

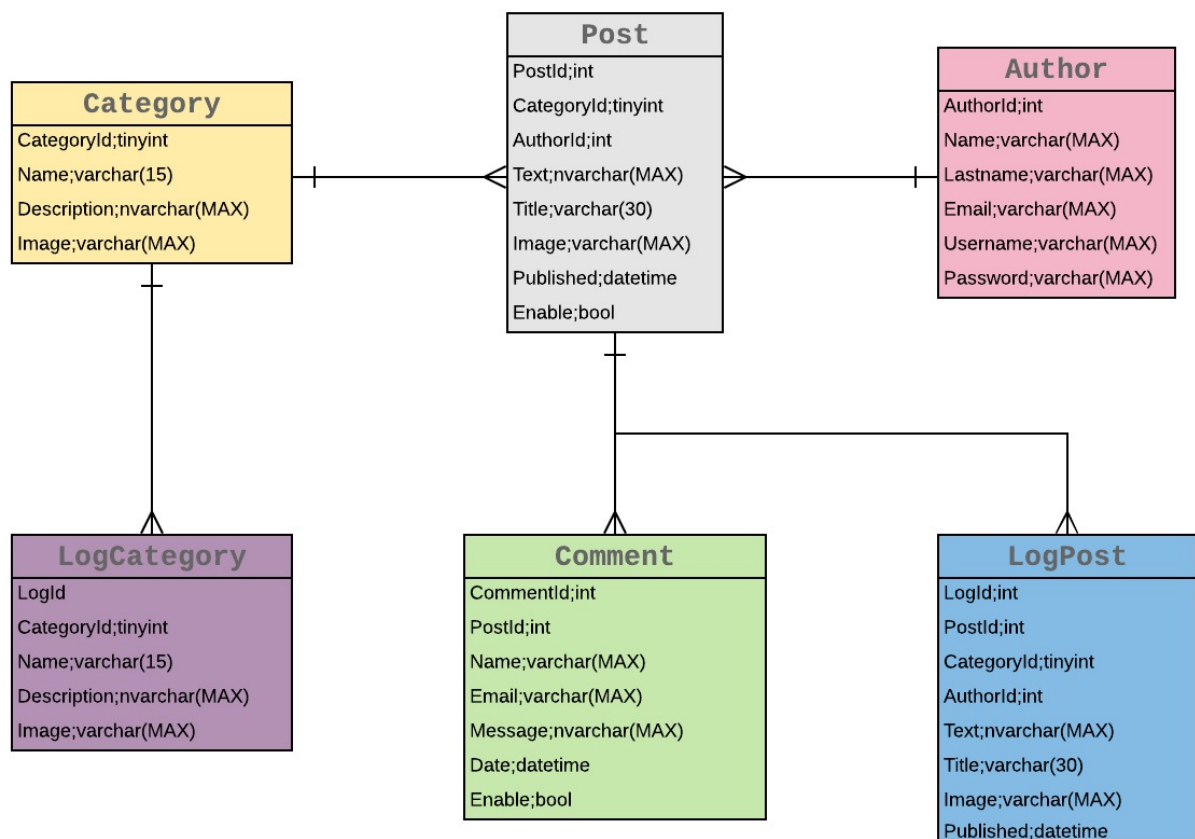
# SE2222 DATABASE SYSTEMS PROJECT PHASE 2

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# Final Design

## BLOG WEBSITE E/R MODEL



# Table Records:

Author Table

	AuthorId	AuthorName	AuthorLname	AuthorMail	Username	Psw
1	1	Taylan	Akbas	takbas@gmail.com	taylanakbas	takbas123
2	2	Russell	Dobson	russel@hotmail.com	russeld	rus321
3	3	Lira	Bosch	lirabosch@gmail.com	lira	lirabosch97
4	4	Donal	Maccone	donal@hotmail.com	donalmac	donalmac54
5	5	Ivy	Kuensch	ivykuensch@gmail.com	ivyy	ivy1327
6	6	Kerr	Cullen	kercullen@hotmail.com	kercullen	kerc1351
7	7	Mari	Robinson	marirob@gmail.com	marirob	maryyrob111
8	8	Haven	Rettig	haven45@hotmail.com	havenrettig	password
9	9	Freddie	Curley	freddiecurley@gmail.com	freddie	freddiecurley1
10	10	Rustin	Osorio	rusosorio@hotmail.com	russ	rustion198

Category Table

	CategoryId	CategoryName	CategoryDesc	CategoryImage
1	1	Music	Without music, life would be a mistake.	NULL
2	2	Sport	Sports do not build character. They reveal it.	NULL
3	3	Photograph	We are making photographs to understand what our lives mean to us.	NULL
4	4	Travel	The most beautiful in the world is, of course, the world itself.	NULL
5	5	Technology	Technology is, of course, a double edged sword. Fire can cook out food but also burn us.	NULL
6	6	Science	Science is organized knowledge. Wisdom is organized life.	NULL
7	7	Game	Life is more fun if you play games.	NULL
8	8	Motivation	Good, better, best. Never let it rest. 'Till your good is better and your better is best.	NULL
9	9	Health	The first wealth is health	NULL
10	10	Food	All you need is love. But a little chocolate now and then doesn't hurt.	NULL

## Comment Table

	CommentId	PostId	AudinceName	AudienceMail	AudinceMsg	Published
1	1	3	Summer	summer@gmail.com	Amazing photos:)	NULL
2	2	4	Katherine	katherine@gmail.com	I want to go here!	NULL
3	3	7	Dahlia	dahlia @gmail.com	Too expensive game to buy.	NULL
4	4	8	Suzanna	suzanna @gmail.com	Motivative:)	NULL
5	5	10	Terry	terry@gmail.com	Too hungry now!	NULL
6	6	9	Kaitlin	kaitlin @gmail.com	Good advice!	NULL
7	7	2	Darcey	darcey @gmail.com	Effective exercises!	NULL
8	8	6	Bertie	bertie @gmail.com	Very interesting!	NULL
9	9	1	Emie	emie @gmail.com	I love this guy!	NULL
10	10	1	Yvette	yvette @gmail.com	Perfect album!	NULL

## Post Table

	PostId	CategoryId	AuthorId	PostText	PostTitle	PostImage	Published	PostEnable
1	1	1	2	Varius vel pharetra vel turpis nunc eget lorem dolo...	Music Test	NULL	2018-10-10 ...	1
2	2	2	3	Magna eget est lorem ipsum dolor sit amet consec...	Sport Test	NULL	2018-07-09 ...	1
3	3	4	1	cras adipiscing enim eu turpis egestas pretium aen...	Travel Test	NULL	2018-11-06 ...	1
4	4	3	5	placerat dui ultricies lacus sed turpis tincidunt id ...	Photograph Test	NULL	2018-09-16 ...	1
5	5	5	7	cursus in hac habitasse platea dictumst quisque s...	Technology Test	NULL	2018-12-10 ...	0
6	6	8	6	diam sit amet nisl suscipit adipiscing bibendum est ...	Motivation Test	NULL	2018-11-11 ...	1
7	7	9	10	lacus sed turpis tincidunt id aliquet risus feugiat in ...	Health Test	NULL	2018-12-01 ...	1
8	8	10	9	adipiscing elit ut aliquam purus sit amet luctus ven...	Food Test	NULL	2018-11-09 ...	0
9	9	7	8	id aliquet risus feugiat in ante metus dictum at tem...	Game Test	NULL	2018-10-10 ...	0
10	10	6	4	euismod elementum nisi quis eleifend quam adipis...	Science Test	NULL	2018-09-11 ...	1

## LogPost Table

	LogId	PostId	CategoryId	AuthorId	PostText	PostTitle	PostImage	Published	PostEnable
1	1	1	1	2	Lorem ipsum dolor sit amet, consectetur adipiscing...	Music Log Test	NULL	NULL	0
2	2	2	2	3	cursus mattis molestie a iaculis at erat pellentesq...	Sport Log Test	NULL	NULL	0
3	3	3	4	1	tincidunt dui ut ornare lectus sit amet est placerat...	Travel Log Test	NULL	NULL	0
4	4	4	3	5	uma nunc id cursus metus aliquam eleifend mi in ...	Photo Log Test	NULL	NULL	0
5	5	5	5	7	ac auctor augue mauris augue neque gravida in ...	Technology Log Test	NULL	NULL	0
6	6	6	8	6	scelerisque viverra mauris in aliquam sem fringilla ...	Motivation Log Test	NULL	NULL	0
7	7	7	9	10	curabitur vitae nunc sed velit dignissim sodales u...	Health Log Test	NULL	NULL	0
8	8	8	10	9	ultrices mi quis hendrerit dolor magna eget est lor...	Food Log Test	NULL	NULL	0
9	9	9	7	8	integer vitae justo eget magna fermentum iaculis ...	Game Log Test	NULL	NULL	0
10	10	10	6	4	vulputate eu scelerisque felis imperdiet proin fem...	Science Log Test	NULL	NULL	0

## LogCategoryTable

	LogId	CategoryId	CategoryName	CategoryDesc	CategoryImage
1	1	1	Muisic	Without music, life would be a mistake.	NULL
2	2	2	Sportt	Sports do not build character. They reveal it.	NULL
3	3	3	Photo	We are making photographs to understand what our lives mean to us.	NULL
4	4	4	Trawel	The most beautiful in the world is, of course, the world itself.	NULL
5	5	5	Tech	Technology is, of course, a double edged sword. Fire can cook out food but also bum us.	NULL
6	6	6	Scienence	Science is organized knowledge. Wisdom is organized life.	NULL
7	7	7	Gamee	Life is more fun if you play games.	NULL
8	8	8	Motivasion	Good, better, best. Never let it rest. 'Till your good is better and your better is best.	NULL
9	9	9	Helth	The first wealth is health	NULL
10	10	10	Food	All you need is love. But a little chocolate now and then doesn't hurt.	NULL

**Note:** I set some columns to null for now, 'CategoryImage' will generate by code and 'Published' columns will updated after completed the project.

# Normalization

## 1NF

All domains are atomic

## 2NF

No partial dependencies and all tables are connected by foreign keys:

FK Post Category

Post(CategoryId) **References** Category(CategoryId)

FK Post Author

Post(AuthorId) **References** Author(AuthorId)

FK Comment Post

Comment(PostId) **References** Post(PostId)

FK LogCategory Category

LogCategory(CategoryId) **References** Category(CategoryId)

FK LogPost Post

LogPost(PostId) **References** Post(PostId)

## 3NF

All domains full dependent to primary keys. So, all tables appropriate for 3NF

**Note:** Tables normalized when I created.

# SQL Queries

One SQL Example for each table:

- **SELECT \* FROM** Author **WHERE** Author.AuthorName = 'Freddie';
- **SELECT** PostTitle **FROM** Post **WHERE** Post.PostEnable = 1 **AND** Post.AuthorId = 3
- **SELECT** AudienceName, AudienceMsg **FROM** Comment  
**WHERE** PostId = 2 **OR** Comment.PostId = 5 **ORDER BY** Comment.Published **DESC**
- **SELECT** Category.CategoryId, Category.CategoryName **FROM** Category  
**WHERE** Category.CategoryImage = *NULL*
- **SELECT DISTINCT** LogPost.PostTitle, Post.PostTitle **FROM** LogPost, Post  
**WHERE** LogPost.PostId = Post.PostId **AND** LogPost.PostText != Post.PostText
- **SELECT** LogCategory.CategoryName **FROM** LogCategory **WHERE**  
LogCategory.OldCategoryId = 4

# SQL Queries(Cont.)

**1-**

```
SELECT LogPost.PostTitle, Author.AuthorName, Category.CategoryName
FROM LogPost
INNER JOIN Author ON LogPost.AuthorId = Author.AuthorId
INNER JOIN Category ON LogPost.CategoryId = Category.CategoryId
WHERE count(LogPost.PostId) > 1
```

**2-**

```
INSERT INTO Author
(AuthorId,AuthorName,AuthorLname,AuthorEmail,Username,Psw)
VALUES
(1,'Taylan','Akbas','takbas@gmail.com','taylanakbas','takbas123')
```

**3-**

```
ALTER TABLE LogPost
ADD FOREIGN KEY (PostId) REFERENCES Post(PostId)
```



# SQL Indexes

**CREATE** clustered **INDEX** titleIndex **ON** Post(PostTitle) **ASC**

**CREATE** clustered **INDEX** authorIndex **ON** Author(AuthorName) **ASC**

**CREATE** clustered **INDEX** commentIndex **ON** Comment(AudienceName) **ASC**

# Triggers

**DELIMITER \$\$**

**CREATE TRIGGER** ChangedPost

**AFTER UPDATE ON** Post

**FOR EACH ROW**

**BEGIN**

**INSERT INTO** LogPost

**SET** PostEnable = false,

PostId = OLD.PostId,

CategoryId = OLD.CategoryId,

AuthorId = OLD.AuthorId,

PostTitle = OLD.PostTitle,

PostText = OLD.PostText,

PostImage = OLD.PostImage,

Published = OLD.Published;

**END\$\$**

**DELIMITER ;**

---

**DELIMITER \$\$**

**CREATE TRIGGER** ChangedCategory

**AFTER UPDATE ON** Category

**FOR EACH ROW**

**BEGIN**

**INSERT INTO** LogCategory

CategoryId = OLD.CategoryId,

CategoryName = OLD.CategoryName,

CategoryDesc = OLD.CategoryDesc,

CategoryImage = OLD.CategoryImage;

**END\$\$**

**DELIMITER ;**