

Group Assignment -1

Introduction

The mini world describes the various dog competitions.

Purpose

The purpose of this database is to store data about the various championships and the events that are a part of the Crufts Dog show.

Users

- Organizers, who keep track of the participants and organize various events
- The participants who register themselves
- The spectators who interested in watching, results

Applications

- Dogs : Stores the data about dogs registered for the event
- Owner : Stores data about a dog's owner
- Championship : Stores data about championship organized by the Crufts
- Events : Stores data about the events organized as a part of each championship
- Results : Stores the performance of dog in an event

Database Requirements

Entities

1. Owner

- Name : Name of the owner
 - Char(50)
 - Not NULL
- Email : Email address of the owner
 - Char(100)
 - Not NULL
 - Unique
- Contact : Contact number of the owner
 - Integer with 8-11 digits
 - Not NULL
- Nationality : Nationality of the owner
 - Char(3)
 - Has to be from fixed choices of country codes
 - Not NULL

2. Championship

- Name : Name of the championship
 - Char(50)
 - Not NULL

- Unique
- Entry Opening Date : Date after which the participants can register
 - DateTime
 - Not NULL
- Entry Closing Date : Date after which participants can no longer register themselves
 - DateTime
 - Not NULL
- Competition start date : Start Date of Competition
 - DateTime
 - Not NULL
- Competition End Date : End date of competition
 - DateTime
 - Not NULL

3. Judge

- Judge_id : Unique Id of the judge
 - Integer
 - Unique
 - Not NULL
- Name : Name of the Judge
 - Char(50)
 - Not NULL
- Breed : The breed judged by the judge
 - Char(50)
 - Not NULL

4. Dogs

- Name : Name of the dog
 - Char(50)
 - Not NULL
- Breed : Breed of the dog
 - Char(50)
 - Not NULL
- Weight : Weight of the dog
 - 50 > Integer > 5
 - Not NULL
- Age : Age of the dog
 - 15 > Integer > 2
 - Not NULL

5. Events

- Type : Type of Event
 - Char(50)
 - Not NULL
- Allowed Dog Size : The dog size permitted determined by the rules
 - Char(10)
 - Choices = (SMALL, MEDIUM, LARGE, ANY)
 - Not NULL
- Prizes : Prize Money allocated to the event

- Integer
- Not NULL

6. Accommodation

- Accommodation_id : Unique Id of the kennel
 - Integer > 0
 - Not NULL
- Size : Size of the kennel
 - Char(10)
 - Choices = (SMALL,MEDIUM,LARGE)
 - Not NULL
- Rent : Rent price of the kennel
 - Integer
 - Not NULL
- Availability : Boolean determining the availability of kennel
 - Boolean
 - Not NULL

Weak Entities

Dogs and Events are weak entities

Relationships

1. Owns

- The relationship between Owner and Dogs
- Degree = (1: Owner, M: Dogs)
- Cardinality constraint = 0

2. Results

- Attributes :
 - Score
 - Integer
- Relationship between Dogs and Events storing the score of a dog in an event
- Degree = (1: Dogs, 1: Events)
- Cardinality constraint = 1

3. Accommodates

- Attributes :
 - Lease Date
 - DateTime
 - Not NULL
 - Lease End Date
 - DateTime
 - Not NULL
- Relationship between Dogs, Owner and Accommodation
- Each accommodation houses dogs from various owner. This relationship stores dates at which the accommodation's leased by the owner for a particular dog
- Degree = (1: Dogs, 1: Owner, 1: Accommodation)

- Cardinality Constraint = 1

Functional Requirements

Insert : dogs

Delete : event

Update : Championship

Selection : retrieve all events in a championship

Projection query : All dogs of a particular breed

Aggr funct : Number of events won by a dog

Search : search for an event

Analysis : Total events won by a dog of particular breed