

Questionnaire Website

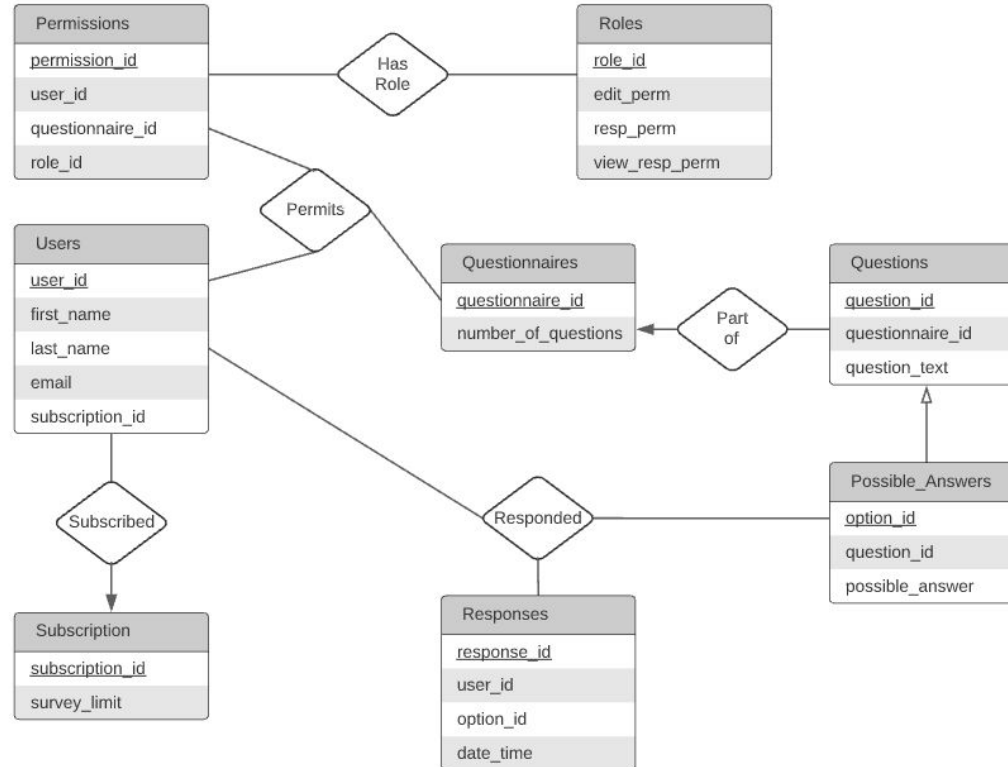
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Survey Creation and Administration Website

- Surveys are important for data collection and databases allow us to easily collect and analyze this data
- User
 - Questionnaires
 - Questions
 - Possible Responses
- Users create a user profile
- Each user has a subscription plan
- Users can create and respond to surveys
- Surveys can contain any number of multiple choice questions

ER Diagram



Users

```
CREATE TABLE Users (  
    user_id INT,  
    first_name VARCHAR(40),  
    last_name VARCHAR(40),  
    email VARCHAR(100),  
    subscription_id INT,  
    PRIMARY KEY(user_id),  
    FOREIGN KEY(subscription_id REFERENCES Subscription(subscription_id))  
)
```

Permissions

```
CREATE TABLE Permissions (  
    permission_id INT,  
    user_id INT,  
    questionnaire_id INT,  
    role_id INT,  
    PRIMARY KEY (permission_id),  
    FOREIGN KEY(user_id REFERENCES Users(user_id)),  
    FOREIGN KEY(questionnaire_id REFERENCES  
        Questionnaires(questionnaire_id)),  
    FOREIGN KEY(role_id REFERENCES Roles(role_id))  
)
```

Roles

```
CREATE TABLE Roles (  
    role_id INT,  
    edit_perm BIT,  
    resp_perm BIT,  
    view_resp_perm BIT,  
    PRIMARY KEY(role_id)  
)
```

Subscription

```
CREATE TABLE Subscription (  
    subscription_id INT,  
    survey_limit INT,  
    PRIMARY KEY(subscription_id)  
)
```

Questionnaires

```
CREATE TABLE Questionnaires (  
    questionnaire_id INT,  
    number_of_questions INT,  
    PRIMARY KEY(questionnaire_id)  
)
```


Questions

```
CREATE TABLE Questions (  
    question_id BIGINT,  
    questionnaire_id INT,  
    question_text VARCHAR(400),  
    PRIMARY KEY(question_id),  
    FOREIGN KEY(questionnaire_id REFERENCES  
        Questionnaires(questionnaire_id))  
)
```

Possible_Answers

```
CREATE TABLE Possible_Answers (  
    option_id BIGINT,  
    question_id BIGINT,  
    possible_answer VARCHAR(400),  
    PRIMARY KEY(option_id),  
    FOREIGN KEY(question_id REFERENCES Questions(question_id))  
)
```

Responses

```
CREATE TABLE Responses (  
    response_id INT,  
    user_id INT,  
    option_id BIGINT,  
    date_time DATETIME,  
    PRIMARY KEY(response_id),  
    FOREIGN KEY(user_id REFERENCES Users(user_id)),  
    FOREIGN KEY(option_id REFERENCES Possible_Answers(option_id))  
)
```

Tech Stack

- MySQL
- Node.js
- Vanilla JavaScript and HTML
- Bootstrap for UI elements

Sample Query

```
/* Retrieve user answers for a specific questionnaire */  
SELECT r.response_id, r.option_id, r.date_time  
FROM (Questionnaires as q  
      INNER JOIN Questions as q2  
            INNER JOIN Possible_Answers as p  
                  INNER JOIN Responses as r  
                        on r.option_id = p.option_id  
                        on p.question_id = q2.question_id  
                        on q.questionnaire_id = q2.questionnaire_id)  
WHERE q.questionnaire_id = "QuestionnaireID"  
      AND r.user_id = "UserID"
```

Sample Query

```
/* Retrieve questions related to questionnaire */  
SELECT *  
FROM Questions  
WHERE questionnaire_id = "QuestionnaireID"  
  
/* Retrieve possible answers related to question */  
SELECT *  
FROM Possible_Answers  
WHERE question_id = "QuestionID"
```

Sample Query

```
/* Number of responses to a specific question */  
SELECT count(r.response_id)  
FROM (Questions as q  
      INNER JOIN Possible_Answers as p  
            INNER JOIN Responses as r  
                  on r.option_id = p.option_id  
            on p.question_id = q.question_id)  
WHERE q.question_id = "QuestionID"
```

Generated Data

```
INSERT INTO csds341_questionnaire.Roles(role_id, edit_perm, resp_perm, view_resp_perm)
VALUES
('root',True,True,True),
('creator',True,False,True),
('moderator',True,False,False),
('participant',False,True,False),
('analyst',False,False,True),
('guest',False,False,False);

INSERT INTO csds341_questionnaire.Subscription(subscription_id, survey_limit)
VALUES
(1,5),
(2,20),
(3,100);

INSERT INTO csds341_questionnaire.Users(user_id, first_name, last_name, email, subscription_id)
VALUES
(1,'Joseph','Gleeson','josephgleeson@gmail.com','2'),
(2,'Donna','Lee','donnaalee@gmail.com','2'),
(3,'Richard','Ruda','richardruda@gmail.com','3'),
(4,'Nicole','Randolph','nicolerandolph@gmail.com','1'),
(5,'Jasmine','Hardin','jasminehardin@gmail.com','1'),
(6,'Jill','Eaton','jilleaton@gmail.com','2'),
(7,'Angela','Parsons','angelaparsons@gmail.com','3'),
(8,'Lisa','Hamrick','lisahamrick@gmail.com','2'),
(9,'Brenda','Anderson','brendaanderson@gmail.com','1'),
(10,'Teodoro','Pate','teodoropate@gmail.com','3'),
```

...

Generated Data

```
INSERT INTO csds341_questionnaire.Questionnaires(questionnaire_id, number_of_questions)
VALUES
(1,5),
(2,7),
(3,12),
(4,19),
(5,25),
(6,50);
```

```
INSERT INTO csds341_questionnaire.Questions(question_id, questionnaire_id, question_text)
VALUES
(1,1,'Have you ever had a secret admirer?'),
(2,1,'In the evening, would you rather play a game, visit a relative, watch a movie, or read?'),
(3,1,'What did you want to be when you were small?'),
(4,1,'Who would you want to be stranded with on a deserted island?'),
(5,1,'If you could go back in time to change one thing, what would it be?'),
(6,2,'Do you collect anything?'),
(7,2,'What kitchen appliance do you use every day?'),
(8,2,'How many pairs of shoes do you own?'),
(9,2,'What three things do you think of the most each day?'),
(10,2,'What do you do to keep fit?'),
```

...

Generated Data

```
INSERT INTO csds341_questionnaire.Responses(response_id, user_id, option_id, date_time)
VALUES
(1,32,2,'2017-01-19 19:37:49'),
(2,32,8,'2017-01-19 19:37:49'),
(3,32,15,'2017-01-19 19:37:49'),
(4,32,17,'2017-01-19 19:37:49'),
(5,32,23,'2017-01-19 19:37:49'),
(6,32,4,'2011-09-05 15:15:35'),
(7,32,7,'2011-09-05 15:15:35'),
(8,32,15,'2011-09-05 15:15:35'),
(9,32,20,'2011-09-05 15:15:35'),
(10,32,23,'2011-09-05 15:15:35'),
```

...