

Having read the brief several times I concluded that the primary entities that would be required for the database would be:

- User
- Board
- Column
- Card
- Workflow
- Attachment
- Checklist
- Invite
- Comments

Once these had been plotted out and the relationships between them established it became apparent that a number of relationships were many-to-many, namely:

- Board-User
- Card-User
- Card-Attachment

In order to decompose these I created, respectively:

- BoardUsers
- CardUsers
- CardAttachments

Where a Boolean is required I have included a 1-bit data type to mimic a Boolean e.g. IsBoardOwner

The Blob type is used for the ProfilePicture attribute as this is an appropriate data type for various file types including images and as profile pictures tend to be smaller file sizes it should not overburden the database to store these.

For the FileToBeAttached attribute I decided the JSON (path) type would be best as this facilitates the uploading of a file to a server and only requires the path to that file to be stored. As the same attachment can be linked to several cards this would improve the efficiency of the database.

For any instances where colour is an aspect of the attribute ; CardColour, LabelColour; I have limited the varchar to 6 as this will facilitate the use of hex values for colours.

I also setup a database in MySQL Workbench with each of the entities represented by a table and there were no errors returned.