

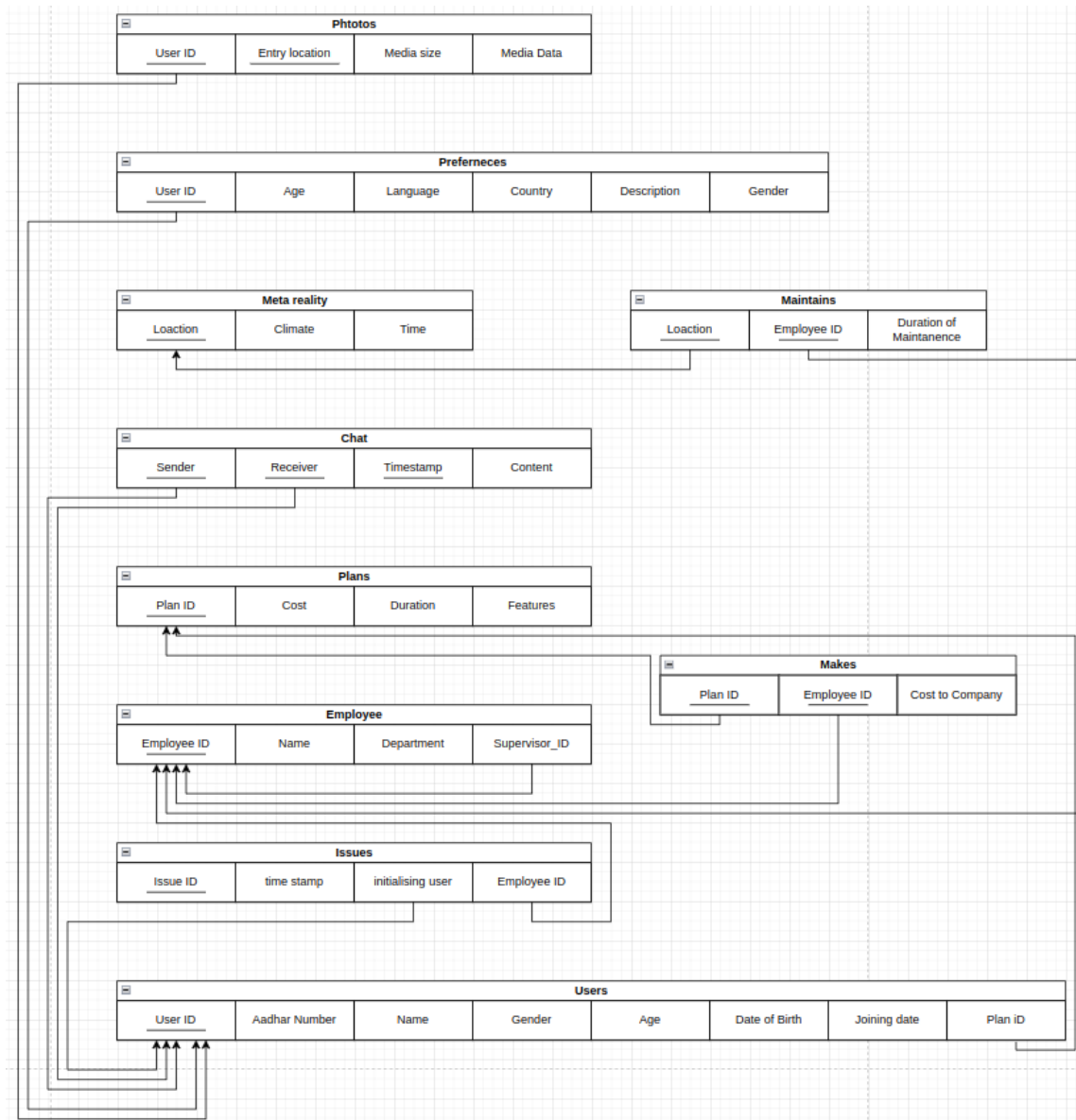
Project Requirements Document (Phase - 3)

Team Number: 1

Team Members:

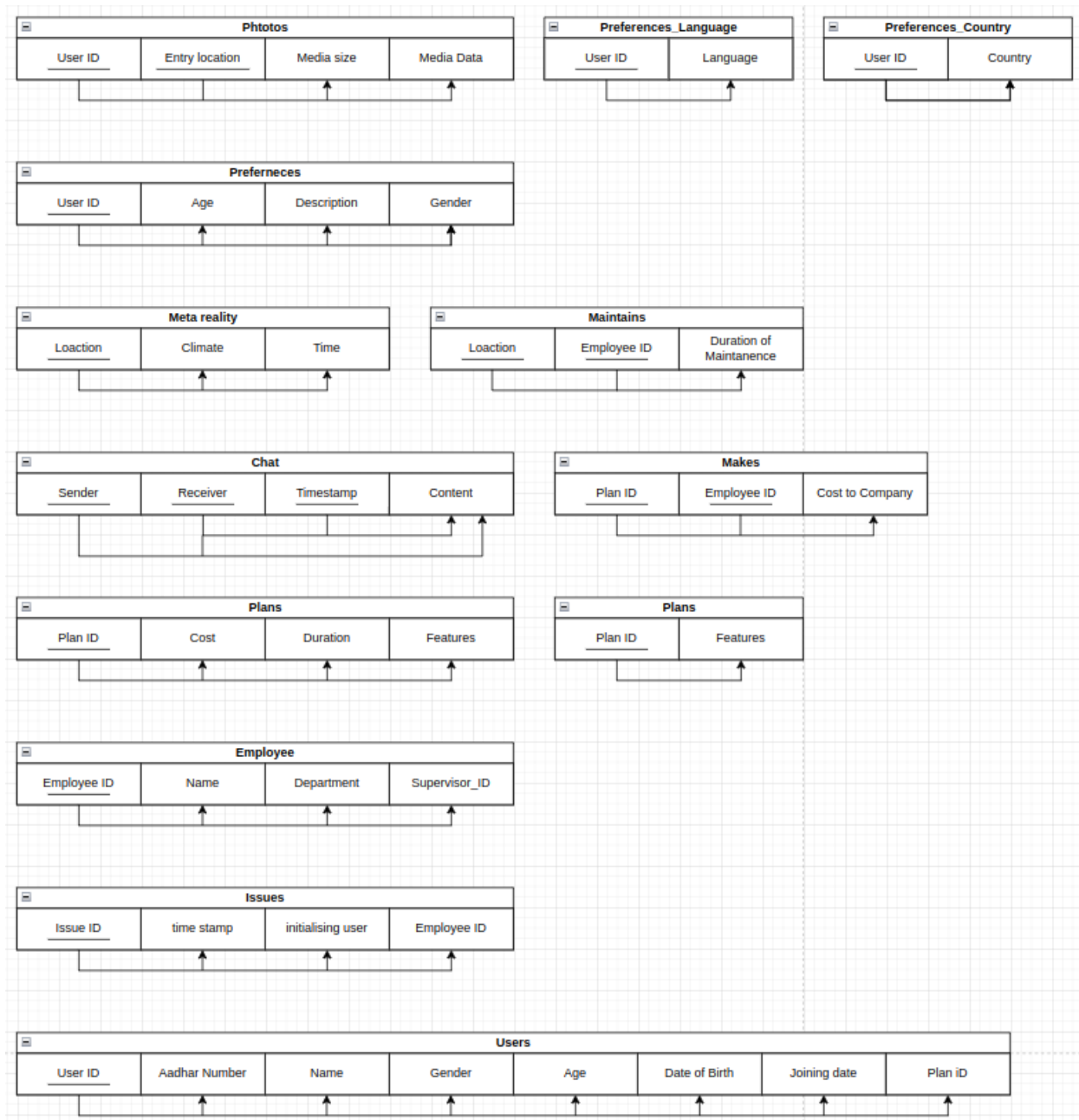
- Bhav Beri (2021111013)
- Harshit Aggarwal (2021111015)
- Sreyas S (2021111016)

Relational Model -



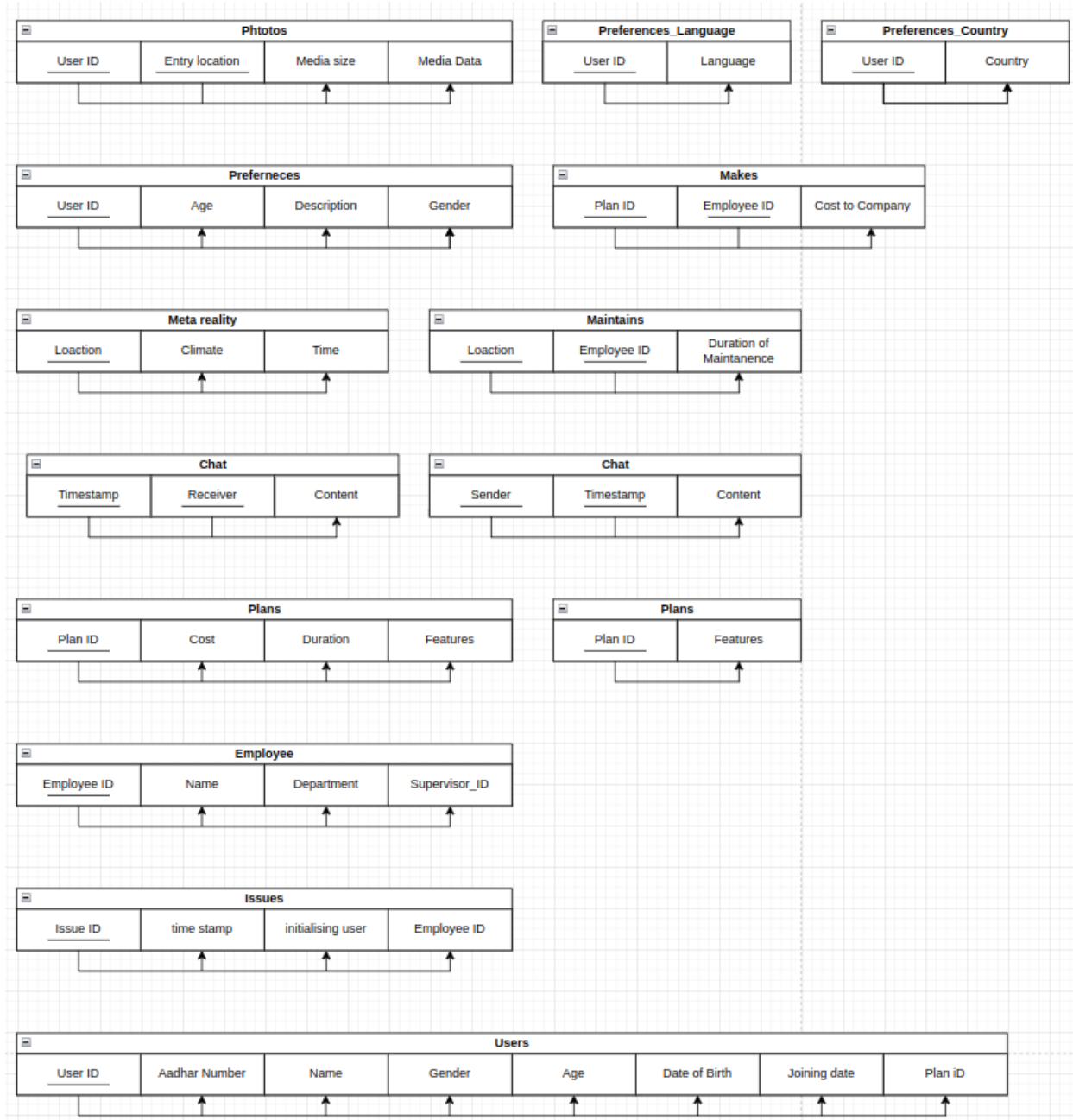
- All the entities are made into tables with the same attributes
- All the Primary keys are marked, and the foreign keys joined
- For the weak entities, the column for identifying relations has been added to make the values of the table identifiable.
- New tables have been made for relationships with attributes and M:N cardinality
- Foreign keys have been added to the required tables based on the relations
- Added new relationship attributes - Cost to company and Duration of maintenance

First Normal Form (1NF) -



- The table preferences had two multivalued attributes,
 - Language
 - Country
- In the first normal form, the tables should have NO multivalued attributes in them.
- To eliminate the existence of multivalued attributes, a new table with just the language (or country) and the original table's Primary key as its foreign key is made.
- This way, we eliminate the multivalued attributes while also reducing redundancy.
- Location, which was originally a multivalued primary key for meta-reality has been changed to a single value primary key

Second Normal Form (2NF) -



- The second normal form requires the functional dependencies of a multi-attribute primary key to all be in separate tables.
- In the chats table, the contents of a message can be retrieved using sender, timestamp, or receiver, timestamp.
- As the sender, receiver, and timestamp together make the primary key; we can split the table into two different tables to ensure that the functional dependencies are only between the primary key and the content attribute.

Third Normal Form (3NF) -

- No tables are violating the third normal form. So no changes need to be done.