Oracle PL/SQL Capstone Exam 28/08/2024

Oracle Code: -

```
set serveroutput on;
-- create table movies
create table movies (
    movie_id number generated by default as identity primary key,
    title varchar2(100) not null,
    director varchar2(100),
    release_year number(4),
    genre varchar2(50)
);
-- create table customers
create table customers (
    customer_id number generated by default as identity primary key,
    name varchar2(100) not null,
    email varchar2(100) unique,
    phone varchar2(15)
);
-- Insert movies data
insert into movies (title, director, release_year, genre) values ('Gharat
Ganpati', 'Navjyot Bandiwadekar', 2024, 'Marathi Film');
insert into movies (title, director, release year, genre) values
('Dharmaveer', 'Pravin Tarde', 2022, 'Marathi Film');
insert into movies (title, director, release year, genre) values ('Swatantrya
Veer Savarkar', 'Randeep Hooda', 2024, 'Bollywood');
insert into movies (title, director, release_year, genre) values ('Khel Khel
Mein', 'Mudassar Aziz', 2024, 'Bollywood');
```

```
insert into movies (title, director, release year, genre) values ('3 Idiots',
'Rajkumar Hirani', 2009, 'Bollywood');
insert into movies (title, director, release year, genre) values ('Housefull
2', 'Sajid Khan', 2012, 'Bollywood');
select * from movies;
-- update one row from movies table
update movies set release year=2024 where title = 'Gharat Ganpati';
select * from movies;
-- delete one row from movies table
delete from movies where movie id=6;
select * from movies;
-- Insert customers data
insert into customers (name, email, phone) values ('Geeta Joshi',
'geeta.joshi@example.com', '9765432108');
insert into customers (name, email, phone) values ('Anita Desai',
'anita.desai@example.com', '8765432109');
insert into customers (name, email, phone) values ('Nisha Kapoor',
'nisha.kapoor@example.com', '6543210987');
insert into customers (name, email, phone) values ('Rahul Khanna',
'rahul.khanna@example.com', '9876543210');
insert into customers (name, email, phone) values ('Siddharth Patel',
'siddharth.patel@example.com', '7654321098');
insert into customers (name, email, phone) values ('Rajesh Kumar',
'rajesh.kumar@example.com', '5432109876');
select * from customers;
-- create movie view
create view movie view as
select movie id, title, director, release year, genre
from movies;
```

```
-- create procedure for add movie
create or replace procedure add movie (
    p_title in varchar2,
    p_director in varchar2,
    p_release_year in number,
    p_genre in varchar2
) as
begin
    insert into movies (title, director, release_year, genre)
    values (p_title, p_director, p_release_year, p_genre);
    commit;
end;
/
-- create declare block for add movie
declare
    p_title varchar2(100) := '&input_title';
    p_director varchar2(100) := '&input_director';
    p_release_year number := 2024;
    p_genre varchar2(50) := '&input_genre';
begin
    insert into movies (title, director, release year, genre)
    values (p_title, p_director, p_release_year, p_genre);
    commit;
    dbms_output.put_line('movie inserted successfully: ' || p_title);
end;
/
select * from movies;
-- create procedure for read movie
create or replace function read_movie (
```

```
p movie id in number
) return sys_refcursor as
    v_cursor sys_refcursor;
begin
    open v_cursor for
    select title, director, release_year, genre
   from movies
   where movie_id = p_movie_id;
    return v_cursor;
end;
/
-- create declare block for read movie
declare
    p_movie_id number := 2;
    v_title varchar2(100);
   v_director varchar2(100);
   v_release_year number;
   v_genre varchar2(50);
begin
    select title, director, release_year, genre
    into v_title, v_director, v_release_year, v_genre
    from movies
   where movie_id = p_movie_id;
   dbms_output.put_line('title: ' || v_title || ', director: ' || v_director
|| ', release year: ' || v_release_year || ', genre: ' || v_genre);
exception
    when no_data_found then
        dbms_output.put_line('no movie found with id ' || p_movie_id);
end;
```

```
select * from movies;
-- create procedure for update movie
create or replace procedure update_movie (
    p_movie_id in number,
    p_title in varchar2,
    p_director in varchar2,
    p_release_year in number,
    p_genre in varchar2
) as
begin
    update movies
    set title = p_title,
        director = p_director,
        release_year = p_release_year,
        genre = p_genre
   where movie_id = p_movie_id;
    commit;
end;
-- create declare block for update movie
declare
    p_movie_id number := '&input_id';
    p_title varchar2(100) := '&input_updated_title';
    p_director varchar2(100) := '&input_updated_director';
    p_release_year number := '&input_updated_year';
    p_genre varchar2(50) := '&input_updated_genre';
begin
    update movies
    set title = p_title,
```

```
director = p_director,
        release_year = p_release_year,
        genre = p_genre
    where movie_id = p_movie_id;
    commit;
    dbms_output.put_line('movie updated successfully.');
exception
    when no_data_found then
        dbms_output.put_line('no movie found with id ' || p_movie_id);
end;
select * from movies;
-- create procedure for delete movie
create or replace procedure delete_movie (
    p_movie_id in number
) as
begin
    delete from movies
    where movie_id = p_movie_id;
    commit;
end;
-- create declare block for delete movie
declare
    p_movie_id number := 6;
begin
    delete from movies
    where movie_id = p_movie_id;
    commit;
```

```
dbms_output.put_line('movie deleted successfully.');
exception
   when no_data_found then
        dbms_output.put_line('no movie found with id ' || p_movie_id);
end;
/
select * from movies;

-- Drop tables
drop table movies;
drop table customers;
```

Java Code: -

Movie.java

```
package com.movie.model;
public class Movie {
    private int id;
    private String title;
    private String director;
    private int releaseYear;
    private String genre;
    public Movie(int id, String title, String director, int releaseYear, String genre) {
        this.id = id;
        this.title = title;
        this.director = director;
        this.releaseYear = releaseYear;
        this.genre = genre;
```

```
}
public Movie() {
    this.id = 0;
    this.title = "";
   this.director = "";
    this.releaseYear = 0;
   this.genre = "";
}
public String toString() {
    return "Movie Details: \nID = " + id +
           "\nTitle = " + title +
           "\nDirector = " + director +
           "\nRelease Year = " + releaseYear +
           "\nGenre = " + genre + "\n";
}
public int getId() {
    return id;
}
public void setId(int id) {
   this.id = id;
}
public String getTitle() {
    return title;
}
public void setTitle(String title) {
   this.title = title;
}
public String getDirector() {
    return director;
}
public void setDirector(String director) {
```

```
this.director = director;
}

public int getReleaseYear() {
    return releaseYear;
}

public void setReleaseYear(int releaseYear) {
    this.releaseYear = releaseYear;
}

public String getGenre() {
    return genre;
}

public void setGenre(String genre) {
    this.genre = genre;
}
```

MovieDao.java

```
package com.movie.dao;
import java.sql.Connection;
import java.sql.SQLException;
import com.movie.model.Movie;
public interface MovieDao {
    void addMovie(Movie movie) throws SQLException;
    Movie readMovie(int id) throws SQLException;
    void updateMovie(Movie movie) throws SQLException;
    void deleteMovie(int id) throws SQLException;
    Connection getConnection() throws SQLException;
}
```

MovieDaoImpl.java

```
package com.movie.dao;
import java.sql.CallableStatement;
import java.sql.Connection;
import java.sql.DriverManager;
import java.sql.ResultSet;
import java.sql.SQLException;
import java.sql.Types;
import com.movie.model.Movie;
public class MovieDaoImpl implements MovieDao {
    private Connection con;
    public void addMovie(Movie movie) throws SQLException {
        con = getConnection();
        String sql = "{call add movie(?, ?, ?, ?)}";
        CallableStatement cst = con.prepareCall(sql);
        cst.setString(1, movie.getTitle());
        cst.setString(2, movie.getDirector());
        cst.setInt(3, movie.getReleaseYear());
        cst.setString(4, movie.getGenre());
        cst.executeUpdate();
        cst.close();
        con.close();
    public Movie readMovie(int id) throws SQLException {
        con = getConnection();
        String sql = "{? = call read_movie(?)}";
        CallableStatement cst = con.prepareCall(sql);
        cst.registerOutParameter(1, Types.REF_CURSOR);
        cst.setInt(2, id);
        cst.execute();
```

```
ResultSet rs = (ResultSet) cst.getObject(1);
        Movie movie = null;
        if (rs.next()) {
            movie = new Movie(id, rs.getString("title"),
rs.getString("director"), rs.getInt("release year"), rs.getString("genre"));
        }
        rs.close();
        cst.close();
        con.close();
        return movie;
    }
    public void updateMovie(Movie movie) throws SQLException {
        con = getConnection();
        String sql = "{call update_movie(?, ?, ?, ?)}";
        CallableStatement cst = con.prepareCall(sql);
        cst.setInt(1, movie.getId());
        cst.setString(2, movie.getTitle());
        cst.setString(3, movie.getDirector());
        cst.setInt(4, movie.getReleaseYear());
        cst.setString(5, movie.getGenre());
        cst.executeUpdate();
        cst.close();
        con.close();
    }
    public void deleteMovie(int id) throws SQLException {
        con = getConnection();
        String sql = "{call delete_movie(?)}";
        CallableStatement cst = con.prepareCall(sql);
        cst.setInt(1, id);
        cst.executeUpdate();
        cst.close();
```

```
con.close();
}

public Connection getConnection() throws SQLException {
    String URL = "jdbc:oracle:thin:@localhost:1521:xe";
    String USER = "SYS AS SYSDBA";
    String PWD = "Atharva2003";
    return DriverManager.getConnection(URL, USER, PWD);
}
```

MovieService.java

```
package com.movie.service;
import java.sql.SQLException;
import java.util.Scanner;
import com.movie.dao.MovieDaoImpl;
import com.movie.model.Movie;
public class MovieService {
    private static MovieDaoImpl dao;
    public static void main(String[] args) {
        dao = new MovieDaoImpl();
        Movie movie = null;
        int id, releaseYear;
        String title, director, genre;
        Scanner sc = new Scanner(System.in);
        System.out.println("Welcome to Movie Store");
        int choice;
        do {
            System.out.println("Enter your choice: ");
            System.out.println("1. Add new movie");
```

```
System.out.println("2. Read movie details");
            System.out.println("3. Update movie details");
            System.out.println("4. Delete a movie");
            System.out.println("5. Exit");
            choice = sc.nextInt();
            sc.nextLine();
            try {
                switch (choice) {
                    case 1:
                        System.out.println("Enter the movie ID: ");
                        id = sc.nextInt();
                        sc.nextLine();
                        System.out.println("Enter the movie title: ");
                        title = sc.nextLine();
                        System.out.println("Enter the movie director: ");
                        director = sc.nextLine();
                        System.out.println("Enter the movie release year: ");
                        releaseYear = sc.nextInt();
                        sc.nextLine();
                        System.out.println("Enter the movie genre: ");
                        genre = sc.nextLine();
                        movie = new Movie(id, title, director, releaseYear,
genre);
                        dao.addMovie(movie);
                        System.out.println("Movie added successfully.");
                        break;
                    case 2:
                        System.out.println("Enter the movie ID: ");
                        id = sc.nextInt();
                        sc.nextLine();
                        movie = dao.readMovie(id);
```

```
if (movie != null) {
                            System.out.println(movie);
                        } else {
                            System.out.println("No movie found with ID: " +
id);
                        }
                        break;
                    case 3:
                        System.out.println("Enter the movie ID to update: ");
                        id = sc.nextInt();
                        sc.nextLine();
                        System.out.println("Enter the new movie title: ");
                        title = sc.nextLine();
                        System.out.println("Enter the new movie director: ");
                        director = sc.nextLine();
                        System.out.println("Enter the new movie release year:
");
                        releaseYear = sc.nextInt();
                        sc.nextLine();
                        System.out.println("Enter the new movie genre: ");
                        genre = sc.nextLine();
                        movie = new Movie(id, title, director, releaseYear,
genre);
                        dao.updateMovie(movie);
                        System.out.println("Movie updated successfully.");
                        break;
                    case 4:
                        System.out.println("Enter the movie ID to delete: ");
                        id = sc.nextInt();
                        sc.nextLine();
                        dao.deleteMovie(id);
                        System.out.println("Movie deleted successfully.");
```

```
break;
                    case 5:
                         System.out.println("Exited the program");
                         break;
                    default:
                         System.out.println("Invalid choice. Please enter a
number between 1 and 5.");
                         break;
                }
            } catch (SQLException e) {
                System.out.println("An error occurred: " + e.getMessage());
            }
        } while (choice != 5);
        sc.close();
    }
}
```

OUTPUT: -





















