

## Film Production Management System

### Scenario Description:

A film production house is a dynamic hub where the entire process of making a movie comes together. The producer oversees the hiring of key professionals, such as directors, marketing teams, finance teams, and creative specialists like set designers and make-up artists. Directors manage the auditions and casting, while screenwriters craft the story. The creative team handles the visual elements, and the marketing team ensures the film reaches the right audience. Every department works together, from budgeting and writing to shooting and editing, all to bring a film from concept to screen.

### Objective:

To create an ER Diagram and identifying the entities, attributes and their Relationship, also to map their Cardinalities. And finally creating a relational database according to the ER diagram drawn.

**Tools Used:** Draw.io

### Concept:

Organizing data into entities, attributes, and relationships to reflect real-world processes. It ensures data integrity, clarity, and smooth management of interconnected tasks in a structured database system.

### Solution:

#### Entities:

Producer (Strong Entity)

Director (Strong Entity)

Marketing (Strong Entity)

Screenwriters (Strong Entity)

Cast (Strong Entity)

Audition (Strong Entity)

Creative Team (Strong Entity)

Film (Strong Entity)

Finance Team (Strong Entity)

#### Attributes:

- Producer
  - p\_id (Primary Key): single valued
  - p\_name: composite
  - p\_dob: simple
  - p\_age: derieved
  - p\_phno: multivalued
  - p\_email: mulltivalued

- Director
  - d\_id (Primary Key): single valued
  - d\_name: composite
  - d\_age: simple
  - d\_phno: multivalued
  - d\_email: multivalued
- Marketing
  - m\_id (Primary Key): single valued
  - m\_phno: multivalued
  - m\_budget: simple
  - m\_timeframe: composite (start date, end date)
- Screenwriters
  - sw\_id (Primary Key): single valued
  - sw\_name: simple
  - script\_id: single valued
  - script\_name: simple
- Cast
  - c\_id (Primary Key): single valued
  - c\_name: simple
  - c\_role: multivalued
- Audition
  - a\_id (Primary Key): single valued
  - a\_venue: simple
  - a\_date: simple
  - auditionee: composite.
- Creative Team
  - Creative Team
    - Set makers
      - sm\_id(Primary Key): single valued
      - sm\_speciality: multivalued
    - Make-up artists & fashion designers
      - ma\_id: (Primary Key): single valued
      - ma\_speciality: multivalued
      - fd\_id: (Primary Key): single valued
      - fd\_speciality: multivalued
    - Editors
      - ed\_id(Primary Key): single valued
      - ed\_speciality: multivalued
- Film
  - f\_id (Primary Key): single valued
  - f\_name: simple
  - f\_release\_date: composite (day, month, year)
  - f\_length: simple
  - f\_language: multivalued
- Finance Team
  - fi\_id (Primary Key): single valued

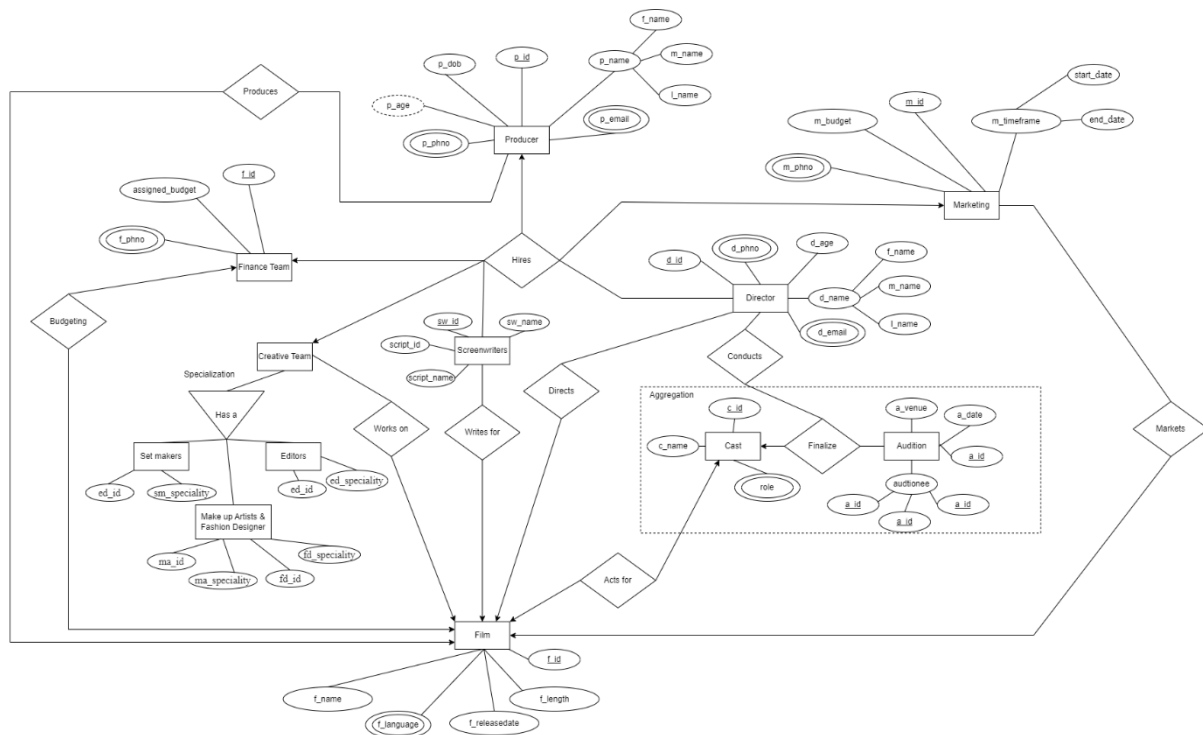
- fi\_phno: multivalued
- assigned\_budget: simple

Relationship:

1. Producer **Hires** Director
2. Producer **Hires** Marketing team
3. Producer **Hires** Finance team
4. Producer **Hires** Creative team
5. Producer **Hires** Screen Writers
6. Producer **Produces** Film
7. Director **Directs** Film
8. Director **Conducts** Audition
9. Director **Finalizes** Cast
10. Cast **Acts for** Film
11. Marketing **Markets** Film
12. Finance Team **Is Responsible for** Budgeting
13. Screen Writers **Writes for** Film
14. Creative Team **Works on** Film

Cardinalities:

- One** Producer hires **Many** Directors.
- One** Producer hires **One** Marketing Team.
- One** Producer hires **One** Finance Team.
- One** Producer hires **One** Creative Team.
- One** Producer hires **Many** Screenwriters.
- One** Producer Produces **One** Film.
- Many** Directors Directs **One** Film.
- Many** Directors Conducts **Many** Auditions.
- Many** Directors Finalizes **One** Cast.
- One** Cast Acts for **One** Film.
- One** Marketing Markets **One** Film.
- One** Finance Team is responsible for budgeting **One** Film.
- Many** Screenwriters Write for **One** Film.

**Many Creative Team Works on One Film.**ER Diagram:

**Relational Database****One** Producer hires **Many** Directors

p_id	f_name	m_name	l_name	p_age

p_id	p_email

p_id	p_phno

p_id	d_id

d_id	f_name	m_name	l_name	d_age

d_id	d_email

d_id	d_phno

**One** Producer hires **One** Marketing Team.

p_id	f_name	m_name	l_name	p_age

p_id	p_email

p_id	p_phno

p_id	m_id

m_id	m_budget	Start_date	Start_date

m_id	p_phno

**One** Producer hires **One** Finance Team.

p_id	f_name	m_name	l_name	p_age

p_id	p_email

p_id	p_phno

p_id	fi_id

--	--

fi_id	assigned_budget

p_id	p_phno

**One** Producer hires **One** Creative Team

p_id	f_name	m_name	l_name	p_age

p_id	p_email

p_id	p_phno

p_id	sm_id	ma_id	ed_id

Creative Team

Set Makers

sm_id	sm_speciality

Make-up artists & fashion designers

ma_id	ma_speciality	fd_id	fd_id

Editors

ed_id	ed_speciality

**One** Producer hires **Many** Screenwriters

p_id	f_name	m_name	l_name	p_age

p_id	p_email

p_id	p_phno

p_id	sw_id

sw_id	sw_name	script_id	script_id

**One** Producer Produces **One** Film

p_id	f_name	m_name	l_name	p_age

p_id	p_email	p_id	p_phno

p_id	f_id

f_id	f_name	f_release_date	f_length	f_language

**Many Directors Directs One Film**

d_id	f_name	m_name	l_name	d_age

d_id	d_email	d_id	d_phno

d_id	f_id

f_id	f_name	f_release_date	f_length	f_language

**Many Directors Conducts Many Auditions**

d_id	f_name	m_name	l_name	d_age

d_id	d_email	d_id	d_phno

d_id	a_id

a_id	a_venue	a_date

a_id	audtioneer

**Many Directors Finalizes One Cast**

d_id	f_name	m_name	l_name	d_age

d_id	d_email

d_id	d_phno

d_id	c_id

c_id	c_name	c_role

**One** Cast Acts for **One** Film

c_id	c_name	c_role

c_id	f_id

f_id	f_name	f_release_date	f_length	f_language

**One** Marketing Markets **One** Film

m_id	m_budget	Start_date	Start_date

m_id	p_phno

m_id	f_id

f_id	f_name	f_release_date	f_length	f_language

**One** Finance Team is responsible for budgeting **One** Film

fi_id	assigned_budget

fi_id	fi_phno

fi_id	f_id



f_id	f_name	f_release_date	f_length	f_language

### Many Screenwriters Write for **One** Film

sw_id	sw_name	script_id	script_id

sw_id	f_id

f_id	f_name	f_release_date	f_length	f_language

### Many Creative Team Works on **One** Film

Creative Team

Set Makers

sm_id	sm_speciality

Make-up artists & fashion designers

ma_id	ma_speciality	fd_id	fd_id

Editors

ed_id	ed_id

sm_id	ma_id	ed_id	f_id

f_id	f_name	f_release_date	f_length	f_language
			s	

### Observation:

The Film Production Management System organizes the entire process of making a movie using a clear and simple database design. It includes key Entities as roles like the producer, director, marketing team, screenwriters, cast, and more, each with their own attributes and tasks. The relationships between these roles, such as hiring teams, conducting auditions, and budgeting, are well-defined. The database ensures all tasks, from planning to release, are connected and managed smoothly. This design is easy to use and helps keep the complex film production process organized and efficient.