Chesapeake Community Connection Website
Software Development Plan
Version 1.1
January 24th, 2024

St. Mary's College of Maryland Capstone

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Revision History

Date	Version	Description	Author(s)
September 25th, 2023	1.1	Initial Draft	Kylie Hall John Heinig Malik Hill Naheed John Yaro Kulchyckyj Isabella Stephens Brittany Brenneman
January 24th, 2024	1.1	Start of revisions for 2024	Daniel Reina Alex Ochman Gavin McDonald John Heinig Kendahl Michael Shively

1. Introduction

1.1 Purpose

The purpose of the Software Development Plan (SDP) is to present all information necessary to control the execution of the project. It describes the approach to the development of the software and is the top-level plan generated and used by managers to direct the development effort.

The following people use the Software Development Plan:

- The project manager uses it to plan the project schedule and resource needs, and to track progress against the schedule.
- Project team members use it to understand what they need to do, when they need to do it, and what other activities they are dependent upon.

1.2 Scope

This Software Development Plan (SDP) establishes a thoroughly detailed overall plan for the software implementations, testing, deployment, and qualifications for the Environmental Justice (EJ) Atlas website.This SDP is broken into a total of five sections. Excluding the first section being the introduction, the remaining four sections individually cover the project overview (Section 2), project organization (Section 3) and management process (Section 4), which go into detail pertaining to the information necessary to reference for the duration of development accurately. The approaches encompassed within this document are contingent on

the product requirements provided by the client's description as they were comprehended at the time of writing. The complete statement of the product requirements will soon officially be documented in the Software Requirements Specification (SRS).

1.3 Definitions, Acronyms, and Abbreviations

Acronym	Meaning
SDD	Software Design Document
SDP	Software Development Plan
SRS	Software Requirements Specification
STP	Software Test Plan
TM	Traceability Matrix

1.4 Document References

Document Title	Version	Date	Author(s)
Software Requirements Specification	1.0	January 24th, 2024	Kylie Hall John Heinig Malik Hill Naheed John Yaro Kulchyckyj Isabella Stephens Brittany Brenneman

1.5 System Overview

The Chesapeake Community Connection website serves as a hub for improving connections and knowledge exchange within the Chesapeake Community. Its core function is to encourage users to share their environmental stories in audiovisual formats. The platform features an accessible user interface accompanied with a designated page explaining the user interface and its capabilities, content submission capabilities, admin oversight for safety, a filtering system for efficient content discovery, and an interactive map system highlighting community-related locations. It ensures seamless access on both mobile and desktop devices through the Google Chrome browser, facilitating widespread community engagement and knowledge sharing.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

The purpose of this project is to create a working website to the specifications given by the client. The website software will have a working delivery date as more information is gathered and the scope of the project is better understood. Tentatively, A website prototype and Version 1 of all project documents will have an end target delivery date of December 15, 2023. Before that final date the following documents are expected to be created and delivered. This includes this document, the Software Development Plan. It also includes the Software Requirements Specification document, the Traceability Matrix, the Software Design Document, and the Software Test Plan.

2.2 Assumptions and Constraints

- Website must be finished by December 15th, 2023
- There are seventeen project team members: Lillian Greenburg, Kylie Hall, Daniel Reina ,Brittany Brenneman, Isabella Stephens, John Heinig, Malik Hill, Naheed John, Yaropolk Kulchyckyj, Shameer Rao, Ariat Ojulu, Alexander Stoyanov-roberts, Dexter Mueller, Jordan Golden, Marjon Ward, Matthew Grimelli, Samuel Albanese
- The equipment needed to produce the website includes personal computers, personal mobile devices,and free downloadable software that can be used for the construction phase. In Addition, a text editor compatible with Python, HTML, Java, and JavaScript language as well as the use of GitHub to track progress and changes to the website application.

2.3 Project Deliverables

- Software Development Plan (SDP)
    - Target delivery date:
        - Version 1: 10/1/2023
        - Version 2: 10/27/2023
- Software Requirements Specification (SRS)
    - Target delivery date:
        - Version 1: 10/11/2023
        - Version 2: 11/8/2023
- Traceability Matrix
    - Target delivery date:
        - Version 1: 10/20/2023
        - Version 2: 11/17/2023
- Software Design Document (SDD)
    - Target delivery date:
        - Version 1: 11/01/2023
        - Version 2: 12/04/2023

- Software Test Plan (STP)
  - Target delivery date:
    - Version 1: 11/08/2023
    - Version 2: 12/06/2023
- Delivery list of documentation, media, etc.
  - Target delivery date: 12/15/2023
- Project presentation
  - Target delivery date: 12/15/2023
- Source code
  - Target delivery date: 12/15/2023

2.4 Evolution of the Software Development Plan

Expected Release Date	Version Number	Remarks
October 1, 2023	1.1	First version of the SDP, getting all of the criteria down before anything else is done.
October 27, 2023	1.2	New version of the plan after other documents and more progress on the project has been made, so more information has been gained.

3. Project Organization

3.1 Organizational Structure

The structure of this project consists of a 17-person team divided into 4 main roles: Project Lead, Research & Development (R&D), Quality Assurance and Documentation (QA), and Systems Operations (SysOps).
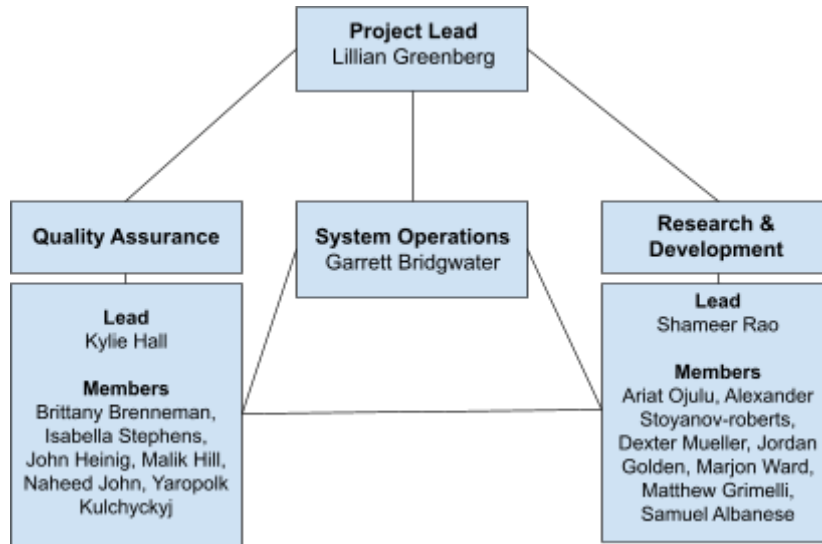
3.2 External Interfaces

The project will include the following external interface(s):

Professor Parisa Nourani Rinaldi
- Role: Project Client
- Email: pnrinaldi@smcm.edu

3.3 Roles and Responsibilities

Person	Project Role(s)
Lillian Greenberg	Project Lead. She is responsible for coordinating the project as a whole and assisting the Research & Development and Quality Assurance teams. She is the main contact between the teams and the customer.

Kylie Hall	Quality Assurance Lead. She is responsible for directing her team's goals both long-term and short-term. She is the main contact for Quality Assurance.
Brittany Brenneman, Isabella Stephens, John Heinig, Malik Hill, Naheed John, Yaropolk Kulchyckyj	Quality Assurance Team Members. They are responsible for writing and editing the documentation the customer and the Research & Development team will evaluate. They are also responsible for testing and debugging software the Research & Development team provides, as well as ensuring that the product matches what the customer desires.
Shameer Rao	Research & Development Lead. He is responsible for directing his team's goals both long-term and short-term. He is the main contact for Research & Development.
Ariat Ojulu, Alexander Stoyanov-roberts, Dexter Mueller, Jordan Golden, Marjon Ward, Matthew Grimelli, Samuel Albanese	Research & Development Team Member. They are responsible for researching and collecting the materials necessary to complete the final product. They are also responsible for writing and editing software needed for the final product.
Garrett Bridgwater	System Operations Team. He is responsible for communicating with OIT and the customer. This role will look after deployment tool issues and provide support for products we're not currently working on.

4. Management Process

4.1 Project Estimates

There is no applicable cost to this project; The cost of the software shall be free. The application shall cost 15 weeks of time for the first iteration and may continue progress over the following year.

4.2 Project Plan

4.2.1 Phase Plan

Project phases shall be implemented sequentially using the waterfall model with some instances of iteration.Communication shall occur between the customer in both meetings throughout the development process as well as asking questions regularly through emails. Modeling shall not happen concurrently with coding and constructing the software, instead it shall be in sequential order.
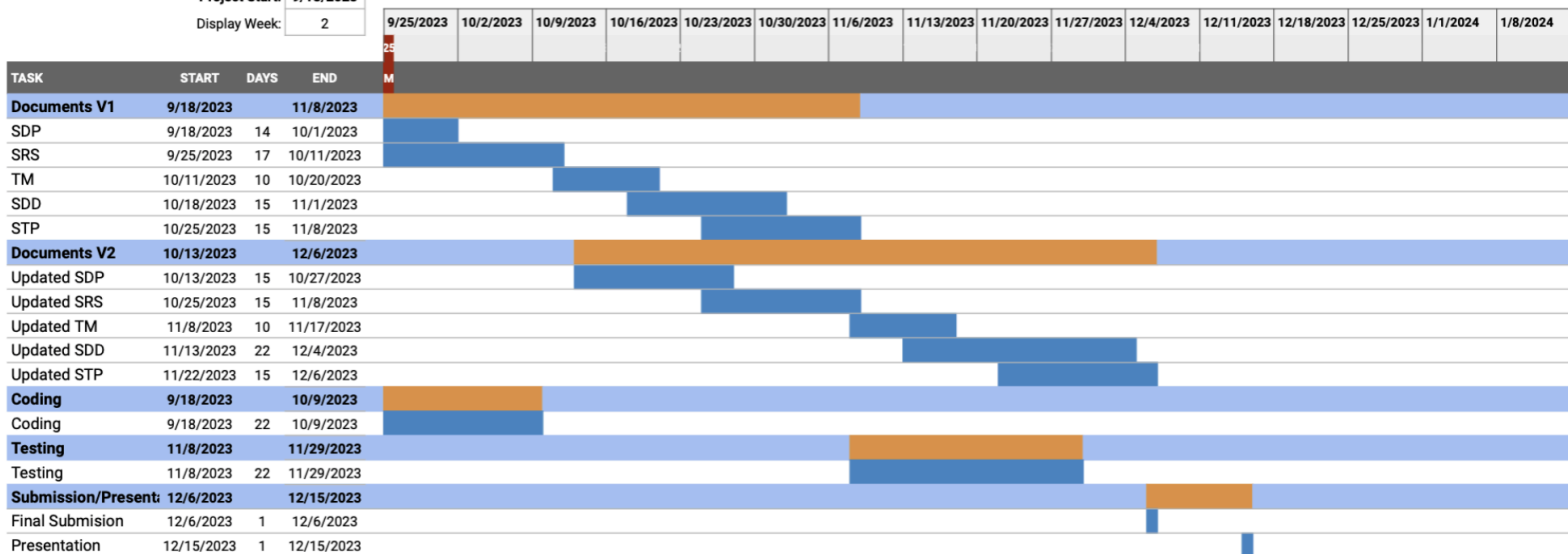
4.2.2 Iteration Objectives

The website application project will utilize the incremental framework activity from the Agile Method for completion; where iterations happen when necessary to complete tasks within sprints. Sprints will typically be two weeks long and may include overlapping objectives if necessary.

4.2.3 Releases

The outcome of this project will yield one website release over the entire project duration.

4.2.4 Project Schedule

Project Start:	9/18/2023																	
Display Week:	2		9/25/2023	10/2/2023	10/9/2023	10/16/2023	10/23/2023	10/30/2023	11/6/2023	11/13/2023	11/20/2023	11/27/2023	12/4/2023	12/11/2023	12/18/2023	12/25/2023	1/1/2024	1/8/2024

TASK	START	DAYS	END
Documents V1	**9/18/2023**		**11/8/2023**
SDP	9/18/2023	14	10/1/2023
SRS	9/25/2023	17	10/11/2023
TM	10/11/2023	10	10/20/2023
SDD	10/18/2023	15	11/1/2023
STP	10/25/2023	15	11/8/2023
Documents V2	**10/13/2023**		**12/6/2023**
Updated SDP	10/13/2023	15	10/27/2023
Updated SRS	10/25/2023	15	11/8/2023
Updated TM	11/8/2023	10	11/17/2023
Updated SDD	11/13/2023	22	12/4/2023
Updated STP	11/22/2023	15	12/6/2023
Coding	**9/18/2023**		**10/9/2023**
Coding	9/18/2023	22	10/9/2023
Testing	**11/8/2023**		**11/29/2023**
Testing	11/8/2023	22	11/29/2023
Submission/Present:	**12/6/2023**		**12/15/2023**
Final Submision	12/6/2023	1	12/6/2023
Presentation	12/15/2023	1	12/15/2023

4.2.5 Project Resourcing

The type of staff required for this project include a project manager, research development team, and quality assurance team. The QA team consists of 6 members and one lead, and the RD team consists of 7 members and one team lead.

4.3 Project Monitoring and Control

4.3.1 Requirements Management

Changes made to the product requirements will be kept on an updated version of the SRS document that shall be shared with the client for their approval.

4.3.2 Quality Control

Defects will be recorded and tracked as Change Requests, and defect metrics will be gathered (see Reporting and Measurement below).

All deliverables are required to go through the appropriate review process, as described in the Development Case. The review is required to ensure that each deliverable is of acceptable quality, using guidelines and checklists.

Any defects found during review which are not corrected prior to releasing for integration must be captured as Change Requests so that they are not forgotten.

4.3.3 Reporting and Measurement

Updated schedule estimates, and metrics summary reports, will be generated at the end of each iteration.

4.3.4 Risk Management

Risks will be identified in the Inception Phase and throughout the lifecycle of the project. Project risk is evaluated at least once per iteration and documented by the Team Lead. All risks will identify and rank risk likelihood and risk consequence, as well as mitigation steps.

4.3.5 Configuration Management

Appropriate tools will be selected which provide a database of Change Requests and a controlled versioned repository of project artifacts.

All source code, test scripts, and data files are included in baselines. Documentation related to the source code is also included in the baseline, such as design documentation. All customer deliverable artifacts are included in the final baseline of the iteration, including executables.

The Change Requests are reviewed and approved by one member of the project, the Change Control Manager role.

5. Miscellaneous

There are no miscellaneous items at this time.