1. Document the entities that should be added to the diagram.
   - The Entities that should be added to the diagram are: Horse, Owner, Person, Barn, Jockey, Trainer, Schedule, Race, Entry

2. Document possible attributes for the Horse entity based on the requirements scenario.
- Horse Attributes, registration_number, name, type, gender, trainer_id, mother_id, father_id, barn_id

3. Document possible attributes for the Barn entity based on the requirements.
Barn Attributes: barn id, name.

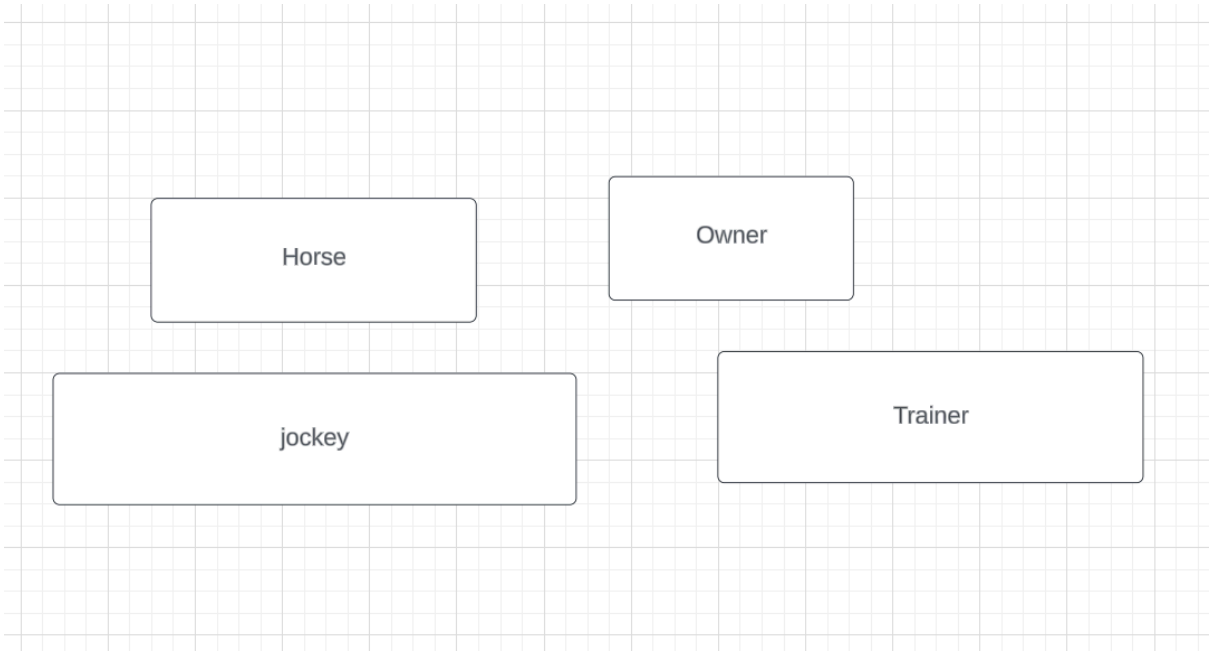
4. Document possible attributes for the Person entity based on the requirements.
Person Attributes: id, name, role, address, phone_no.

5. Document possible attributes for the scheduled entity based on the requirements Schedule Attributes: schedule ID, race date, name, race track ID.

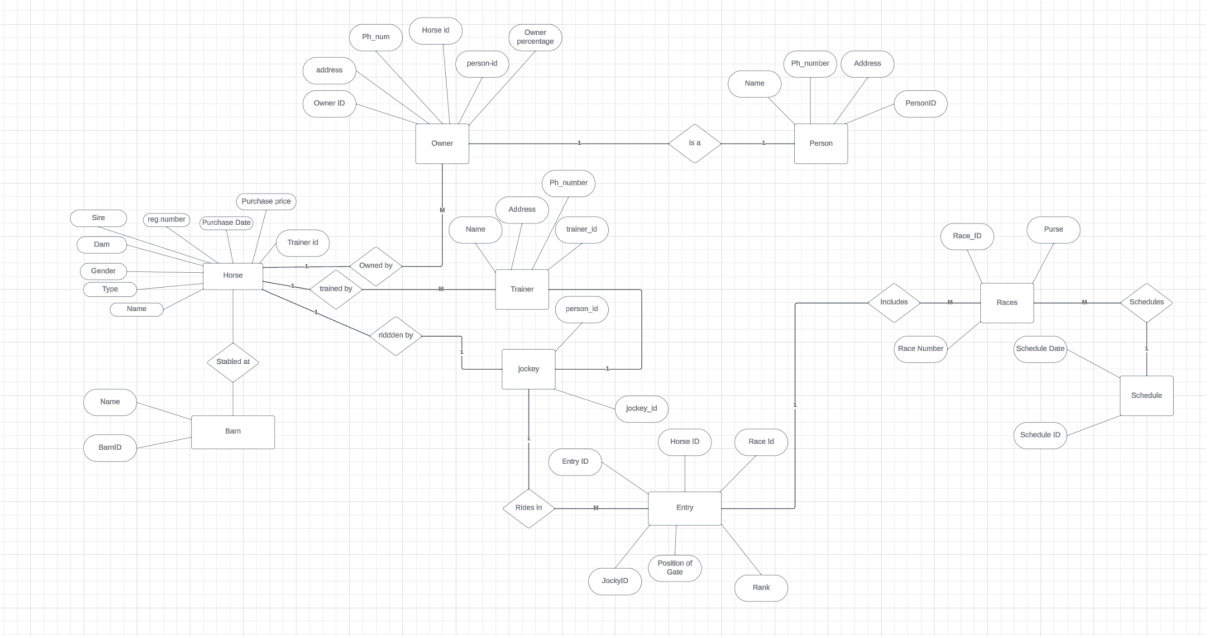
6. Document possible attributes for the Race entity based on the requirements.
Race Attributes: race id, name, race no, purse, Schedule ID.

7. Document possible attributes for the Entry entity based on the requirements.
Entry Attributes: Race ID, Horse ID, Entry ID, Jockey ID, Gate position, Finishing Position

8. Make a screen capture showing the ER diagram with four entities.



9. Make a screen capture showing the ER diagram with nine entities and their attributes for the Darling Downs Race Track scenario.



Document your notes about potential relationships, cardinality constraints, participation constraints, and weak entities.

1. Horse-Trainer Relationship: (One-to-Many) Trainer can train multiple horses.
2. Horse-Owner Relationship: (Many-to-Many) A horse can have multiple Owners and an Owner can own multiple horses.
3. Horse-Barn Relationship:(One-to-Many) A Barn can accommodate multiple horses.
4. Entry-Horse Relationship: (One-to-Many) Horse can have multiple Entries.
5. Entry-Jockey Relationship: (One-to-Many) A Jockey can participate in multiple Entries.
6. Race-Entry Relationship: (One-to-Many) A Race can have multiple Entries.

Participants constrain.

1. Horse-Trainer Relationship: Every horse must have a Trainer assigned.
2. Horse-Barn Relationship: Every horse must be stabled at a barn.
3. Horse-Owner Relationship: Every horse must have at least one owner.
4. Person-Trainer Relationship: Every person involved in horse racing is not necessarily a trainer.

Weak entities are trainers here, and Entries depend on other entities to exist. For instance, Entries depend on Horse, jockey, and race and trainer depends on Horse and Person

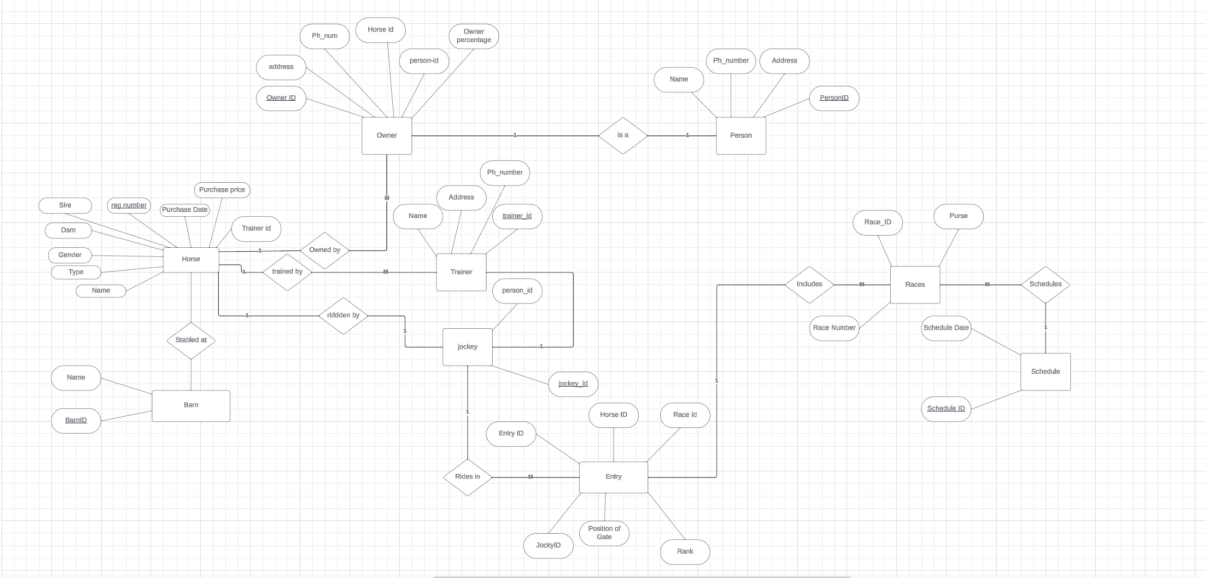
Part 3

1. Document the names of each primary key attribute you selected or created for (a) Horse, (b) Barn, (c) Person, (d) Schedule, (e) Owner, (f) Trainer, and (g) Jockey.

Horse: registration_number
Barn: barn_id
Person: person_Id
Schedule: schedule_id
Owner: owner_id
Trainer: trainer_id

Jockey: jockey_id

2. Make a screen capture showing the ER diagram with primary keys for all of the strong entities.



3. Document the names of the binary relationships that are missing one or both cardinality values.
1. Stable in
2. Runs in
3. Rides in

4. Document your assumptions about the missing cardinality values as a statement that is understandable by an end user.
1. A barn can have many horses stabled
2. A horse may run in many entries
3. A jockey may run in many entries
4. A track can host multiple races.
5. A dam or sire can be a parent to one or many offspring