

Change Logs

Entities

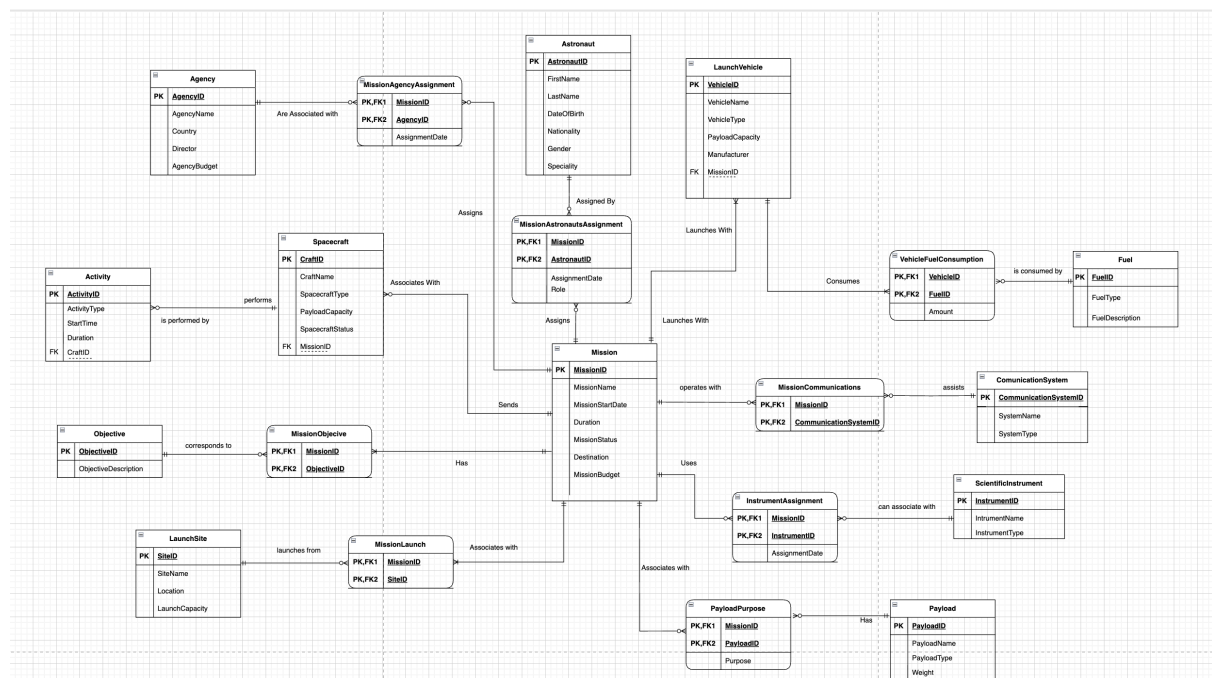
- Added "MissionAgencyAssignment" associative entity between "Mission" and "Agency" entities.
- Introduced "Activity" entity to track and record activities performed by spacecraft.
- Created "Objective" entity to list all mission objectives.
- Updated "MissionObjective" to be an associative entity between "Mission" and "Objective" entities.
- Implemented "MissionLaunch" associative entity between "Mission" and "LaunchSite" entities.
- Added "PayloadPurpose" associative entity between "Mission" and "Payload."
- Introduced "InstrumentAssignment" associative entity between "Mission" and "ScientificInstrument."
- Implemented "MissionCommunications" associative entity between "Mission" and "CommunicationSystems."
- Renamed "FuelConsumption" entity to "Fuel" for better clarity.
- Added "VehicleFuelConsumption" associative entity between "LaunchVehicle" and "Fuel."
- Included "MissionAstronautAssignment" associative entity between "Mission" and "Astronauts."

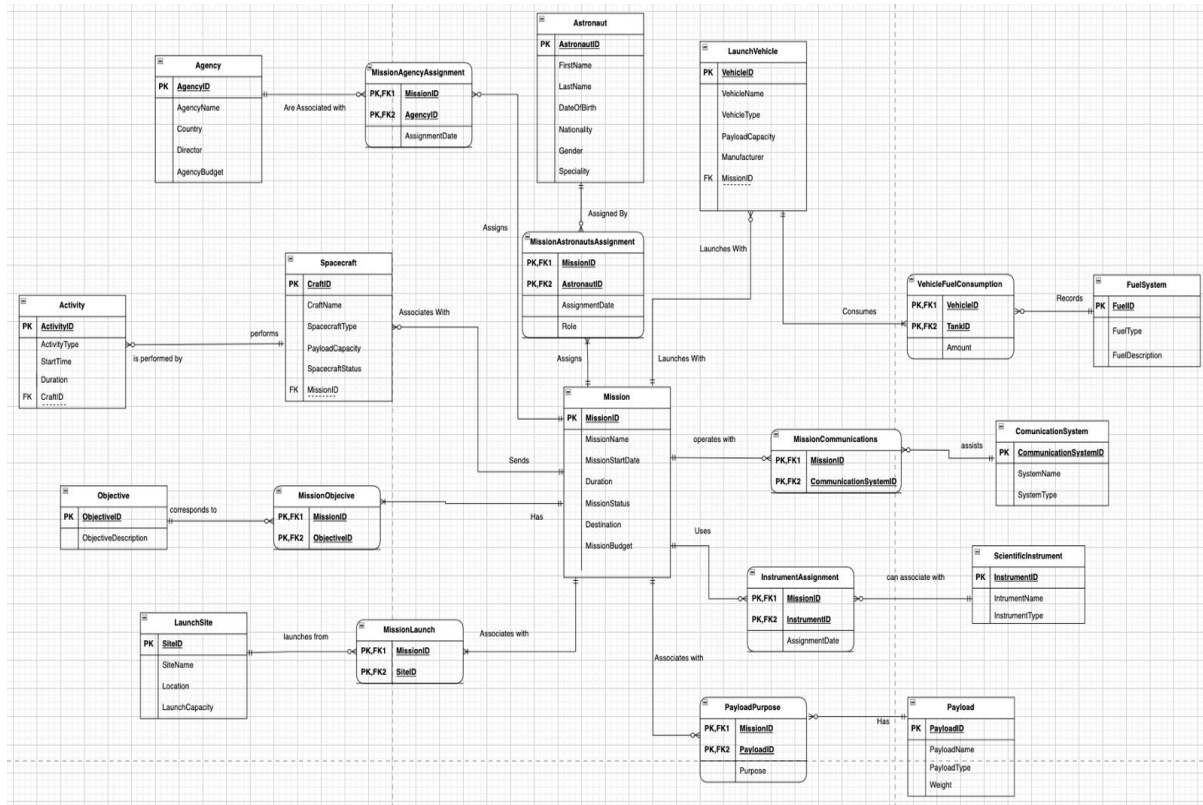
Relationships

- Updated the relationship between "Mission" and "Agency" from "1 to many" to "many to many." Additionally, added an associative entity "MissionAgencyAssignment" between them.
- Modified the relationship between "Mission" and "Objective" from "many to 1" to "many to many." Also, introduced an associative entity "MissionObjective" between them.
- Adjusted the relationship between "Mission" and "Payload" from "many to 1" to "many to many." Inserted an associative entity "PayloadPurpose" between them.
- Updated the relationship between "Mission" and "ScientificInstrument" from "many to 1" to "many to many." Included an associative entity "InstrumentAssignment" between them.
- Modified the relationship between "Mission" and "CommunicationSystems" from "many to 1" to "many to many." Added an associative entity "MissionCommunications" between them.

Assumptions Made

- A mission can deploy zero or many spacecrafts.
- An activity would be tracked by a given spacecraft, and a spacecraft can perform multiple activities.
- A mission has one or many objectives, and multiple missions can share the same objective.
- A mission can be launched from multiple sites, and a site can launch multiple missions.
- A mission can use one or many launch vehicles (rockets).
- A mission can have zero or many astronauts, and an astronaut can be assigned to zero or many missions.
- Each launch vehicle can consume one or multiple fuels, and a fuel can be consumed by zero or many launch vehicles.





[GitHub Link](#)