



Reservation System

FRENCHTOWN STUDIOS RESERVATION SYSTEM JACOB WOODWORTH

CENTRIQ TRAINING FSWD FINAL PROJECT | August 19, 2021

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JACOB WOODWORTH

Early in my life I received a guitar and felt a sense of expression, creativity, and direction, I had never felt before. From that time and through my youth I lived my life through music feeding my desire to learn.

Now, I am still feeding that desire to learn in the tech field, it is just not on stage or in a recording studio but instead at a desk in a .Net environment.

The music industry in many ways was a conduit into the professional and technological world for me. After only a few months of joining a start up with an entry-level position I realized that I had found my next setting of discipline. In just a few years, a company that was founded with only a handful of employees had grown to 22 times that number with me at the head of operations and management. While the company grew as did my interests in other avenues, specifically the technology field and the many platforms of learning it offers.

At the time, I never thought of myself as being tech savvy, but I was surprised by the amount of terminology, platforms and applications I had been exposed to. Working with developers made me appreciate the intricacies of web design, their functionality, and the countless hours that go into them. This was the push that I needed to follow my academic hunger to join Centriq Training and become a Full Stack Developer.

The Centriq Training 4-month bootcamp has been at times a stressful yet rewarding experience. It has taught me fundamentals and concepts in HTML, CSS, C#, JS, jQuery, MVC, .NET, React.js, SQL, and others to start my career in the technology field. Leaving my current job to become a full-time student and now a developer was not an easy decision, but it has been a life changing and I only wish I had made the move earlier in life.

Currently I am in Saint Louis Missouri and will be seeking out employment opportunities that will challenge my new skills as well as my already seasoned assets. Often the best way to learn is by fire and that is something that is no stranger to me in my story. After a decade of respected and professional experience providing internal employee development, team effectiveness and leadership development consulting; I find myself back in the pupil's chair of life. Eager to hear the next melody or note that comes after C#.

FINAL PROJECT SELECTION

It was an easy decision to choose the Reservation System when it came time to select our final projects. I knew going in I wanted to build something that would have purpose outside of my portfolio and be used in the real world. That purpose presented itself in the Reservation System project. It was the only external application of the three options presented and the logic and functionality will be converted into another project I am currently building for my wife's recently established photography company Frenchtown Studios.

This application gives the owner the ability to create and manage reservations by client and location which makes it a powerful tool for a small business owner. It also provides the client the ability to create their own profile, reservations, and communicate directly with the company. In short, this project has met all my original goals. It is a highly functioning data driven application that is also esthetically pleasing and easy to navigate.

PROJECT REQUIREMENTS & DETAILS

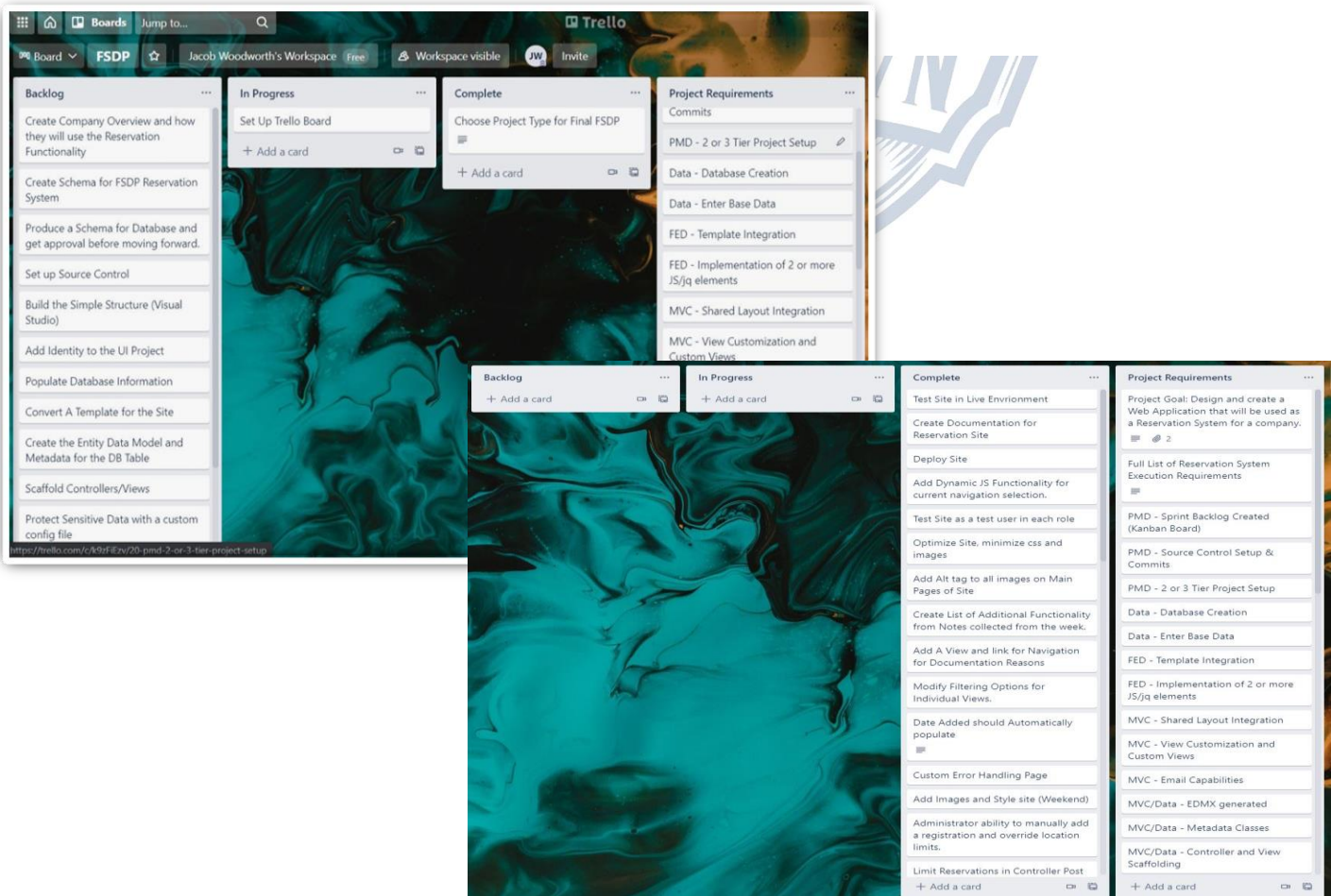
Build a data-driven Full Stack Web Application for a fictional company of our choice. The “company” is seeking an online solution for their clients to create an account, register and set up reservations for themselves at multiple locations. They also would like the site to be easy to navigate on both a mobile and desktop browser with a clean and modern look. Administrators of the site will have full crud functionality and be able to manually enter reservations in case of cancellations or squeezing in extra clients. Employees will be able to add/view client notes and easily be able to pull reports based on client by location and date. A full database will need to be built and properties like Date Added for Assets will need to be automatically populated. The company listed specific authorization and accessibility needs for admins, employees, and clients. (Further explanation of user roles and authorizations are listed in the identity matrix below)

HomeController	Index	Contact				
Admin	x	x				View Home and Contact Views
Employee	x	x				View Home and Contact Views
Client	x	x				View Home and Contact Views
Anonymous	x	x				View Home and Contact Views
Reservations	Index	Details	Create	Edit	Delete	
Admin	x	x	x	x	x	Full Crud + View and Place Reservations
Employee	x	x				View Reservations + Daily Reports
Client	x	x	x			Create Reservations for Personal Assets
Anonymous						
Locations	Index	Details	Create	Edit	Delete	
Admin	x	x	x	x	x	Full Crud + Reservation Limit Override
Employee	x	x				View All Client Information and Details
Client	x	x				View Personal Client Information and Details
Anonymous						
ClientDetails	Index	Details	Create	Edit	Delete	
Admin	x	x	x	x	x	Full Crud
Employee	x	x				View Client Information and Details
Client	x	x	x	x	x	Full Crud Only for Client Owned Account
Demo						
ClientAssets	Index	Details	Create	Edit	Delete	
Admin	x	x	x	x	x	Full Crud
Employee	x	x	x	x		Full Crud with the exception of Delete
Client	x	x	x	x	x	Crud, Photo Upload, Add/Update Notes, View
Anonymous						

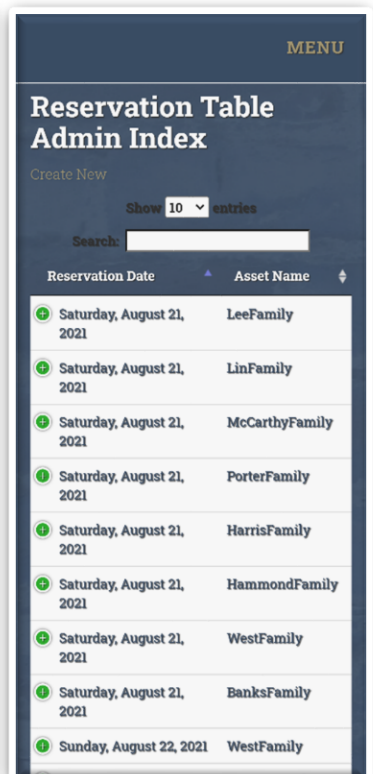
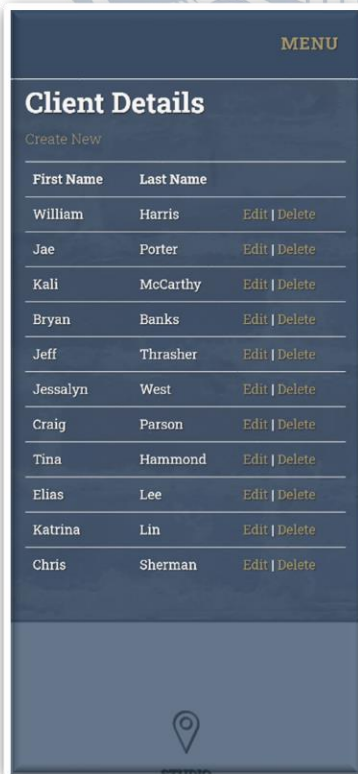
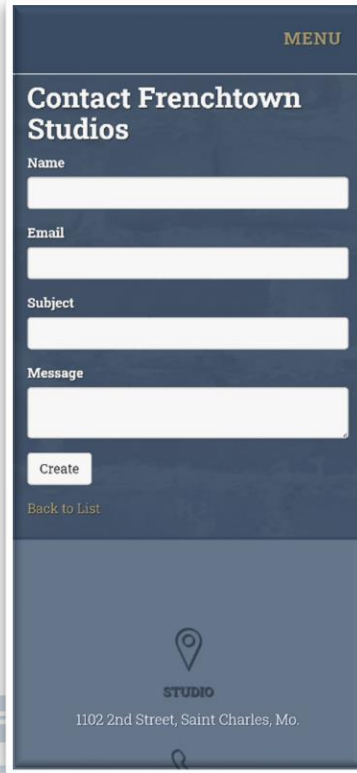
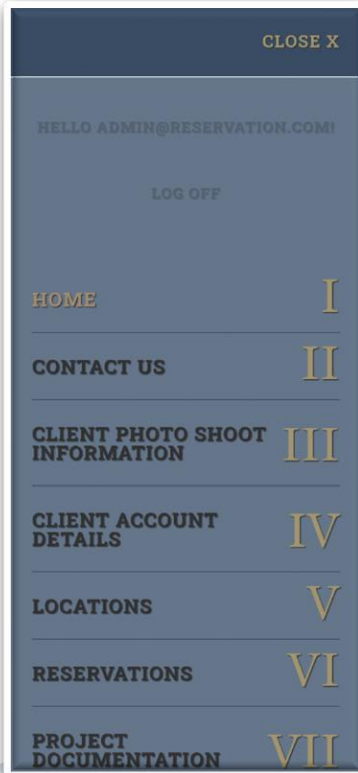
PROJECT FORMATION AND PLANNING

Using these requirements and details I was able to begin the creation of Frenchtown Studios Reservation System. Frenchtown studios is a photography studio and company located in one of the historic districts of St. Charles, Mo. The company was established recently and the clientele up to this point has been developed by either word of mouth or marketing on social media sites. Specializing in portraits they regularly offer specials where they will host weekend dates with a reservation limit for four locations (Studio, Private Residence, 370 Lakeside Park, and Eco Park) in the area. Clients will be able to navigate to the site via social marketing efforts, create and register a user profile and asset (Photo Shoot) and reserve the time that best suits their needs.

DATABASE DIAGRAM & TRELLO BOARD



SNAPSHOTS OF THE USER INTERFACE



CODE SNIPPETS

```
// POST: Reservations/Create
// To protect from overposting attacks, please enable the specific properties you want to bind to, for
// more details see https://go.microsoft.com/fwlink/?LinkId=317598.
[HttpPost]
[ValidateAntiForgeryToken]
public ActionResult Create([Bind(Include = "ReservationId,ClientAssetsId,LocationId,ReservationDate")] Reservation reservation)
{
    var location = db.Locations.Where(l => l.LocationId == reservation.LocationId).FirstOrDefault();
    var nbrReservation = db.Reservations.Where(r => r.LocationId == reservation.LocationId).Count();

    if (ModelState.IsValid && User.IsInRole("Admin"))
    {
        db.Reservations.Add(reservation);
        db.SaveChanges();
        return RedirectToAction("ReservationTable", "Filters");
    }

    if (ModelState.IsValid && nbrReservation < location.ReservationLimit)
    {
        db.Reservations.Add(reservation);
        db.SaveChanges();
        return RedirectToAction("Index");
    }

    if (ModelState.IsValid && nbrReservation >= location.ReservationLimit)
    {
        return RedirectToAction("Index");
    }

    ViewBag.ClientAssetsId = new SelectList(db.ClientAssets, "ClientAssetsId", "AssetName", reservation.ClientAssetsId);
    ViewBag.LocationId = new SelectList(db.Locations, "LocationId", "LocationName", reservation.LocationId);
    return View(reservation);
}
```

The IF tree (snipped above) is in the Post Create of the Reservations Controller. The logic inside is built to cascade and filter results and return views based on authorization and using the variables created with Linq above to check reservation vacancy.

```
[Required(ErrorMessage = "Reservation Date is required")]
[Display(Name = "Reservation Date")]
[DisplayFormat(DataFormatString = "{0:D}", ApplyFormatInEditMode = true)]
public System.DateTime ReservationDate { get; set; }
}

[MetadataType(typeof(LocationMetadata))]
public partial class Location
{
    public string NameAndDate { get { return $"{LocationName} - {ReservationDate:d}"; } }
}

#endregion

ReservationMetadata
```

In order to give the administrator, the ability to override reservations by location, the ReservationDate Field was added to the Location Table in the db and a custom partial class was built in the EF layer (snipped above).

CODE SNIPPETS

```
[HttpPost]
[ValidateAntiForgeryToken]
public ActionResult Contact(ContactViewModel cvm)
{
    if (!ModelState.IsValid)
    {
        return View(cvm);
    }

    string message = $"(FrenchTownStudios) You have received an email from {cvm.Name} with a subject of {cvm.Subject}. Please respond to {cvm.Email} with your response to the following message: <br/>{cvm.Message}";

    MailMessage mm = new MailMessage(ConfigurationManager.AppSettings["EmailUser"].ToString(), ConfigurationManager.AppSettings["EmailTo"].ToString(), cvm.Subject, message);
    mm.IsBodyHtml = true;
    mm.Priority = MailPriority.High;
    mm.ReplyToList.Add(cvm.Email);

    SmtpClient Client = new SmtpClient(ConfigurationManager.AppSettings["EmailClient"].ToString());
    Client.Port = 8889;

    Client.Credentials = new NetworkCredential(ConfigurationManager.AppSettings["EmailUser"].ToString(), ConfigurationManager.AppSettings["EmailPass"].ToString());

    try
    {
        Client.Send(mm);
    }
    catch (Exception ex)
    {
        ViewBag.CustomerMessage = $"We're sorry your request could not be processed at this time. Please try again later. Error Message:<br/>{ex.StackTrace}";
        return View(cvm);
    }

    return View("EmailConfirmation", cvm);
}
```

Above is the Contact View Model logic built out in the Home Controller. It is the springboard between the Contact View Model, the SMTP client, and the views returned based on user input.

The code below contains a custom error handling view that I included in my application. This was achieved by replaced globally through my application for 404 errors via the Web.config and Error Controller that I built for this function.

```
<h2>ShootHappens</h2>

<div class="container pushItDownStyle">
    <div class="row mt3 presentation">
        <div class="centered">
            <i class="icon ion-ios7-help-outline large-icon"></i>
            <h1>404 ERROR</h1>
            <hr>
        </div>
        <div class="col-lg-6 col-lg-offset-3 centered">
            <h3>Sometimes Shoot Happens</h3>
            <p>The page you are looking for does not exist!</p>
            <p class="mt"><a href="@Url.Action("Index", "Home")" class="btn btn-lg btn-theme">Take Me Home</a></p>
        </div>
    </div>
<!-- /row -->
</div>
```


Jacob Woodworth

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FULL STACK DEVELOPER

.NET Framework

Full Stack Web Application Design

C# Fundamentals

Database Management

Unit Testing

Software Development Lifecycle

Agile Scrum Methodology

Continued Growth in IT Knowledge

TECHNICAL AND PROFESSIONAL SKILLS

Front End: HTML5, JavaScript, jQuery, jQueryUI, CSS3, Responsive/Mobile Web Development, Bootstrap, XML, ReactJS

Middle Tier: Visual Studio, C#.NET, ASP.NET, LINQ, MVC, EF

Back End: ADO.NET, SQL, SSMS

Professional Skills: Troubleshooting, Critical Thinking, Operations & Project Management, Strategic Planning, Communication, Team Building, Peer Development, Active Listening, Life Skills, Time Management, Budget Forecasting, and Lead Generation Development.

INDEPENDENT DEVELOPMENT PROJECTS

- **Personal Site:** www.jacobwoodworth.com
- **StoreFront:** Created a secure application for managing product data. Application is built to simulate an online store front with a shopping cart. Administrators will have the ability to manage product, category and vendor data.
- **S.A.T. Scheduling Administration Tool:** Created a secure application for managing product data. Application is built to simulate an online class scheduling system. Administrators will have the ability to manage students, courses, scheduled classes, and enrollments.
- **Final Project:** Created a secure data driven ASP.NET MVC application from design through deployment for managing the tracking and organization of hardware and software within a company. Administrators can manage employee, department data and all details relating to assigned hardware and software.

TECHNICAL TRAINING

Full Stack Web Developer Program, [Centriq Training](#)

Graduated 08/2021

Saint Louis, Mo

Centriq Badges Earned: Perfect Attendance, Career Ready, and Program Graduate

- MVC Framework
- Website Deployment
- Trouble Shooting & Debugging
- Pair Programming
- Source Control
- Code Review
- Agile/Scrum (Created Team Project)

Construction Laborer/Operator, Scharf Construction Co. LLC

08/2019 – 04/2021

Saint Charles, Mo

- Active Member of Local 660 Laborers' International Union of North America.
- Skilled labor in concrete construction and building materials.
- Operated heavy machinery and equipment in high-risk environments.
- Knowledge of materials, equipment, and contractual completion windows.
- Collaborated in large groups to achieve company goals and targets.

Director of Operations, Lightfire Partners LLC & Zu USA LLC

04/2012 – 02/2019

Saint Louis, Mo

- Developed company structure including 100% of customer service facing business.
- Managed daily operation company-wide including 50+ employees.
- Purchased and managed 50K-100K of data acquisition from clients and vendors monthly.
- Recruited, trained, and coached 100% of staff on an ongoing basis.
- Created and implemented a company standard to ensure quality and compliance.
- Forecasted company profits working closely with senior level management and account.

Performing Member and Manager, Defiance Pointe LLC

06/2006 – 02/2012

Saint Louis, Mo

- Creation, composition, and performance of music
- Development of tour logistics, transportation, press kits, social media, and marketing.
- Budgeted 100% of financials for company and 12 employees.
- Recorded and released (4) albums while maintaining independent label interests.
- Accomplished something that only a fortunate few percent can say. "I chased my dreams."

