# Database Concepts 5COM1052

# Coursework 2018-2019

# Mega Independent Cinema Experience (MICE)



# System Specification

The MICE Cinema group is a small group of independent cinemas in Hertfordshire. They show what they regard as quality films and they usually start each showing of a film with a short talk about the film by the cinema manager.

There are a number of cinema venues in Hertfordshire. Each screen only shows one film an evening, although some of the venues have more than one screen with different capacities (number of seats) – therefore the venue can show more than one film in an evening. A specific film will be performed over a number of evenings on the same screen, the collective performances are known as showings.

For each performance of a film, the owners would like to know how much money was taken so that they can work out how much a film brings in overall for a showing, and collectively from the different cinemas in which it is performed, thus indicating which is the most popular film (and the least!).

Each cinema employs a group of employees with certain job types (Administrator, Receptionist, Cinema Manager, Projectionist, Accountant, Cleaner etc.) Employees only work in one cinema. Each cinema only has one manager and some employees supervise other employees. A manager only manages one cinema. At its administrative centre, MICE also has staff which help administer the group, such as Accountant, CEO, Central Advanced Booking Sales staff, assistants.

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# After a design process the following tables have been put forward:

# Resulting Tables

Cinema (Cinema\_no, cinema\_name, location, manager\_empno\*)

Employee (Empno, surname, given\_name, dob, address, cinema\_no\*, supervisor\_empno\*)

Screen (Cinema\_no\*, Screen\_no, no of seats)

Film (Film\_no, film\_name, date\_of\_release)

Showings (Cinema\_no\*, Screen\_no\* Film\_no\*, start\_date, end\_date)

Performance (Performance\_id, Cinema\_no\*, Screen\_no\*, Film\_no\*, date, takings)

## Section One 40%

Create the above tables in the Oracle database (university installation).

Ensure that you enforce Entity Integrity by declaring the Primary Keys for every table, and ensure that you enforce Referential Integrity by creating the appropriate foreign keys. Please note these tables are for testing and only include the main attributes are necessary to generate the information required.

Draw up a set of test data for the database. You only need sufficient data to carry out your tests to make sure the database can answer the necessary queries. Create the tables and populate with your test data. (If you need a list of sample data for the films go to one of Mark Kermode web pages as below:

<https://www.bfi.org.uk/news-opinion/news-bfi/lists/mark-kermode-50-films-every-film-fan-should-watch> )

***You must include yourself in the test data as an Employee***. Your empno is the same as your student number.

## Section 2 SQL Queries 50%

## 10 queries (5 marks per query – of which 3 for query and 2 for result.)

## For all errors marks are deducted from the initial 5 marks.

The following queries are to be devised and run using standard SQL.

When you submit the work, provide a single file (any standard format MS Word or PDF, etc)

It will contain:

* SQL Developer screenshots of each of the 10 queries
* SQL Developer screenshots of output produced from running each query
* Set of Table Descriptions, using the DESCRIBE table\_name: command

(DO NOTtype queries and output into a Microsoft Word file longhand).

The work MUST have been completed on the Oracle RDBS installation at the University (MORK11) using your user id, if it is not it, will not be marked.

It also needs to be legible!

1. Produce a list of films which have a date of release before August 2016
2. List the full details of the cinemas managed by the employees with the employee number 55 and 52
3. List employee details for the employees who work at the same cinema as the employee Joe Bloggs
4. Write a SQL statement to count the number of films in the database released before August 2016 (The result should just show the count)
5. Produce a list of Employees who work for the cinema with the cinema number 07 and include the cinema name in the result. Arrange the result in ascending order by employees’ surname. Name attributes should be combined into a single output column, and given a sensible header.
6. Employee number 99 has phoned in sick. We need the full details of his supervisor.
7. Write a SQL statement to list all the film names of films shown between 1st July 2017 and 30th September 2017
8. Write a SQL statement to list the cinema numbers of cinemas which employ more than four employees
9. Produce the takings for the film with the name *Big Fish* when it was shown in cinema 02 in screen no 1
10. Which film has taken the least takings at a performance? Include film name and cinema name in the results

**With all queries part of the mark allocation are for the query and half for the submitted results as shown.**

**Please remember we check your tables and table content on-line.**

# Section Three

Grant access on your tables to comtpmm, comrklk, comqhx1, rj14aab

**5 marks**

Table descriptions supplied. **5 marks**