
Assignment1

Air Guitar World Championship

By Team Griffindors

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Introduction

- The Mini World is about the Air Guitar World Championships, which is organized virtually, **Champion of Champions Championships**.

Purpose

- To help the Air Guitar Governing body conduct their virtual tournament.
- To maintain a news-letter for Air Guitar.

Users

- Judges.
- Applicants.
- Organisers.
- Media.
- Host. (One who calls participants on stage)
- Audience.

Applications.

- Those who wish to participate can apply to participate in championships.
- People can sign up for news-letter.
- Judges update the score of participants.
- Organisers will be able to declare winner from scores given by judges.
- Organisers can review applications from participants.
- Organisers can review applications from companies willing to sponsor their events.

Database Requirements

Entities Types

1. Judge

- Name (composite attribute= first name + last name)
 - 20 char long for each first name and last name.
- Date of Birth
 - dd/mm/yyyy. Such that today's (year - yyyy) >= 30.
- E-mail
 - Valid email.

2. Applicants

- Name (composite attribute)
 - 20 char long for each First name, Last name, Stage name.
- Email
 - Valid email
- Nationality
- Song (Sent at the time of application)
 - <https://airguitarworldchampionships.com/en/entry/competition-clip/> Constraints to file type of song
- Category.
 - Can take only the following values : previous world champion or Dark horse Qualifying round or National champion.

3. Event

- Year
- Type (National Championship or World Championships)
 - Values it can take is either "National or World Champions

- Date
 - dd/mm/yyyy Any date before today but after the year 1996.
- Gold
 - Composite attribute of Gold medalist name and image.
 - Name is a composite attribute of First name, Last name, Stage name. (name has similar constructs as stated earlier).
- Silver
 - Composite attribute of silver medallist name and image.
 - Name is a composite attribute of First name, Last name, Stage name. (name has similar constructs as stated earlier).
- Bronze
 - Composite attribute of Bronze medalist name and image.
 - Name is a composite attribute of First name, Last name, and Stage name. (name has similar constructs as stated earlier).

4. News-letter Subscription

- Email
 - Valid email
- Date of subscription
 - dd/mm/yyyy Any date before today but after the start of news-letter.

5. Place

- Country.
- City.
- Foreign postal code.

** The Address given must be valid. All possible places where the tournament can be conducted are stored.

6. Organizer

- Name (composite attribute of first and last name.)
- Email
- Nationality.

Weak Entity

- Eligibility (has one attribute eligible can take two values either Yes or No).
- Host. (It has one attribute namely host)

Relationships

1. Host Hosted by Event

- ★ Degree 2.
- ★ Cardinality Constraints: A host can host many events, but an event can have only one host.
- ★ Cardinality Ratio: 1:N
- ★ Participation Constraints: Host entity has partial participation. Event entity type has complete participation.

2. Applicant Is Eligible

- ★ Degree 2.
- ★ Cardinality Constraints: An applicant can only be related to one Eligible entity. One Eligible entity can be related to many Applicants entities.
- ★ Cardinality Ratio: M:1.
- ★ Participation Constraints: Applicant entity type has complete participation. Eligible entity type has partial participation.

3. Event conducted at place

- ★ Constraints: This event can be conducted only at one place. And a place can conduct many events.
- ★ Cardinality Ratio: N:1
- ★ Participation Constraints: Event entity type has total participation. Place entity type has partial participation.

4. Applicant Score given by Judge

- ★ Degree 2.
- ★ Cardinality Constraints: An Applicant must be related to All the Judges.

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- judge should be related to all the applicants.
- ★ Cardinality Ratio M:N
- ★ Participation Constraints: Both applicant entity type and judge entity type has total participation.
- ★ It has two attributes: round 1 and round 2.

n>2 Relationships:

Organizers Organize Event Which is judged by Judges

- ★ Degree 3.
- ★ Participation constraint: All the three entity types have Total participation.

Functional Requirements

Functionality

1. Selecting Participants
 - participants to send applications. fee
 - verification of applications with qualifying round, Previous World Champion, National-level winner.
 - Participants send songs which are then verified.
 - Selecting order of participants for participation in the world finals.
2. Based on performance judges give scores and guests announce the winner based on score.

Modifications

1. Insert:
 - A new subscription to newsletter
 - A new blog / news entry
 - Insert details of new Judges / Applicant / Organizer/ Host
2. Delete:
 - Delete an entity from Newsletter, when they unsubscribe
 - Delete unwanted news articles

- Organizers can Delete ineligible applicants. (who did not qualify the dark house qualifying round and is not a national champion and not previous world champion.)
- Delete all applicants after the tournament.

3. Update:

- Applicant can update his details (like stage name etc)
- Organizers can update eligibility of an applicant.

Retrievals

1.Selection

- ❖ **Selecting the Winner.**
- ❖ **Retrieve all the judges/organizes for an event.**
- ❖ **Retrieve all the previous world Champions.**

2.Projection

- ❖ **Retrieval of Emails of all the applicants above a particular score.**
- ❖ **List all countries with at least one world champion**

3.Aggregate:

- ❖ **Sum of scores by all Judges in a round**

4.Search

- ❖ **'Hall' will match with 'Hall of Fame'**
- ❖ **Retrieve all matches of Name (first name) given a part of it.**

Analysis:

- **How many new news-letter subscriptions are added from a particular date.**
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