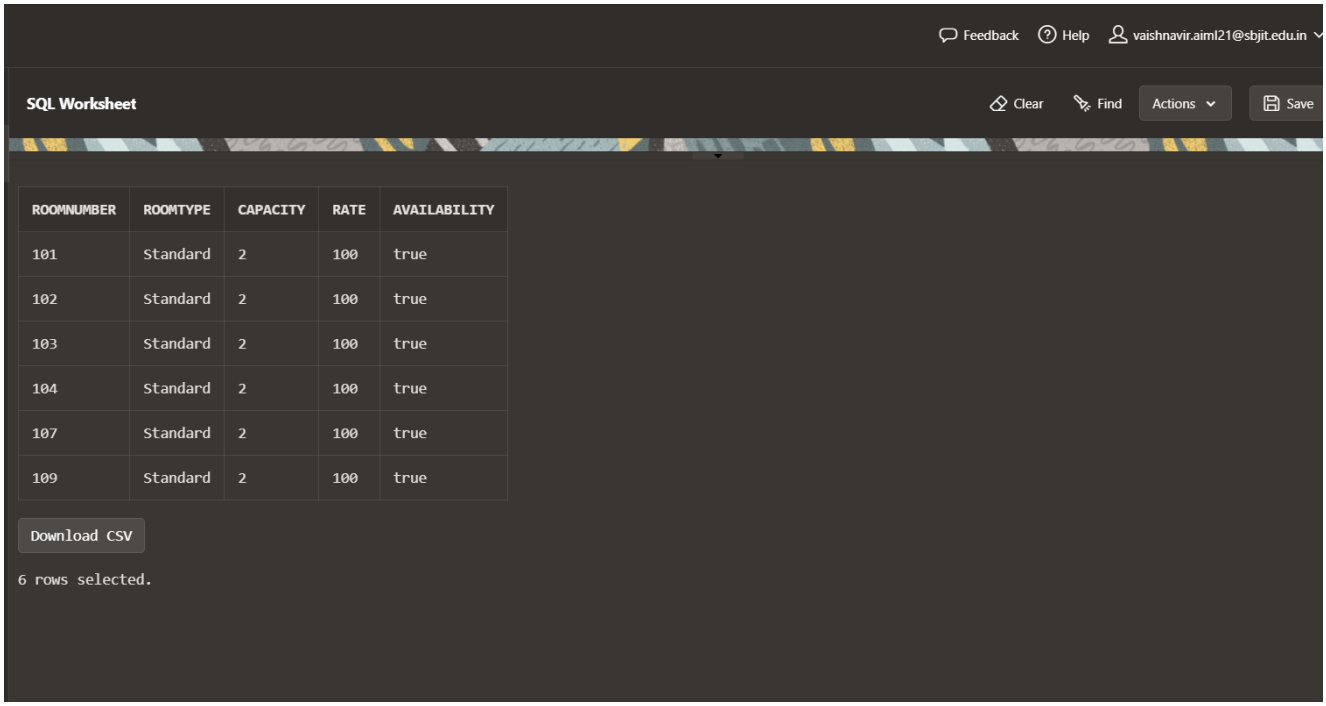


Fig.4.18 " Find the standard room type in table rooms"

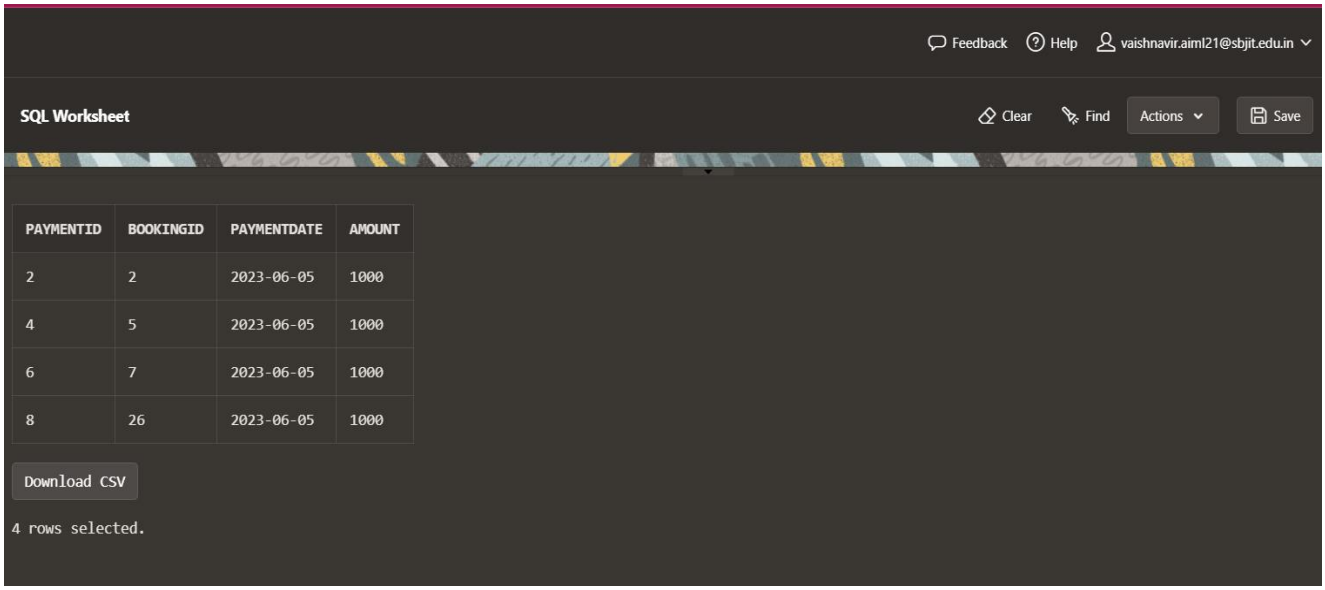


Fig.4.19 “Find the Payments whose Amount greater than 500”

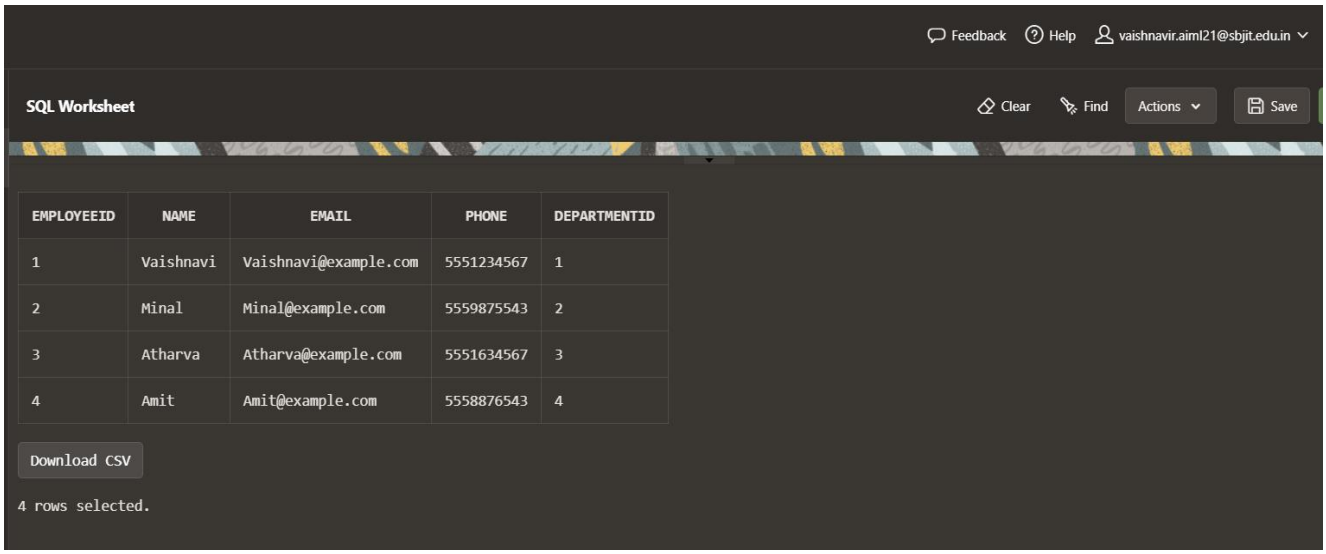


Fig.4.20 “Find the all Employees having EmployeeID less than 5”

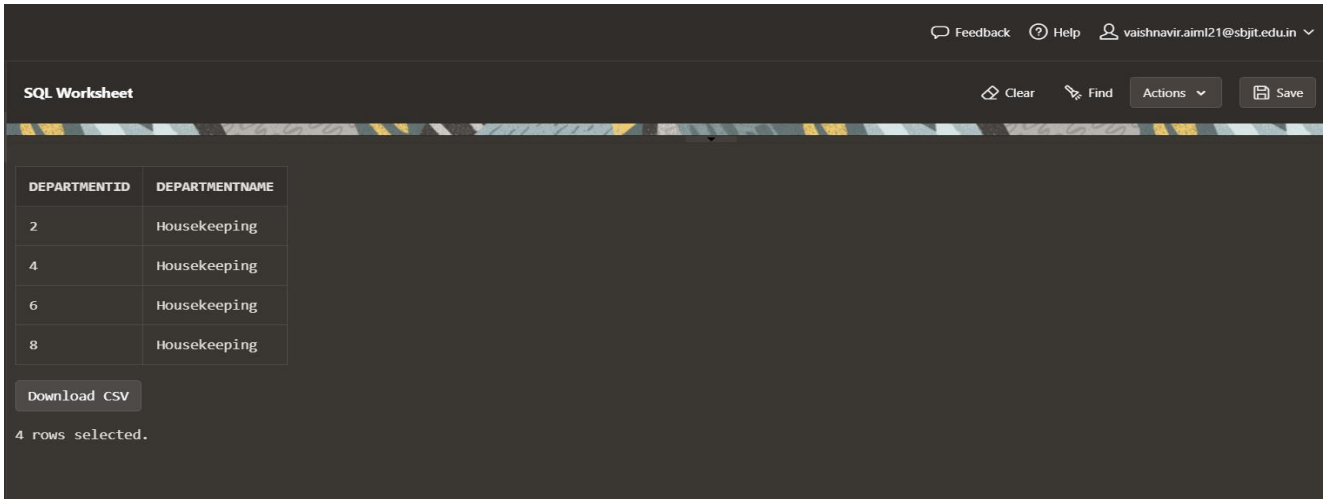


Fig.4.21 “Find the housekeeping departmentname in table departments”

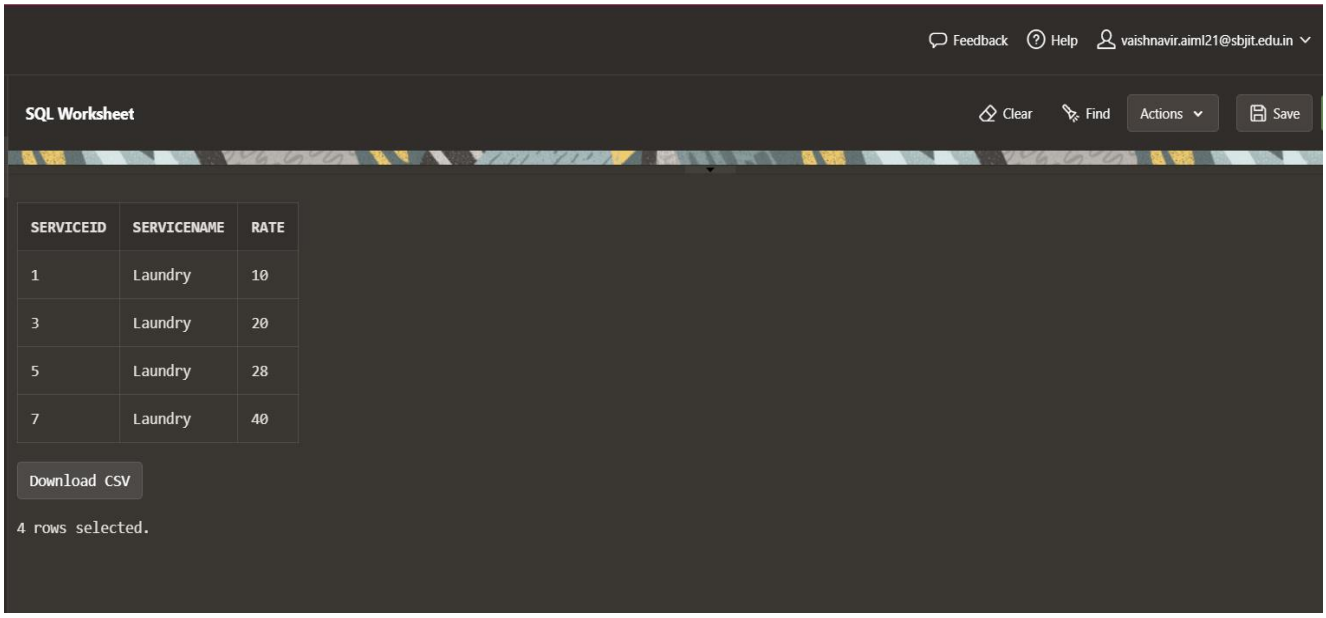


Fig.4.22 “Find the laundry service name in table service”

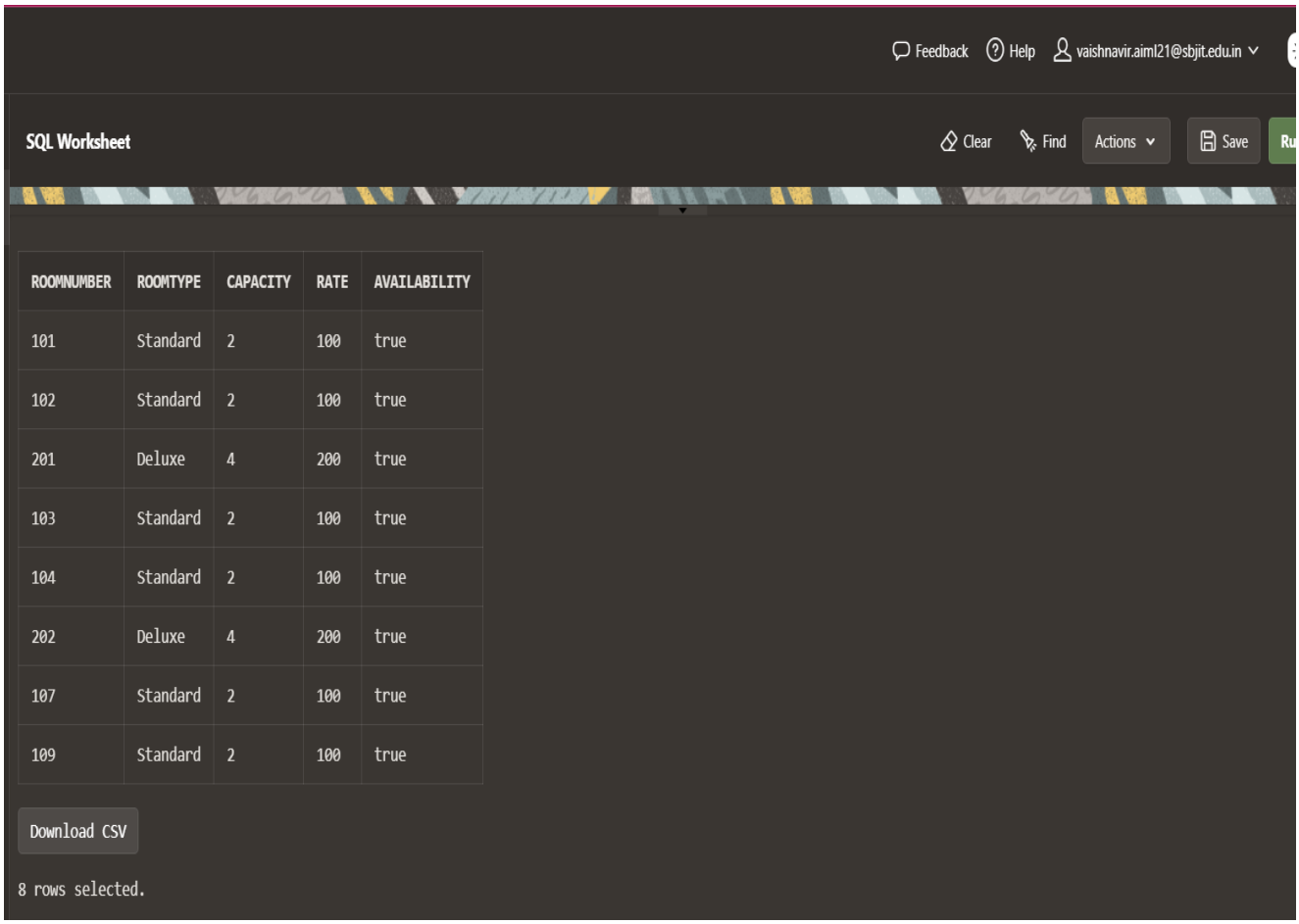


Fig.4.23 “Find the rooms whose rate greater than 10.00”

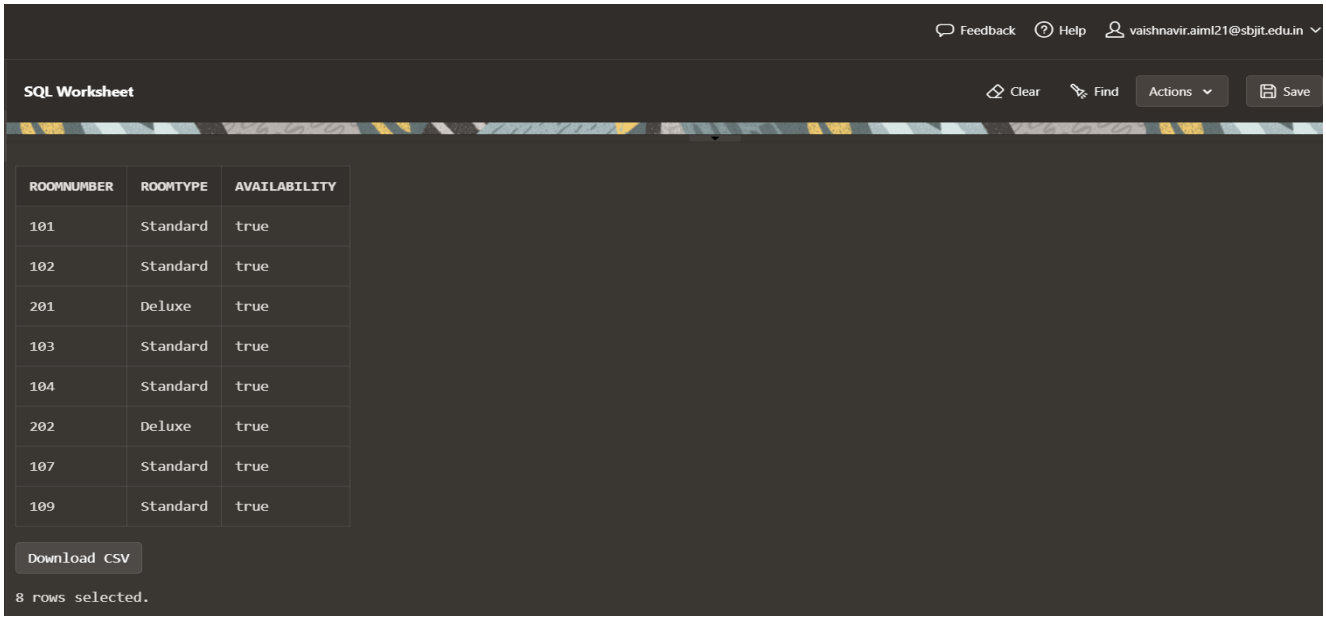


Fig.4.24 “Retrieve the list of rooms along with their availability status”

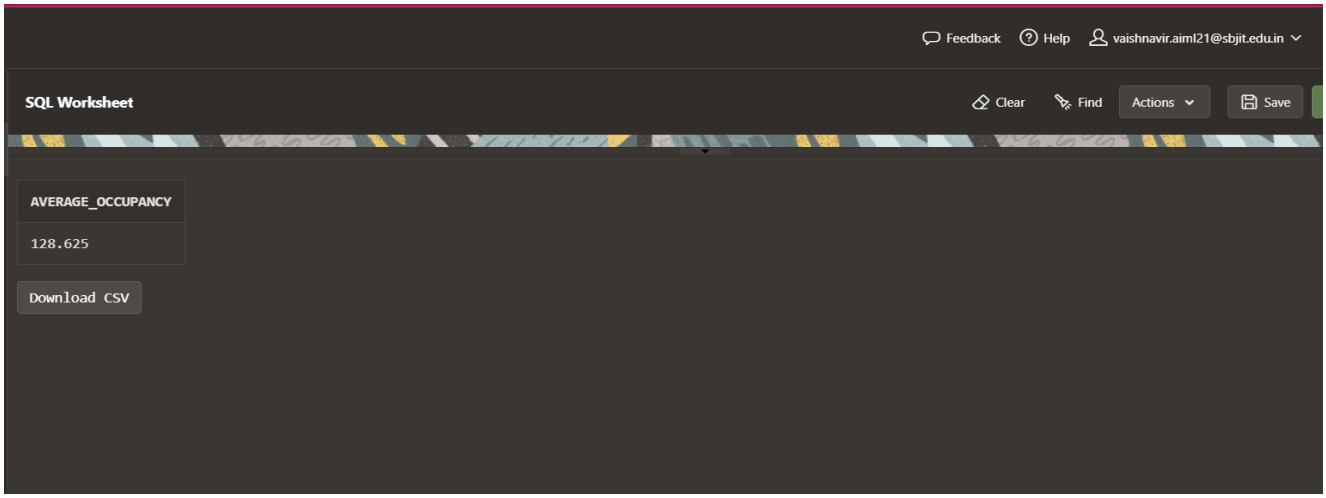


Fig.4.25 “Retrieve the average occupancy rate for a specific hotel”

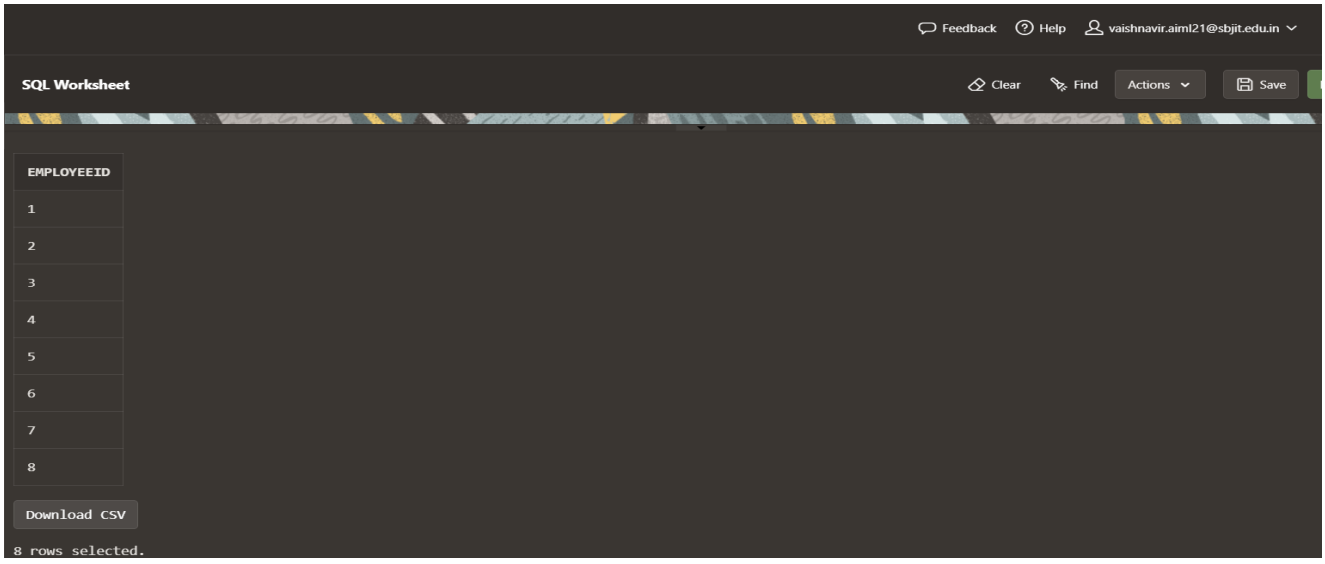


Fig.4.26 “Find the name of Employees name from Employees table”

CHAPTER 5
CONCLUSION

The conclusion of this project is A Hotel management system is a computerized management system. This system keeps the records of hardware assets besides software of this organization.The proposed system will keep a track of Workers, Recidents, Accounts and generation of report regarding the present status.This project has my sql(my live oracal)based software that will help in storing, updating and retrieving the information through various user-friendly menu-driven modules.The project "Hotel Management System" is aimed to develop to maintain the day-to-day state of admission/Vacation of Residents, List of Workers , payment details etc. Main objective of this project is to provide solution for hotel to manage most there work using computerized process. This software application will help admin to handle customers information, room allocation details, payment details, billing information.etc. Detailed explanation about modules and design are provided in project documentation. The existing system is a manually maintained system. All the Hotel records are to be maintained for the details of each customers, Fee details, Room Allocation , Attendance etc. All these details are entered and retrieved manually,because of this there are many disadvantages like Time Consuming ,updating process, inaccuracy of data.For avoiding this we introduced or proposed a new system in proposed system the computerized version of the existing system. provides easy and quick Access over the data.

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