# Requirements analysis overview

## The client’s brief.

Eye Candy Cinemas is an entertainment company that has several cinemas  
complexes, each with several theatres. The company would like to  
develop a database that will provide a basis for a website application.

The purpose of the report is to provide an analysis and documentation of the requirements, information-gathering techniques, SDLC and an ERD for the database system.

##### Plan:

Eye Candy Cinemas will be about to store, view or update info about movies, cinema complexes, theatres and movie info, screening and schedule. Certain data within the database will possess.

Details related to cinemas such as, phone number, email and location (street, street nr, suburb, city). Also, for each theatre in the cinemas will details includes theatre ID, seating capacity (20 to 500) and sound system used (Sony SDDS, Dolby Digital EX, THX, Dolby Atmos)

Details related to movies such as movie id, movie title, director, release year, duration and a IMDB link. Also, the cinema database includes information such as movie screenings; including screening ID, movie played (movie ID), theatre ID, price, date, and time of when the movie is being played.

Details related to ticket, ticket ID, name, user email address, user phone number, screening ID, seat number.

# Information Gathering

Document Analysis: Documentary analysis is a type of qualitative research in which documents are reviewed by the analyst to assess an appraisal theme. so, for example by looking at existing system documentation, such as user manuals, technical info and process. This can help in understanding the current structure and operation.

Interviews: Information gathering interviews involve structured conversations with individuals or experts to collect valuable data, insights, or knowledge on a specific topic or subject. So for example by Interviewing people who work with the old system, already know detailed information about how it works for a more move. We can get detailed information about processes, workflows, and challenges about the old system.

# System development life cycle x

#### Requirements Gathering and Analysis:

* Document Analysis
* Interviews (read in information gathering for what they are)

#### System Design:

* ERD
* database schema

#### System Development:

* Database Creation
* Data Population
* Version Control
* Documentation

#### System Testing:

* Validation Testing
* Security Testing
* Recovery and Backup Testing
* Stress Testing

#### System Deployment:

* Backup and Recovery Strategy
* Database Installation
* Security setup

#### System Maintenance and Support:

* Routine Maintenance Tasks
* Database Security
* Backup and Recovery

# System Development

## Database schema

## Entity Relationship Diagram

#### Entities and attributes

I already talked about this in the plan section. but here it is again in shorter terms.

(FK) = foreign key

(PK) = primary key

* Cinemas: The Cinemas entity represents individual Cinemas within the organization.

Attributes for Movies are:

1. UID (Integer) (PK)
2. phone number (VARCHAR)
3. email (VARCHAR)
4. street name (VARCHAR)
5. street number (Integer)
6. suburb (VARCHAR)
7. city (VARCHAR)

* Theatres: The Theatres entity represents individual Theatres within the organization.

Attributes for theatres are:

1. UID (Integer) (PK)
2. Seating capacity (integer)
3. Sound system (char)

* Movies: The Movies entity represents individual Movies that have/are/going to be played. Attributes for theatres are:

1. UID
2. IMDB link (VARCHAR)
3. Title (VARCHAR)
4. Release date (Date Time)
5. Director (VARCHAR)
6. Runtime in seconds (integer)

* Tickets: the tickets entity represents individual tickets that brought or purchased from a user

Attributes for tickets are:

1. UID (integer) (PK)
2. First and last name (VARCHAR)
3. Movie screening ID (FK)
4. Seat number (integer)
5. Phone number (VARCHAR)
6. Email (VARCHAR)
7. Price (**DECIMAL)**

* Move screening:

1. UID (Integer) (PK)
2. Movie ID (FK)
3. Theatre ID (FK)
4. Cinema ID (FK)
5. Date and time for start of movie (Date Time)

A diagram of a movie

Description automatically generated

Analyze the case study and produce a set of business rules.

1. each move should have a unique identifier and include details such as movie title, director, release year, duration and a IMDB link

2. each ticket should have a unique identifier and include detail such as, name, user email address, user phone number, screening ID and seat ID should be 1-n N being the max number of seats in the theatre

3. each cinema should have a unique identifier and include detail such a phone number, email and location (street, street nr, suburb, city)

3.each theatre should have a unique identifier and include detail such seating capacity (20 to 500) and sound system used (Sony SDDS, Dolby Digital EX, THX, Dolby Atmos)

4. a theatre should be linked with an only 1 cinema and a cinema should have at least 1 theatre

5. each movie screenings should have a unique identifier and include detail such movie played (movie ID), theatre ID, price, date, and time of when the movie is being played

6. seating number on the ticket should NOT go above the theatre seating capacity related to the theatre ID on the ticket

Relationship between ...

movies and movie screenings: one to many

movie screenings and ticket: one to many

Cinema and theatre: one to many

movie screenings and theatre: one to one