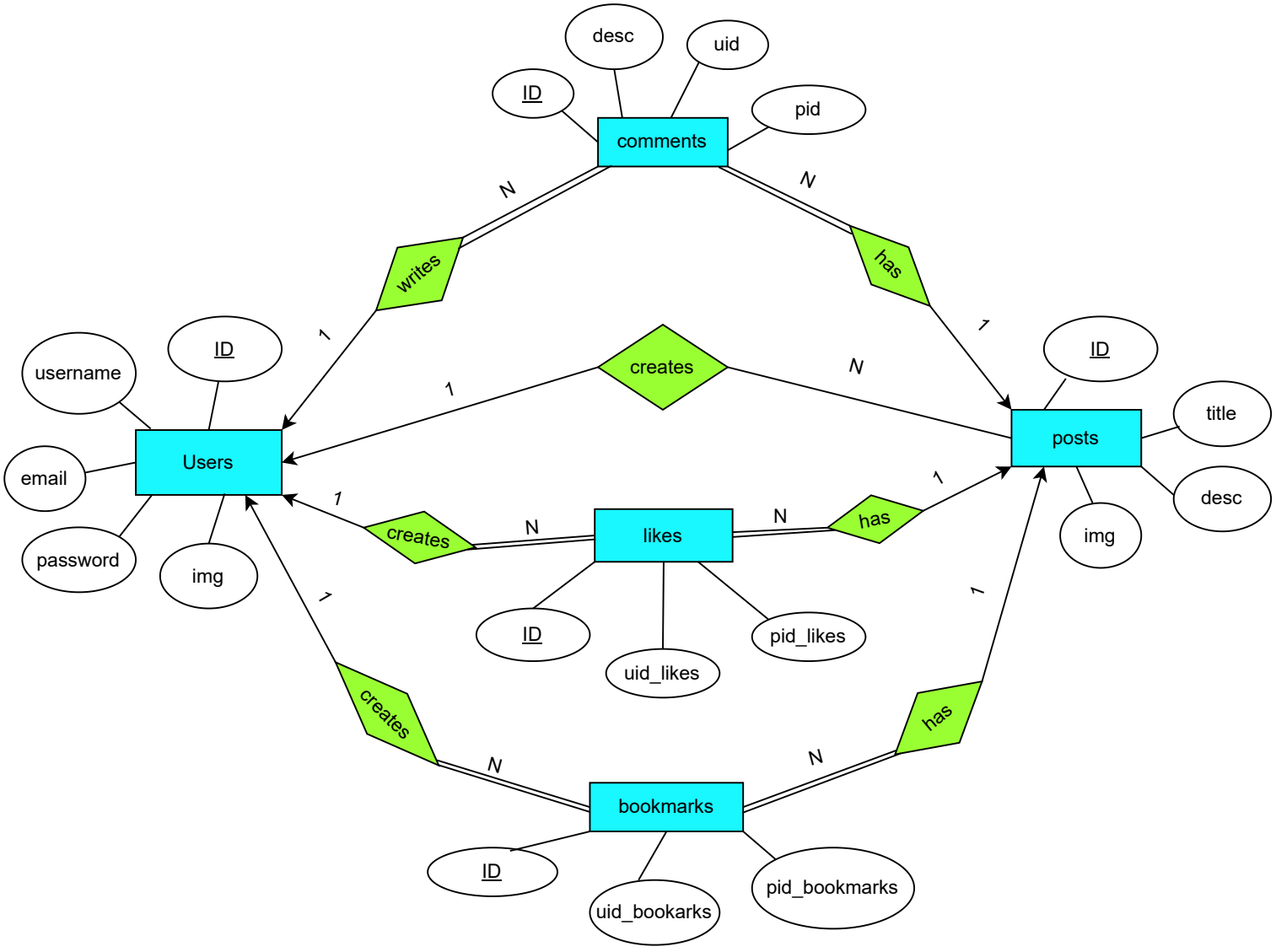
Entity Relationship Diagram

for

Insights.dev

(Blog Website)

Contributors:
Meet Dholakia -22BCP004
Sujal Nirala - 22BCP035



Relations:

1) Users (ID, username, email, password, img)

2) Posts (ID, title, desc, img)

3) Comments (ID, desc, uid, pid)

4) Likes (ID, uid_likes, pid_likes)

5) Bookmarks (ID, uid_bookmarks, pid_bookmarks)

Normal Forms

1NF: Ensures that each column in a table contains only atomic (indivisible) values, and there are no repeating groups of columns.

2NF: Building upon 1NF, 2NF eliminates partial dependencies, ensuring that all non-key attributes are fully functionally dependent on the primary key.

3NF: Further refining the structure, 3NF eliminates transitive dependencies by ensuring that all non-key attributes are dependent only on the primary key and not on other non-key attributes.

BCNF: Table should be in 3NF and X should be a superkey for every functional dependency (FD) X−>Y in a given relation.

Our Relations / Tables:

1) Users (ID, username, email, password, img)

- First Normal Form (1NF): Yes, there are no repeating groups and each column contains atomic values.
- Second Normal Form (2NF): Yes, because there are no partial dependencies. All non-key attributes are fully dependent on the primary key (ID).
- Third Normal Form (3NF): Yes, there are no transitive dependencies. All non-key attributes are directly dependent on the primary key.

2) Posts (ID, title, desc, img)

- First Normal Form (1NF): Yes, there are no repeating groups and each column contains atomic values.
- Second Normal Form (2NF): Yes, because there are no partial dependencies. All non-key attributes are fully dependent on the primary key (ID).
- Third Normal Form (3NF): Yes, there are no transitive dependencies. All non-key attributes are directly dependent on the primary key.

3) Comments (ID, desc, uid, pid)

- First Normal Form (1NF): Yes, there are no repeating groups and each column contains atomic values.
- Second Normal Form (2NF): Yes, because there are no partial dependencies. All non-key attributes are fully dependent on the primary key (ID).

- Third Normal Form (3NF): Yes, there are no transitive dependencies. All non-key attributes are directly dependent on the primary key.

4) Likes (ID, uid_likes, pid_likes)

- First Normal Form (1NF): Yes, there are no repeating groups and each column contains atomic values.
- Second Normal Form (2NF): Yes, because there are no partial dependencies. All non-key attributes are fully dependent on the primary key (ID).
- Third Normal Form (3NF): Yes, there are no transitive dependencies. All non-key attributes are directly dependent on the primary key.

5) Bookmarks (ID, uid_bookmarks, pid_bookmarks)

- First Normal Form (1NF): Yes, there are no repeating groups and each column contains atomic values.
- Second Normal Form (2NF): Yes, because there are no partial dependencies. All non-key attributes are fully dependent on the primary key (ID).
- Third Normal Form (3NF): Yes, there are no transitive dependencies. All non-key attributes are directly dependent on the primary key.