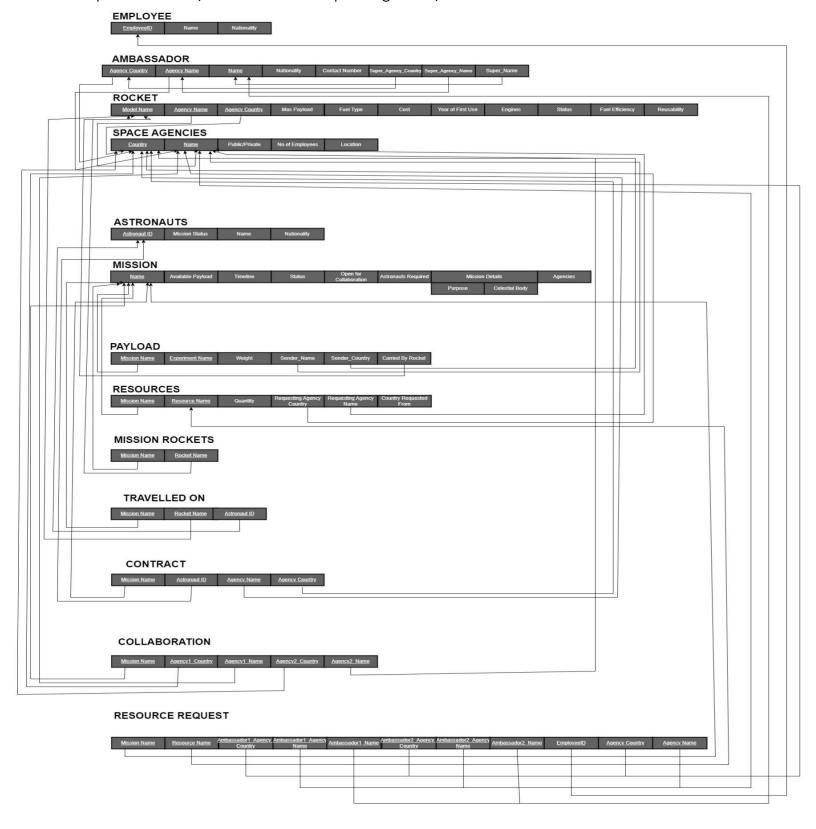
Team 24 - Project Phase 3

Relational Model:

Derived Attributes: Derived attributes are implemented as queries, can potentially be put in a view. (The attributes in Space Agencies)



Collapsed developed by relation for rocket into agency attribute.

Quantity no longer part of partial key for resource.

The Represents relationship is implemented as part of the primary key for Ambassador.

1NF conversion:

- Multi valued attribute locations of Space Agency made into a new relation.
- Multi valued attribute agencies of Mission made into a new relation.
- Composite attribute Mission Details broken down into two attributes Purpose, Celestial Body

2NF Conversion:

No changes necessary

- Employee, Astronauts, Mission have a single attribute as a primary key, so no changes are necessary.
- Space agency locations, Mission agencies, Mission rockets, Travelled on, Contract, Collaboration, Resource Request are tables for relationships, so all attributes are part of the primary key and thus no change necessary.
- For other relations, no changes are necessary since there is no partial functional dependency(Relations with a set of attributes as a primary key can have two tuples with all but one primary key attribute same, so no partial functional dependency can exist)

3NF Conversion:

No changes necessary

- Space agency locations, Mission agencies, Mission rockets, Travelled on, Contract, Collaboration, Resource Request are tables for relationships, so all attributes are part of the primary key and thus no change necessary.
- For Employee, Ambassador, Rocket, Space Agencies, Mission, Payload, Resources no transitive dependency exists since there is no functional dependence emerging from a non prime attribute.

1NF, 2NF and 3NF:

View as svg

