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Towson University

REQUIREMENTS

SPECIFICATION

reservEdu

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1. **Customer Statement of Requirements**

The aim of the project is to create a platform to rent out facilities of high schools across the nation, as requested by the Department of Education. Information about the facility and the availability should be available in the website, per user’s request. Site needs to be able to accept payments for renting of these facilities, as well as handle donations. Upon a confirmation of a reservation, the system generates a usage report and sends the report to the officials of the state. The usage report includes the facility usage as well as the profit earned per school and facility. This system also includes social media integration that allows the user/client to promote certain events. This also includes “mentions” which is essentially sharing information about a particular event on social media platforms.

1. **System Requirements**
   1. A server running a LINUX distro. Exact specification of the server is going to be continuously scaling at due time based on the amount of traffic.
   2. To handle incoming traffic, as well as host the backend PHP server, we are going to be using Apache 2.
   3. MySQL or a similar database to store reservation and user data
   4. System must be powered on and have access to the internet at all times.
   5. System must be able to accept electronic payments
   6. System must be able to integrate with social media platforms.
2. **Use Roles**
   1. Stakeholders
      1. Education Administrators, third party users, the Department of Education
   2. Actors and Goals
      1. Department of Education:
         1. Manage big data in reservEdu / manage system
         2. Manage users / manage permissions for the users
         3. Manager reservations
         4. Manage institutions / facilities
         5. View / access usage reports for all high schools
      2. Education Administrators:
         1. Specify interests for individual institutions, advertising available reservations via social media
         2. Manage reservations for facilities based on the level of access provided to the different level of education of administrators.
      3. The Public:
         1. Create reservations for public events
         2. Share information on social media
         3. Promote on site and in social site.
3. **User Interface**
   1. Skeleton (Rough)
      1. Welcome Page
      2. Available Reservations Listing Page (Public)
      3. Application Dashboard [School (Admin) / Authentication Requirement]
         1. Create new reservation types
         2. Users would like a search function
         3. Mange current reservations
         4. Edit school information / public profile
         5. Calendar of Events
         6. Share to Social Media
      4. Application Dashboard [User (Public) / Authentication Requirements]
         1. View current listings
         2. Create reservations
         3. Edit created reservations
         4. Account / Profile Page
         5. Contact School
         6. Donate
         7. Share to Social Media
      5. About / Contact Page
      6. Terms & Conditions
   2. Frontend Application
      1. The frontend of the website is going to be powered by a JavaScript framework, Ember.js. The frontend will grab required information (i.e. reservation data, user information, OAuth2 tokens) via Ajax requests to the backend PHP server.
      2. The JavaScript framework will be of a Model-View-View-Model (MVVM) or model-view-controller (MVC) pattern. This allows for clean and easy collaboration, and consistent scalability.
4. **Functional Requirements**
   1. Able to handle transactions:
      1. Secure systems to be used for reservations
         1. SSL certificate from the open source authority Let’s encrypt is going to be used.
         2. Transaction - Stripe, which uses a JavaScript plugin to handle requests asynchronously.
      2. Also to be used for donations
   2. Other Systems / Subsystems
      1. System will be integrated with Stripe for payment
         1. Confirmation about the reservation would be sent with the payment information
      2. System will have two databases
         1. First database to hold user’s information
         2. Second database to hold facilities / other information.
   3. Output:
      1. System must be able to provide / display information about the facilities and the availability.
      2. System must be able to provide reservation information
      3. System must be able to provide payment information to the respectable authority.
      4. System displays the information to the public always up-to-date, to insure that no facilities, concurrently, are rented out.
5. **Plan of Work**

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| --- | --- | --- |
| **Date** | **Due** | **Description** |
| February 16 | System Requirements | Document that describes the features and the behavior of the project. In this case, reservEdu |
| February 22 | Skeleton of UI | Lay out the basics for the User Interface |
| March 30 | Preview | Overview of Preliminary Solution |
| April 2017 | Integrating | Social Media and Payment Integration |
| May 2017 | Final Project | Project Revision/Submission |

1. **Presenting Work**
   1. Report will use PowerPoint and other electronic visual aids to show the project as it is progressing.
   2. Show the client how we are progressing and if we are maintaining the timeline, we set out for the project.
   3. Show the client about the progress and if we are maintaining the timetable set for this project.
   4. Use a possible demo of the software even if it is just bare bones to please the client.
   5. Let the client know it is a pleasure to be working for them and be kind.
   6. Keep it simple.
2. **References**
   1. “A Checklist for Grading the First Software Engineering Report. ” Software Engineering Report Grading. Rutgers, n.d. Web. 12 Feb. 2017.

<http://www.ece.rutgers.edu/~marsic/Teaching/SE/report1-grading.html>