System Definition

Section 1: Problem Definition

Dr. Timoth Lederman is a General Motors enthusiast. Several years ago, he found a web application on the Internet that allowed him to custom design trucks. Unfortunately, the website is no longer in existence. Dr. Lederman has expressed his want for a new web application that will allow users to custom design 1947-1955 Chevrolet trucks. This project will be called Chevrolet Advanced Design Series Paint Visualizer (CADS Paint Visualizer).

Section 2: System Justification

The purpose of this web application is to allow users to build their dream Chevrolet truck. This application will give fans of General Motors a fun place to visualize any truck that they can think of using either the original colors of the Chevy trucks from 1947-1955, or any other combination of colors that they can think of.

Section 3: Goals for the System and the Project

The goal of this project is to design a fun web application for the General Motors Advanced Design Series trucks. It is very important that the user will be able to use both factory and custom colors on various body styles. It is also very important for this application to be very simple to use. When you start using the application, it should be very intuitive on how to use all of the features. People with little to no computer skills should be able to figure out the web application immediately.

Section 4: Constraints

The constraint on the web application is that the client, Dr. Timoth Lederman, does not want users to have to download any software in order to use the application. This limits the software that YDOS can use to create CADS Paint Vizualizer.

Section 5: Functions to be Provided

CADS Paint Visualizer will have the following functionalities:

- A visualizer application that will be used to view paint colors (both factory paint colors and custom paint colors) on the Chevrolet Advance Design Series trucks (1947-1955)
- The applet will show the shape of the truck as well as different emblems and adjustments that were made based on the different years the truck was produced.
- The user will be able to select the year of the truck. After the truck year is selected, the factory paint codes for the specified year will be displayed along with a custom paint selection choice.
- As the year changes, the factory paint and emblems/grilles will change based on the users input.

Section 6: User Characteristics

There will be one type of user for this application. The user can be anyone that wants to access the sight. Since the web application will be only for the Advance Design Series, the majority of the users will most likely be an Advance Design Series truck owner. Any one that can access the visualizer will be able to use all the functions of the web application.

Section 7: Development Environment & Production Environment

Development Environment - The development environment that we will be using to build this web application includes, the software and hardware included in the software engineering lab along with our own personal hardware and software.

Operating Environment - We will be using both Mac's and PC's with Internet capability, access to the Siena server, and the latest web browsers.

Maintenance Operating - Maintenance will be done on the same machines where the development of the web application takes place.

Section 8: Solution Strategy

YDOS will follow and implement a Waterfall model strategy with minor deviations in the testing phase. With this process installed, YDOS will be able to meet all requirements and properly document progress passed along to us from our client, Dr. Timoth Ledermen. The steps we will follow are as listed:

- Define and Obtain Requirements
- Development of Preliminary Design
- Development of Detailed Design
- Implementation of Software
- Testing the Software System
- Installation and Maintenance of System

Section 9: System Acceptance Criteria

It is imperative that CADS Paint Visualizer include the following features:

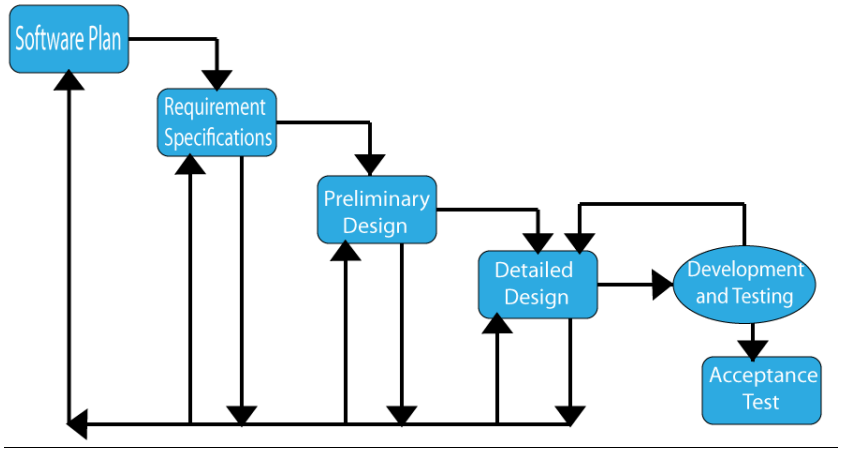
- Users will not be required to log into the system.
- The amount of users at one time will not be limited.

Section 10: Sources of Information

The main source of information for this project will come from the client, Dr. Timoth Lederman. Dr. Timoth Lederman has directed YDOS to the stovebolt.com photo gallery, and has provided YDOS with line drawings of the 1947-1955 Chevy trucks.

Project Plan

Section 1: Project Management & Development Model



Software Plan – Y.D.O.S. will gather key information from the client in order to clearly define the problem and the project plan.

Requirements Specification – Y.D.O.S. will evaluate the problem at hand in order to determine what needs to be done for this project.

Preliminary Design – Y.D.O.S. will put the detailed requirements into action to create a trial version of the web application.

Detailed Design – Y.D.O.S. will refine the work done in the preliminary design phase, and Y.D.O.S. will break the requirements into modules. In this phase, design tools will be used for database and screen design.

Development and Testing – Y.D.O.S. will develop the code and run a series of tests on the web application in order to make sure that there are no bug in the system, and to ensure that the project meets the client's requirements.

Acceptance Test – Y.D.O.S. will confirm that the web application functions properly and meets all of the criteria specified by the client.

Section 2: Team Structure

Y.D.O.S. is a team made up of five individuals:

Name	E-mail	Phone Number
Troy Valle	t29vall@siena.edu	518.729.8434
Frank Schroeder	fd14schr@siena.edu	518.423.9811
Kerrie Daley	ka11dale@siena.edu	518.788.8079
Grady McBride	gc20mcbr@siena.edu	203.815.3767
Matt Mainello	mg02main@siena.edu	518.860.9167

The individuals of YDOS have the following roles:

Troy Valle – Team Leader

The team leader is in charge of organizing the team, distributing work, and making sure everything is done on time. The team manager also, manages team meetings and schedules client meetings.

Frank Schroeder – Project Manager

Kerrie Daley – Technical Processor

The technical processor is responsible for taking notes at every team meeting, and at every client meeting. The technical processor is also in charge of managing and editing all of the team documents.

Grady McBride – Database Manager

As the data base manager it is important to design a database that will make it easy to store and retrieve the data required for our program. This will include things like storing all of the different models of trucks, wheels, shop colors and anything else our program will need to run properly and efficiently. Our program will then be able to quickly retrieve the data that is needed.

Matt Mainello – Webmaster

The webmaster is responsible for maintaining the team website and uploading documents and information pertaining to the team. The webmaster takes care of routine maintenance, testing and upkeep of the site to ensure that it is optimal for the team.

Section 3: Preliminary Staffing & Resources

YDOS feels confident that the 5 members of our team will be sufficient to get the job done. We have our assigned roles to allow each process involved in our project the focus that it needs to be accomplished in a timely manner. We will also help each other out to the best of our abilities to ensure that each role is being fulfilled properly.

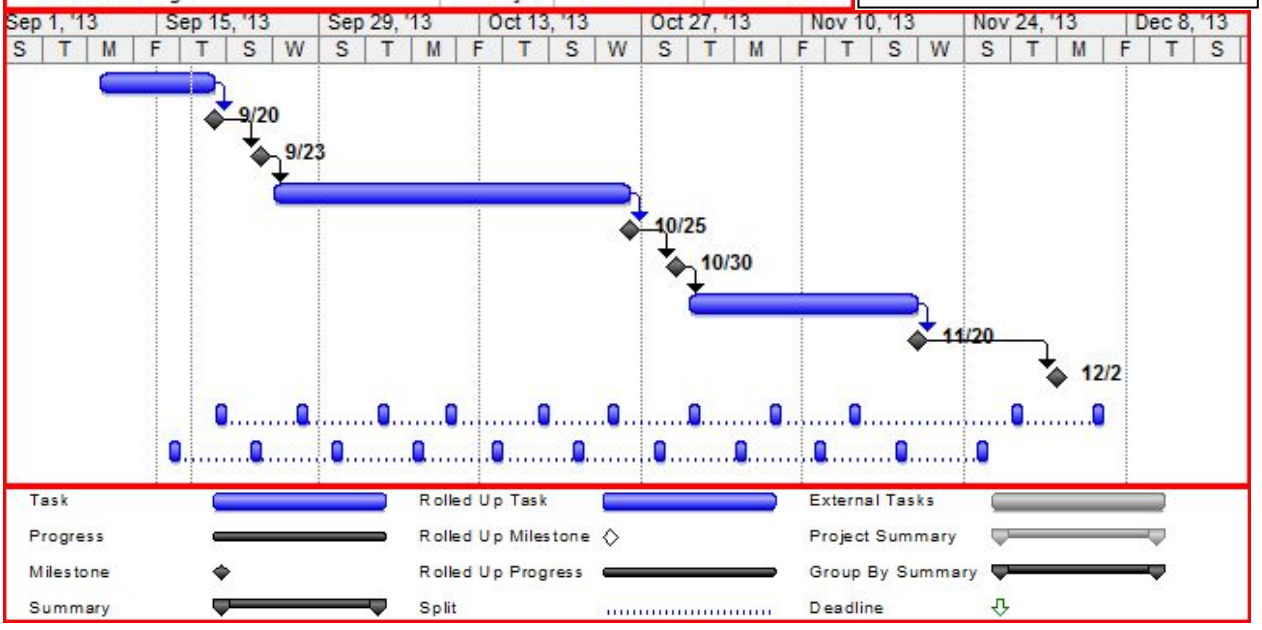
We will be using our personal laptops, as well as the computers provided in the software engineering lab to develop our project. We will also be using the software engineering lab to hold our meetings to discuss the progress of our project.

Section 4: Development Schedule

Software Plan	8 days?	Tue 9/10/13	Thu 9/19/13
Software Plan Documents Due	0 days	Fri 9/20/13	Fri 9/20/13
Software Plan Presentation	0 days	Mon 9/23/13	Mon 9/23/13
Requirements Specification	23 days?	Wed 9/25/13	Fri 10/25/13
Requirements Specification Documents	0 days	Fri 10/25/13	Fri 10/25/13
Requirements Specification Presentation	0 days	Wed 10/30/13	Wed 10/30/13
Peliminary Design	14 days?	Thu 10/31/13	Tue 11/19/13
Peliminary Design Documents Due	0 days	Wed 11/20/13	Wed 11/20/13
Peliminary Design Presentation	0 days	Mon 12/2/13	Mon 12/2/13
Client Meetings	11 days?	Fri 9/20/13	Thu 12/5/13
Team Meeetings	11 days?	Mon 9/16/13	Mon 11/25/13

Your Dream, Our Solution

Client:
Dr. Timoth C. Lederman
Professor of Computer Science
Siena College
Computer Science Department



Section 5: Project Monitoring & Control

It is very important to all of us at YDOS that each step of our project gets done in the time that Dr. Lederman has specified. To ensure success in this objective, we will meet with Dr. Lederman weekly and will not hesitate to ask him questions through email if need be to keep the project moving forward. Members of YDOS will also have a weekly meeting, and will also be contacting one another on the daily basis through any means of communication we see fit.

Section 6: Tools and Techniques to be Used

A web-hosting site provided by the client, Dr. Lederman, will be used for data storage. We will be using notepad++ to develop the web application components. We will be using our own modified waterfall model to manage the project and get it completed on time.

Section 7: Programming Languages

The web application will be built with a combination of HyperText Markup Language (HTML), Cascading Style Sheets (CSS), JavaScript, PHP: Hypertext Preprocessor (PHP) and Structured Query Language (SQL).

Section 8: Testing Requirements

YDOS will continue to test the CADS Paint Visualizer to make sure that the program runs smoothly. We will run through every scenario that our program may face in order to make sure there are no bugs in our project. Also because our users are not expected to be computer savvy, we will also make sure that the program is easy to use by having different test subjects run through our program while providing feedback as they do so. We will also show Dr. Lederman our design through each stage of its development to ensure that it is running the way he has intended.

Section 9: Supporting Documents

The following documents will be submitted to Dr. Lederman and the client if requested:

- Software Plan
- Requirements Specifications
- Preliminary Design
- Detailed Design
- Acceptance Test

Section 10: Documentation and Delivery

Presentations will be given and documents will be provided to the client as the project progresses. The presentation dates are as follows:

- Project Plan: Monday September 23rd from 8-10 in Roger Bacon Room 328
- Requirements Specification: Monday October 28th from 8-10 in Roger Bacon Room 328
- Preliminary Design: Monday December 2nd from 8-10 in Roger Bacon Room 328
- Detailed Design: Spring of 2013 in Roger Bacon Room 328
- Acceptance Test: Spring of 2013 in Roger Bacon Room 328

Appendices
Appendix A: Resumes

Troy Valle t29vall@siena.edu

518-729-8434

82 Blossom Lane, Valatie, NY, 12184

Objectives

My goal is to become a Computer Software Engineer and challenge myself to progress in that field.

Education

- Siena College, Loudonville, New York
- Bachelor of Science in Computer Science, Economics Minor, Senior, Graduating May 2014
- Computer Science GPA: 3.52

Work Experience

Doctored Apps 2013-Present

- Working with a team to create Apps for both Android and IOS devices.

Cook at Chris' Cafe, 2010-Present

- Prepared meals for customers in a timely and efficient manner for over 200 customers daily.

Cleaner for MGL Cleaning, 2009-2010

- Was responsible for two floors of an office building, including vacuuming, cleaning bathrooms, dusting and taking out the garbage.

Relevant Coursework

- Data Structures, Assembly Language, Object-Oriented Design and Programming, Analysis of Algorithms, Data Base Management, Communications and Networks, Robotics

Skills

- Programming Languages: Java, Python, HTML, CSS, PHP, JavaScript, SQL, LUA
- Application Development
- Web Design
- Microsoft Office Suite
- Proficient with Macintosh, Windows and Linux
- Experience Fixing Computer Hardware and Software
- Database Design and Management

Awards

- Siena College Presidential Scholarship

Frank Schroeder

Fd14schr@siena.edu • 1055 Spring Ave Extension• (518) 423-9811

Objective

Obtain a position that leverages my academic and personal interests in the field of Software Development, Web Application Development, or Graphic Design.

Education

Siena College September 2010 - Currently Enrolled
Loudonville, New York (Class of 2014)
Bachelor of Science Computer Science
Second Major : Creative Arts: Multimedia

Averill Park High School September 2006 – June 2010
Averill Park, New York
Advance Regents Diploma: Technology & Communications
Project Lead the Way Certificate Recipient

Projects

Siena College Automated Predictor of Extremism (S.C.A.P.E) – Head Researcher June 2012 – Present

- Developed software to an analysis and forecast a model, using computation linguistics, that aims to identify typical patterns that relate to criminally and ideologically patterns of political violence
- The model can be incorporated into a system that would predict an organizations focus, thereby making it possible for governments to devise more effective policy responses to terrorist organizations and their criminal networks.
- Presented at the Annual Upstate NY Undergraduate Research Conference

Robotics September 2011– Present

- Developing new graphical user interface and developing new software to easily maximize programming potential of robots
- Guest Speaker on Robotics at Union College
- Programed robotic opponent for card games: http://www.youtube.com/watch?v=bPdn2IwDLCc
- Robots at Siena: https://www.siena.edu/pages/6341.asp
- Mensa Conference, September 2011

Courses

Computer Science
Data Structures, Object Oriented Design and Programming, Database Management, Analysis of Algorithms, Assembly Language and Computer Architecture, Discrete Mathematics, Web Application Development, Robotics, Mobile Application Development, Software Engineering, Communications and Networks, Theory of Computation, Multimedia Python Programing, Calculus

Personal Traits

- Technically skilled, skilled problem solver, strategic planning, tactful, adaptation
- Interpersonal skilled, effective team member, superb communication
- Comfortable presenting to ideas, concepts, and findings

Kerrie A. Daley

7 Linda Lane
Waterford, New York 12188
(518) 788-8079
ka11dale@siena.edu

Siena College

QUALIFICATIONS

Highly organized and efficient

- Planned several bridal events which included booking vendors for events, finalizing event details, and making sure that the day of the event runs smoothly

Recognized as a strong leader

- Nominated for Siena Leadership Institute by professors, and nominated for the Christian Leadership Institute by parishioners

Works well in a team

- Worked on several group projects in many academic courses, and worked as a co-leader of the parish of Holy Trinity Youth group

EDUCATION

Siena College, Loudonville, New York
Bachelor of Science in Mathematics, May 2014
Bachelor of Science in Computer Science, May 2014
Current GPA: 3.43

PROFESSIONAL EXPERIENCE

*Intern***,** Events with Style, Albany, NY
August 2012-present

- Expanded my technical skills in Search Engine Optimization.
- Organized bridal and children events.
- Contacted vendors to attend the events.

Call Center Interviewer, Siena College Research Institute, Loudonville NY
June 2013-present

- Gathered state-wide opinion polls on political, economic, and social issues.

TECHNICAL SKILLS

Java programming language.
Microsoft: Excel, Word, and PowerPoint.
Search Engine Optimization.
Mail Merge.

SCHOOL/COMMUNITY ACTIVITIES

Treasurer of Math Club at Siena College, present.
Siena Leadership Institute, September 2011-present.
Founder/ Leader of youth group for the Holy Trinity Parish in Cohoes, NY, 2009-2011.Christian Leadership Institute, July 2008.

Grady McBride

07 Oak Hills Drive, Clinton, CT 06413 203-815-3767 gc20mcbr@siena.edu

Education

Siena College, Loudonville, NY, 2010-2014

B.S. in Computer Science, Business Minor

Experience gained in Java, MIPS, and SQL Developer

Clubs: Prospective Student Ambassadors, Computer Science Club

Courses taken:

- Intro to Computer Science
- Intro to Programming
- Data Structures
- Object Oriented Programming
- Assembly Language
- Data Base Management
- Algorithms
- Calc I and II
- Discrete Math I and II

Experience

Student Assistant for Public Safety, Loudonville, NY, February, 2013 – present.

creating Public Safety website functions to improve department services, including the recent addition of a lost-and-found and vacation request form.

Student Assistant in Athletics, Communications, Loudonville, NY, September, 2011 present

- Website Management which includes updating the schedules, news feeds, and uploading pictures.
- Direct live feed and video recording of athletic events including management of cameras and choice of graphics
- Manage scoreboard and music for the athletic events

Student Assistant-Furniture Mover, Loudonville, NY, October, 2010 –May, 2011

Grocery Store Clerk (Deli and Front End), Clinton, CT, Summers of 2010-2013 and school breaks

Matt Mainello

● 15 Heather Ridge Road Troy, NY ● 518-860-9167 ● mg02main@siena.edu

Academics

College: Siena College, Loudonville, NY.

- Major: Computer Science
- Projected Graduation: 2014
- Scholarship: Presidential Scholarship

Computer Science Courses as of 9/2013: Intro to Computer Science (CSIS 110), Calculus I (Math110), Calculus II (Math 120), Intro to Programming (CSIS 120), Data Structures (CSIS 210), Discrete Structures I (CSIS 251), Discrete Structures II/Computational Theory (CSIS 351), Object Oriented Design and Programming (CSIS 225), and Analysis of Algorithms (CSIS 385), Assembly Language, Computer Architecture (CSIC 220), Web Application and Development (CSIS 390),Communications and Networking (CSIS 365), Software Engineering I (CSIS 410)

High School: LaSalle Institute, Troy, NY

- *Awards*: Gold Honors-GPA 93 or Up ('08-'10), Silver Honors – GPA 85 or Up ('05-'07)
- *College Courses in High School*: Spanish I & Calculus I and II
- *Training*: JROTC: ('06-'10)

Work Experience:

- 9/2011- Currently a Siena College ITS Help Desk Consultant
- 6/2012-8/2012- Medical Records Digital Archiver
- 1/2013-4/2013- IT Intern at NYS OTDA
- 4/2013-Current- IT Intern at Logistics One

Achievements:

- 1st Team Big-Ten Athletic Conference All-star for LaSalle Baseball Team (09-10)
- Recruited to play Baseball by Siena College and LeMoyne College in high school
- When I'm not in school I work as a mechanic and like to restore classic Mustangs. I have restored two cars so far, my brothers 1987 Mustang GT 5.0 and my father's 1965 Shelby G.T. 350. As well as resto-modded my 1998 Mustang GT. Anything with a motor and wheels I love to work on.

Appendix B: Glossary of Terms

- **Waterfall method:** A sequential design process involving progression from phase to phase. In the traditional waterfall method when you move on to a new phase you do not return. Our version does allow some backtracking.
- **notepad++:** A text/source code editor for Windows. Used for programming and scripting languages.
- **HyperText** Markup Language (HTML): main markup language for creating web pages.
- **Cascading Style Sheets (CSS):** A style sheet language used to make web pages visually appealing.
- **JavaScript:** A scripting language that is run on web pages in a browser.
- **PHP: Hypertext Preprocessor:** A server-side scripting language used for web development.
- **Structured Query Language (SQL):** Programming language designed for managing data.
- **YDOS:** Your Dream Our Solution (Team name)
- **CADS:** Chevy Advanced Design Series Paint Visualizer (Project name)