

# Final project Spoiler Alert CS 4750

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# Actor Table

## Schema Statement:

Actor (Actor\_Name, Booking\_Number, Actor\_Hometown, Actor\_Review)

## Functional Dependencies:

A -> ABCD

B -> B

C -> C

D -> D

Fc:

A -> BCD

3NF:

ABCD

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 <b>Actor_Name</b>	varchar(255)	latin1_swedish_ci		No	None			Change  Drop  More
<input type="checkbox"/>	2 <b>Booking_Number</b>	varchar(255)	latin1_swedish_ci		No	None			Change  Drop  More
<input type="checkbox"/>	3 <b>Actor_Hometown</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	4 <b>Actor_Review</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More

☐ Check all    With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)  Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Actor_Name	15	A	No	
Edit  Drop	Booking_Number	BTREE	Yes	No	Booking_Number	15	A	No	

# Acts\_In Table

Schema Statement:

Acts\_In (Title, Actor\_Name)

Functional  
Dependencies:

AB  $\rightarrow$  AB

Fc:                      3NF:  
AB  $\rightarrow$  N/A          AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	<b>Title</b>	varchar(44)	utf8_general_ci	No	None			Change  Drop  More
<input type="checkbox"/>	2	<b>Actor_Name</b>	varchar(19)	utf8_general_ci	No	None			Change  Drop  More
<div> <input type="checkbox"/> <a href="#">Check all</a>    With selected:  Browse  Change  Drop  Primary  Unique  Index  Fulltext</div>									
<div> Print  Propose table structure  Move columns  Normalize</div>									
<div> Add <input type="text" value="1"/> column(s) <input type="text" value="after Actor_Name"/>  Go</div>									
<div>Indexes </div>									
Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Title	15	A	No	
					Actor_Name	15	A	No	

# Agent Table

## Schema Statement:

Agent (Agent\_Phone\_Number, Agent\_Name)

## Functional

## Dependencies:

$A \rightarrow AB$

Fc: 3NF:

$A \rightarrow B$  AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	<b>Agent_Phone_Number</b>	varchar(18)	utf8_general_ci	No	None			Change  Drop  More
<input type="checkbox"/>	2	<b>Agent_Name</b>	varchar(22)	utf8_general_ci	Yes	NULL			Change  Drop  More

☐ Check all With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Agent_Phone_Number	15	A	No	

# Managed\_By Table

## Schema Statement:

Managed\_By(Actor\_Name, Agent\_Phone\_Number)

## Functional Dependencies:

Fc: 3NF:  
AB -> N/A AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/> 1	Actor_Name 🔑	varchar(19)	utf8_general_ci		No	None			Change  Drop  More
<input checked="" type="checkbox"/> 2	Agent_Phone_Number 🔑	varchar(18)	utf8_general_ci		No	None			Change  Drop  More
<div>⬆ <input type="checkbox"/> Check all With selected:  Browse  Change  Drop  Primary  Unique  Index  Fulltext</div>									
<div> Print  Propose table structure  Move columns  Normalize</div>									
<div> Add <input type="text" value="1"/> column(s) <input type="text" value="after Agent_Phone_Number"/> <input type="button" value="Go"/></div>									
<div>Indexes ⓘ</div>									
Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Actor_Name	15	A	No	
					Agent_Phone_Number	15	A	No	

# Directed\_By Table

## Schema Statement:

Directed\_By (Title, Director\_Name)

## Functional Dependencies:

AB -> AB

Fc:                      3NF:  
AB -> N/A      AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 <b>Title</b>	varchar(44)	utf8_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	2 <b>Director_Name</b>	varchar(50)	utf8_general_ci		No	None			Change  Drop  More

☐ Check all    With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)  Go

**Indexes**

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	<b>PRIMARY</b>	BTREE	Yes	No	Title	15	A	No	
					Director_Name	15	A	No	

# Director Table

## Schema Statement:

Director (Director\_Name, Number\_of\_Oscar, Director\_Rating, Director\_Review)

## Functional

## Dependencies:

A -> ABCD

B -> B

C -> C

D -> D

Fc:

3NF:

A -> BCD    ABCD

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	<b>Director_Name</b>	varchar(255)	utf8_general_ci	No	None			Change  Drop  More
<input type="checkbox"/>	2	<b>Director_Review</b>	varchar(255)	latin1_swedish_ci	Yes	NULL			Change  Drop  More
<input type="checkbox"/>	3	<b>Number_of_Oscar</b>	int(11)		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	4	<b>Director_Rating</b>	int(10)		Yes	NULL			Change  Drop  More
<div> <input type="checkbox"/> Check all    With selected:  Browse  Change  Drop  Primary  Unique  Index  Fulltext</div>									
<div> Print  Propose table structure  ?  Move columns  Normalize</div>									
<div> Add <input type="text" value="1"/> column(s) <input type="text" value="after Director_Rating"/>  Go</div>									
<div><b>Indexes</b>  ?</div>									
Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Director_Name	15	A	No	

# Movie Table

## Schema Statement:

Movie(Title, Duration, Gross, Language, Movie\_Review, Genre)

## Functional

## Dependencies:

A -> ABCDE

B -> B

C -> C

D -> D

E -> E

Fc:

3NF:

A -> BCDE    ABCDE

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 <b>Title</b>	varchar(255)	utf8_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	2 <b>Duration</b>	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	3 <b>Gross</b>	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	4 <b>Language</b>	varchar(255)	utf8_general_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	5 <b>Movie_Review</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	6 <b>Genre</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More

☐ Check all    With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Title	20	A	No	



# Produced\_By Table

## Schema Statement:

Produced\_By (Production\_ID, Title)

## Functional

## Dependencies:

AB -> AB

Fc: 3NF:

AB-> AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1 <b>Title</b>	varchar(255)	utf8_general_ci		No	None			Change  Drop  More
<input type="checkbox"/>	2 <b>Duration</b>	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	3 <b>Gross</b>	varchar(20)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	4 <b>Language</b>	varchar(255)	utf8_general_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	5 <b>Movie_Review</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<input type="checkbox"/>	6 <b>Genre</b>	varchar(255)	latin1_swedish_ci		Yes	NULL			Change  Drop  More
<div> <input type="checkbox"/> Check all With selected:  Browse  Change  Drop  Primary  Unique  Index  Fulltext</div>									
<div> Print  Propose table structure   Move columns  Normalize</div>									
<div> Add <input type="text" value="1"/> column(s) <input type="text" value="after Genre"/>  Go</div>									
<div>Indexes </div>									
Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Title	20	A	No	

# Production\_Company Table

## Schema Statement:

Production\_Company (Production\_ID, Production\_Name)

## Functional

## Dependencies:

A -> AB

B -> B

Fc: 3NF:

A -> B AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	<b>Production_ID</b>	varchar(13)	utf8_general_ci	No	None			Change  Drop  More
<input type="checkbox"/>	2	<b>Production_Name</b>	varchar(27)	utf8_general_ci	Yes	NULL			Change  Drop  More

☐ Check all    With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)  Go

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Production_ID	15	A	No	

# Movie\_Sponsor Table

## Schema Statement:

Movie\_Sponsor(Title, Sponsor)

## Functional Dependencies:

AB -> AB

Fc:                      3NF:  
AB -> N/A      AB

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
<input type="checkbox"/>	1	<b>Title</b>	varchar(44)	utf8_general_ci	No	None			Change  Drop  More
<input type="checkbox"/>	2	<b>Sponsor</b>	varchar(255)	latin1_swedish_ci	No	None			Change  Drop  More

☐ Check all    With selected: Browse Change Drop Primary Unique Index Fulltext

Print Propose table structure Move columns Normalize

Add  column(s)

Indexes

Action	Keyname	Type	Unique	Packed	Column	Cardinality	Collation	Null	Comment
Edit  Drop	PRIMARY	BTREE	Yes	No	Title	15	A	No	
					Sponsor	15	A	No	

# Database Security

- Privileges only for certain users
- Username and Password required to write to DB



# Maximum Character Count for Review

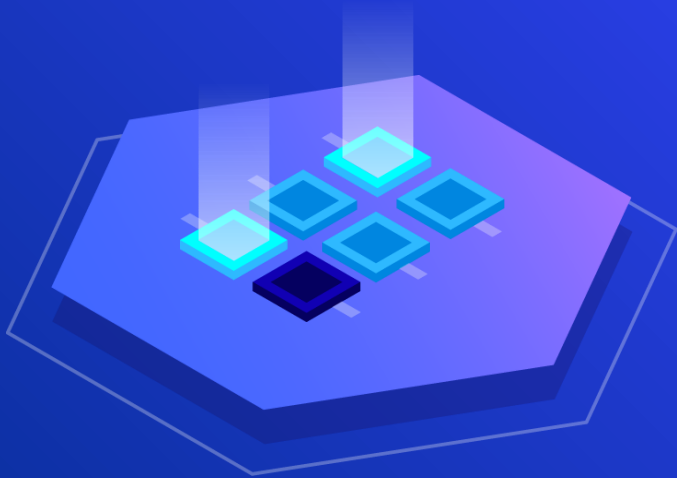
- Trigger after each review update.
- Truncate Review characters at 1000.

```
CREATE TRIGGER `Check_Validity_Movie` AFTER UPDATE ON `Movie`  
FOR EACH ROW UPDATE Movie  
SET `Movie_Review` = LEFT(Movie_Review,1000)  
WHERE LEN(Movie_Review) > 1000
```



# Stored Procedure Insert\_Movie

- A stored procedure to easily enter new movies



```
DELIMITER $$
```

```
CREATE DEFINER='hwb9za'@'%' PROCEDURE `Insert_Movie`(IN `Title` VARCHAR(255),  
IN `Duration` VARCHAR(20), IN `Gross` VARCHAR(20), IN `Language` VARCHAR(255),  
IN `Movie_Review` VARCHAR(255), IN `Genre` VARCHAR(255))
```

```
NO SQL
```

```
INSERT INTO Movie (`Title`, `Duration`, `Gross`, `Language`, `Movie_Review`, `Genre`)
```

```
VALUES (Title, Duration, Gross, Language, Movie_Review, Genre)
```

```
$$DELIMITER ;
```

# Application Demo

- Spoiler Alert Link:

<http://cs4750.cs.virginia.edu/~Ins4pr/db/homepage.html>



# Question and Answer

