



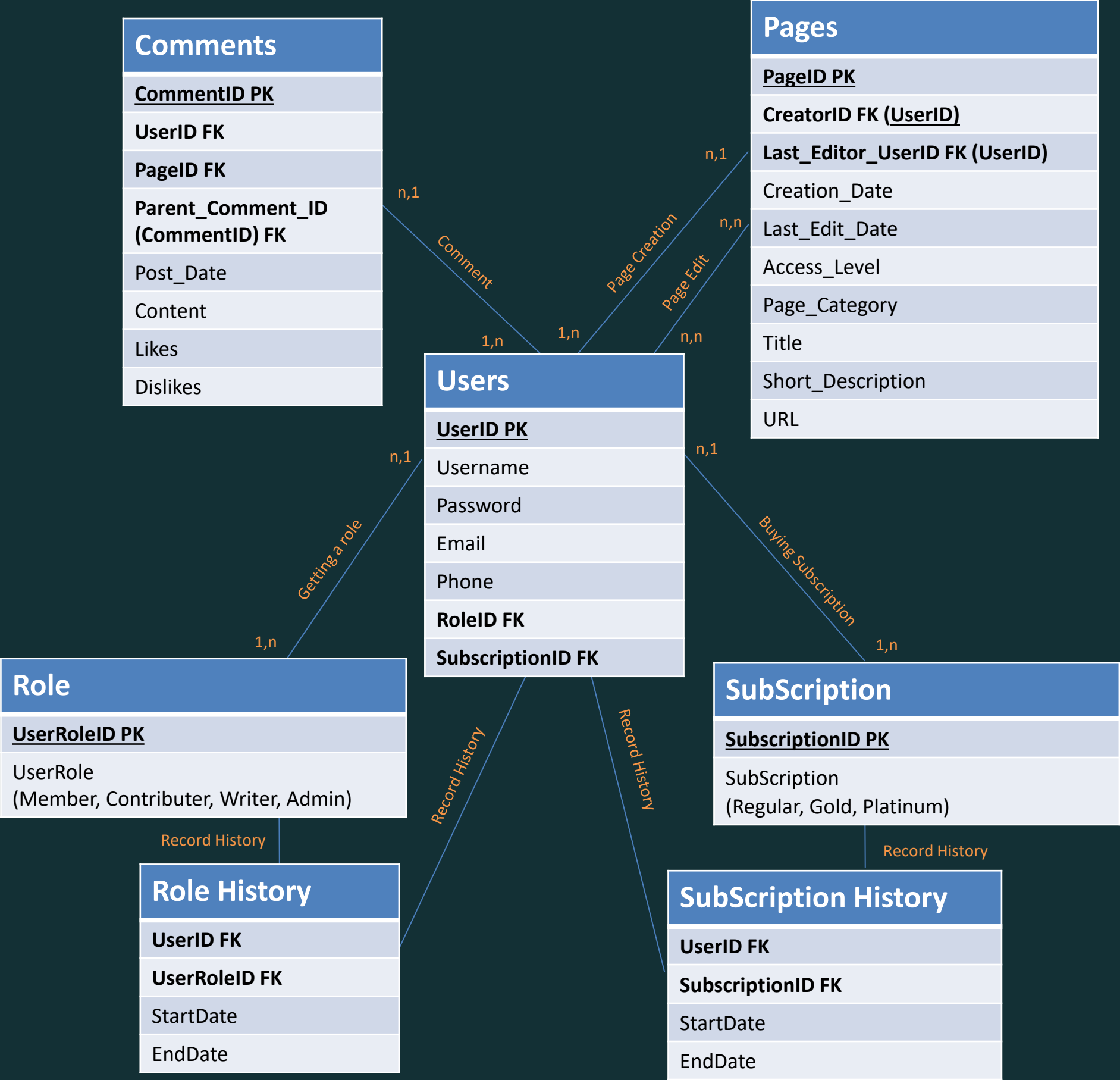
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SQL DATABASE DESIGN PROJECT

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ERD Phase 1



ERD Phase 2



IT WAS
CHALLENGING
SOMETIMES...



MAIN CHALLENGES

- THE CASE OF THE LIVING PLAN

- HOW DO YOU CREATE A DATABASE? SIMPLE, YOU PLAN IT, DESIGN IT, BUILT IT AND DATA WILL COME. RIGHT?

WELL... AT LEAST THAT'S HOW WE THOUGHT IT WILL GO, BUT WE THEN UNDERSTOOD THAT WHILE BUILDING OUR DATABASE WE ENCOUNTER UNPLANNED CHALLENGES.

- WE WENT BACK TO THE DRAWING BOARD, CHANGING OUR PLANS, TIME AND TIME AGAIN, TO SUIT THE CURRENT EFFORTS TO CREATE A WORKING DATABASE.

- THE CASE OF THE MULTIPLYING TABLES

- AT FIRST WE THOUGHT ABOUT MAKING THE MEMBERSHIP & SUBSCRIPTION AS COLUMNS OF THE USERS TABLE

- BUT IN ORDER TO BOTH MAKE REPEATING CHANGES AND KEEP HISTORY OF THOSE WE NEEDED THEM AS A SEPERATE TABLE SO WE ENDED UP WITH 4 DIFFERENT TABLES

MAIN CHALLENGES

- THE CASE OF THE HARSH CONSTRAINT

- WHEN DEFINING OUR CONSTRAINTS WE TRIED USING THE KNOWN SAMPLES OF DATA TYPES. IN SOME CASES, IT WORKED, WHILE IN OTHERS, NOT SO MUCH.
- FOR INSTANCE, FORCING AN EMAIL ADDRESS TO HAVE A .COM ENDING WILL NOT ALLOW USERS WITH OTHER EMAILS TO JOIN OUR SYSTEM.
- IN THE CASE OF THE EMAIL ADDRESS, WE CHANGED IT TO HAVE ANY ENDING %@%.%.
- IN THE CASE OF PHONE NUMBERS, WE FOUND OURSELVES WITH ENDLESS POSSIBILITIES AND A HARD WAY TO UNDERSTAND HOW TO AVOID WRONG NUMBERS.
- WE DECIDED THAT OUR SYSTEM WILL BE DEDICATED TO THE ISRAELI MARKET AND THUS ALLOWED ONLY 2 TYPES OF FORMATS.

- THE CASE OF THE “NEW PHONE, WHO DIS?”

- WE DECIDED TO IDENTIFY OUR USERS USING THEIR PHONE & EMAIL MEANING THOSE TWO COLUMNS ARE UNIQUE AND CANNOT BE USED TWICE FOR DIFFERENT USERS.

MAIN CHALLENGES

- THE CASE OF THE “WE ARE ALL SPECIAL” PAGES

- WE THOUGHT ABOUT CREATING A CATEGORY LIST THAT USERS WILL NEED TO CHOOSE FROM, BUT WE UNDERSTOOD THAT MIGHT CAUSE A PROBLEM IF A USER WILL NOT FIND A CATEGORY THAT MATCHES, ESPECIALLY IN THE EARLY STAGES OF THE SITE.
- WE DECIDED TO LEAVE CATEGORY AS FREE TEXT FOR NOW UNDERSTANDING THAT IN THE FUTURE WE MIGHT NEED TO CHANGE THE DATA TO CLOSED CHOICE.

- THE CASE OF THE “WHO’S YOUR DADDY?”

- THIS WAS A HARD ONE, WE WANTED OUR DATA TO BE AS NULL FREE AS POSSIBLE, BUT TO CONNECT A “PARENT” COMMENT TO A COMMENT WE ONLY HAD ONE COLUMN IN OUR COMMENTS TABLE, THAT MEANS IF A COMMENT WAS THE FIRST COMMENT AND NOT A SUB-COMMENT IT HAD NULL IN ITS PARENT COMMENT COLUMN. THAT COLUMN WAS REFRENCING THE COMMENT TABLE ITSELF USING THE SAME DATA (COMMENTID) FOR BOTH THE PK AND THE “PARENT” COMMENT COLUMN.
- AT FIRST WE THOUGHT WE’LL ENTER A TEXT COMMENT LIKE “NA” BUT OOPS, COMMENT ID IS AN INT TYPE DATA AND WE CANNOT USE TEXT IN THAT COLUMN.
- WE THOUGHT WE’LL JUST USE A DEAFULT 0, BUT OOPS OUR COMMENTID HAS A CONSTRAINT, IT’S THE PK SO IT STARTS AT X AND RISES BY 1, WE COULDN’T USE A LOWER #.
- AFTER CONSULTING WITH ONN WE DECIDED TO JUST LEAVE IT AS A NULL FOR PRIMARY COMMENTS AND TAKE CARE OF THE DATA ONCE IT ARRIVES FOR ANALYSIS.

analysis results

Comments

```
-----Comments
CREATE TABLE dbo.Comments
(
    CommentID INT IDENTITY(1000000,1) PRIMARY KEY,
    UserID int references dbo.Users (UserID),
    PageID int references dbo.pages (PageID),
    Parent_Comment_ID int REFERENCES dbo.Comments (CommentID),
    Post_Date Datetime NOT NULL DEFAULT(GETDATE()),
    CommentContent Nvarchar(250) CHECK(LEN(CommentContent) >= 2 ),
    Likes int,
    Dislikes int,
)

insert into dbo.Comments (UserID,PageID, CommentContent)
values ( '1', '1', 'xxxxxxxxx')
```

	CommentID	UserID	PageID	Parent_Comment_ID	Post_Date	CommentContent	Likes	Dislikes
1	1000000	1	1	NULL	2024-03-26 22:02:13.690	xxxxxxxxx	NULL	NULL

QUESTIONS

