| --------------------------- --CREATING TABLES --DDL ---------------------------  --Creating users table and indexes **CREATE** **TABLE** "users" (  "id" SERIAL,   "username" VARCHAR(25) **NOT** NULL,  "last\_login" **TIMESTAMP**,   **CONSTRAINT** "users\_pkey" PRIMARY **KEY** ("id"),  **CONSTRAINT** "users\_username\_length" **CHECK** (**LENGTH**("username") <=25) );  **CREATE** **UNIQUE** **INDEX** **ON** "users" (**LOWER**("username")); **CREATE** **INDEX** "users\_index\_username\_lastlogin" **ON** "users" ("username", "last\_login");  --Creating topic table and index **CREATE** **TABLE** "topic" (  "id" SERIAL,  "topic\_name" VARCHAR(30) **NOT** NULL,  "topic\_description" VARCHAR (500),   **CONSTRAINT** "topic\_pkey" PRIMARY **KEY** ("id"),   **CONSTRAINT** "topic\_name\_length"**CHECK** (**LENGTH**("topic\_name") <=30),  **CONSTRAINT** "topic\_description\_length"**CHECK** (**LENGTH**("topic\_description") <=500) );  **CREATE** **UNIQUE** **INDEX** **ON** "topic" (**LOWER**("topic\_name"));  --Creating posts table and indexes **CREATE** **TABLE** "posts" (  "id" SERIAL,   "title" VARCHAR(100) **NOT** NULL,   "topic\_id" INT **NOT** NULL,   "user\_id" INT,   "post\_URL" VARCHAR,  "post\_text" TEXT,   "post\_timestamp" **TIMESTAMP**,  **CONSTRAINT** "posts\_pkey" PRIMARY **KEY** ("id"),  **CONSTRAINT** "posts\_fkey\_topic" FOREIGN **KEY** ("topic\_id") **REFERENCES** "topic"("id") **ON** **DELETE** **CASCADE**,  **CONSTRAINT** "posts\_fkey\_user" FOREIGN **KEY** ("user\_id") **REFERENCES** "users"("id") **ON** **DELETE** **SET** NULL,  **CONSTRAINT** "posts\_title\_length" **CHECK** (**LENGTH**("title")<=100),  **CONSTRAINT** "posts\_text\_URL" **CHECK** (("post\_URL" **IS** **NOT** NULL **AND** "post\_text" **IS** NULL)   **OR** ("post\_URL" **IS** NULL **AND** "post\_text" **IS** **NOT** NULL)) );  **CREATE** **INDEX** "posts\_index\_title" **ON** "posts" ("title"); **CREATE** **INDEX** "posts\_index\_time" **ON** "posts" ("post\_timestamp"); **CREATE** **INDEX** "posts\_index\_content" **ON** "posts" ("post\_text", "post\_URL");  --Creating comments table and indexes **CREATE** **TABLE** "comments" (  "id" SERIAL,  "user\_id" INT,  "post\_id" INT **NOT** NULL,  "parent\_comment\_id" INT,   "comment\_text" TEXT **NOT** NULL,  "comment\_timestamp" **TIMESTAMP**,  **CONSTRAINT** "comments\_pkey" PRIMARY **KEY** ("id"),  **CONSTRAINT** "comments\_fkey\_user" FOREIGN **KEY** ("user\_id") **REFERENCES** "users"("id") **ON** **DELETE** **SET** NULL,  **CONSTRAINT** "comments\_fkey\_posts" FOREIGN **KEY** ("post\_id") **REFERENCES** "posts"("id") **ON** **DELETE** **CASCADE**,  **CONSTRAINT** "comments\_fkey\_comments" FOREIGN **KEY** ("parent\_comment\_id") **REFERENCES** "comments" ("id") **ON** **DELETE** **CASCADE** );  **CREATE** **INDEX** "comments\_index\_parent" **ON** "comments" ("parent\_comment\_id", "id"); **CREATE** **INDEX** "comments\_index\_time" **ON** "comments" ("id", "comment\_timestamp");  -- Creating votes table and index **CREATE** **TABLE** "votes" (  "id" SERIAL,   "user\_id" INT,   "post\_id" INT **NOT** NULL,  "vote" SMALLINT,   **CONSTRAINT** "votes\_pkey" PRIMARY **KEY** ("id"),  **CONSTRAINT** "votes\_fkey\_user" FOREIGN **KEY** ("user\_id") **REFERENCES** "users"("id") **ON** **DELETE** **SET** NULL,  **CONSTRAINT** "votes\_fkey\_posts" FOREIGN **KEY** ("post\_id") **REFERENCES** "posts"("id") **ON** **DELETE** **CASCADE**,  **CONSTRAINT** "votes\_limit" **CHECK** ("vote" = '-1' **OR** "vote" = '1'),  **CONSTRAINT** "votes\_unique" **UNIQUE** ("user\_id", "post\_id") );  **CREATE** **INDEX** "votes\_index" **ON** "votes" ("post\_id", "vote");   ---------------------------- --INSERTING DATA INTO TABLES - DML ---------------------------- --Inserting distinct usernames into users table **INSERT** **INTO** "users" ("username") **SELECT** "username" **FROM**  (**SELECT** **DISTINCT** REGEXP\_SPLIT\_TO\_TABLE("upvotes", ',') **AS** "username"  **FROM** bad\_posts  **UNION**  **SELECT** **DISTINCT** REGEXP\_SPLIT\_TO\_TABLE("downvotes", ',') **AS** "username"  **FROM** bad\_posts  **UNION**  **SELECT** **DISTINCT** ("username") **AS** "username"  **FROM** bad\_posts  **UNION**  **SELECT** **DISTINCT** ("username") **AS** "username"  **FROM** bad\_comments) user\_table;   --Inserting distinct topics into topic table **INSERT** **INTO** "topic" ("topic\_name")  (**SELECT** **DISTINCT** ("topic")  **FROM** bad\_posts);  --Inserting posts into post table **INSERT** **INTO** "posts" ("id", "title", "topic\_id", "user\_id", "post\_URL", "post\_text")  (**SELECT** b.id, **SUBSTRING** ("title" **FROM** 1 **FOR** 100), t.id **AS** "topic\_id" ,u.id **AS** "user\_id", b.url, b.text\_content  **FROM** bad\_posts b  **JOIN** topic t  **ON** b.topic=t.topic\_name  **JOIN** **users** u  **ON** b.username=u.username);  --Inserting data into comments table **INSERT** **INTO** "comments" ("user\_id", "post\_id", "comment\_text")  (**SELECT** u.id **AS** user\_id, p.id **AS** post\_id, b.text\_content  **FROM** bad\_comments b  **JOIN** **users** u  **ON** u.username=b.username  **JOIN** posts p  **ON** p.id=b.post\_id);      --Inserting data into votes table **INSERT** **INTO** "votes" ("vote", "user\_id", "post\_id")  **SELECT** 1 **AS** "upvotes", u.id **AS** "user\_id", p.id **AS** "post\_id"  **FROM**   (**SELECT** REGEXP\_SPLIT\_TO\_TABLE("upvotes", ',') **AS** "username"   **FROM** bad\_posts) bp  **JOIN** **users** u  **ON** bp.username = u.username  **JOIN** posts p  **ON** p.user\_id = u.id  **UNION**  **SELECT** -1 **AS** "downvotes", u.id **AS** "user\_id", p.id **AS** "post\_id"  **FROM**   (**SELECT** REGEXP\_SPLIT\_TO\_TABLE("downvotes", ',') **AS** "username"   **FROM** bad\_posts) bp  **JOIN** **users** u  **ON** bp.username = u.username  **JOIN** posts p  **ON** p.user\_id = u.id  **ON** CONFLICT **ON** **CONSTRAINT** "votes\_pkey" **DO** **NOTHING**;   **DROP** **TABLE** bad\_comments; **DROP** **TABLE** bad\_posts; |
| --- |