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COSC412

Software Project Management Plan

Preface: Scope and purpose

Scope: The features the website, as requested by the client, will be defined in this document. Both the backend and/or frontend mechanisms involved in each feature will be defined in this document. An explanation for each design and development choice will be provided for each mechanism involved in the project.

Purpose: This document is for the reader to understand the underlying structure of this specific project and the mechanisms at play in this project’s functionality.

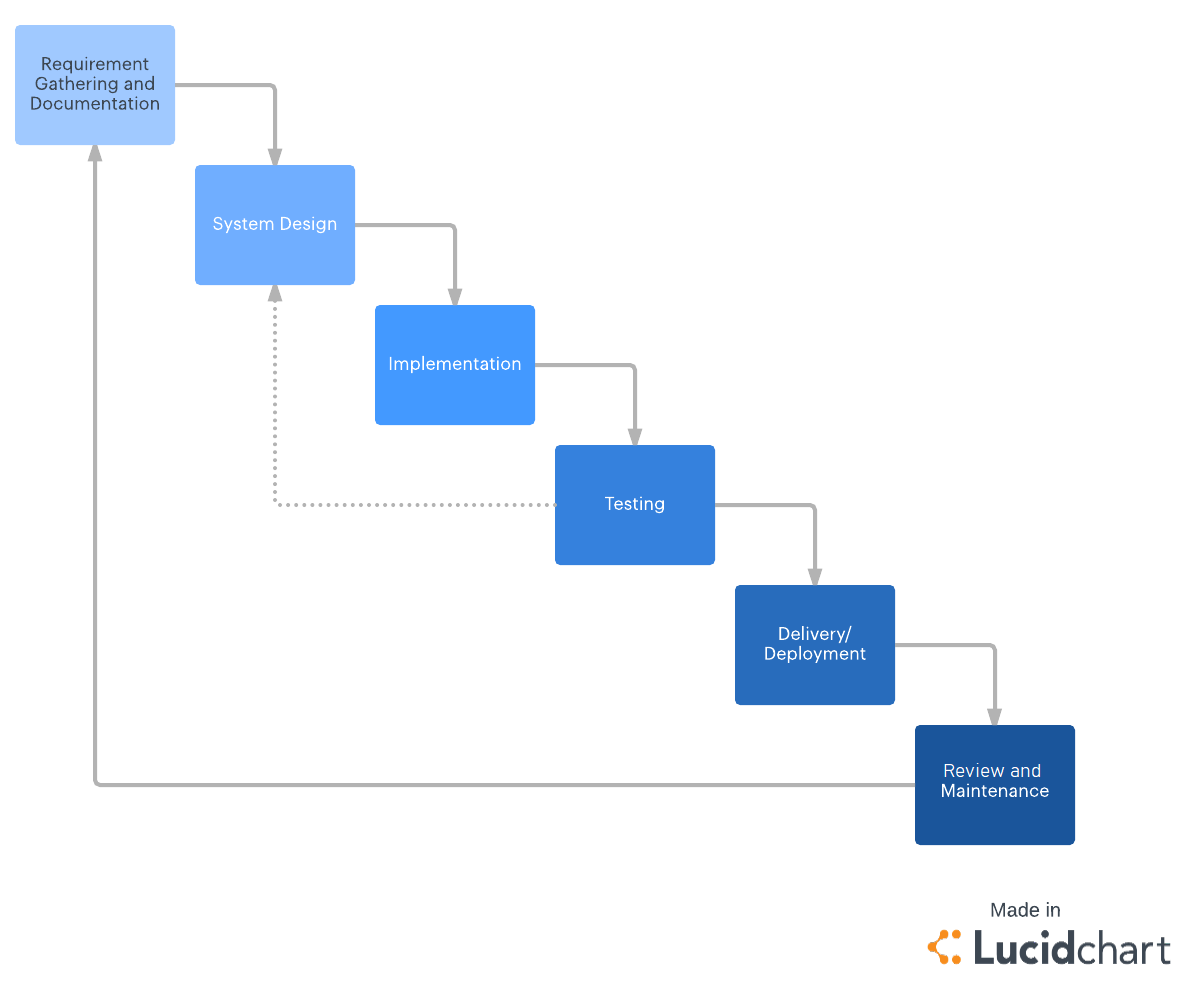
Introduction

* 1.1 Project Overview
  + Project Description: The project entails a website for a small business which builds desktop computers. The features of this site include a Homepage, Catalog, and Shopping cart. The homepage includes a slideshow, information on the business, and a section for reviews. The Catalog will use the Newegg API and have filters to sort products. The shopping cart feature allows for users to pay for and play orders through the site. This is done using the FedEx API and Stripe API. The site will have a database for user accounts and items to be listed in the catalog.
* 1.2 Project Deliverables: All items to be delivered, including delivery dates and location
  + Database for Registered and Guest user Accounts (07/12)
  + Catalog (07/18)
    - Includes: Database for items by item weight, base price, Availability, and an array of Images.
  + Shopping Cart (07/21)
    - Includes: A Payment page, confirmation page, and shipping rates
  + Contact page (07/24)
* 1.3 Evolution of the SPMP: Plans for anticipated and unanticipated change
* 1.4 Reference Materials: Complete list of materials referenced in SPMP
  + L. (2018, September). Waterfall Project Management Template [made in Lucidchart]. Retrieved from https://www.lucidchart.com/blog/waterfall-project-management-methodology
* 1.5 Definitions and Acronyms
* **1.6 Selected Software Process with brief justification**

Project Organization

Part 2:

* **2.1 Process Model: Relationships among project elements**
  + The Development model used will be the Waterfall model because most of the process will be sequential.



* + The Loop through System from ‘Testing’ to ‘System Design’ occurs to account for any design implementations that fail integration test. It will be re-evaluated to be properly integrated into the system.
* **2.2 and 2.3 Organizational Structure and Interfaces**
  + The Client is a
  + Most of the software and resources will be non-commercial and used through student discounts until after the date of delivery. The client did not approve the project for commercial use until September.
* **2.4 Project Responsibilities:**
  + Major functions:
    - For the Customer:
      * To browse and shop for parts.
      * To contact the store owner directly through email.
      * To write a review on the site.
    - For the Store Owner:
      * To receive build request and to view customer inquiries sent from the site’s contact page.
  + The projects features include:
    - A Catalog.
    - A shopping Cart.
    - A contact page.

Managerial Process

Part 3:

* 3.1 Management Objectives and Priorities
  + Describes management philosophy, priorities among requirements, schedule and budget
* 3.2 Assumptions, Dependencies and Constraints
  + External events the project depends on, constraints under which the project is to be conducted
* 3.3 Risk Management
  + Identification and assessment of risk factors, mechanism for tracking risks, implementation of contingency plans
  + What do you do if client does not like developed prototype?
  + What do you do if the requirements are multiplying during analysis? (requirements creep) (too complex)
    - Use pre-built tools like APIs
  + If Project size is too large?
* 3.5 Monitoring and Controlling Mechanisms
  + Frequency and mechanisms for reporting
* 3.4 Staffing Plan
  + Numbers and types of personnel required to conduct the project
* **3.5 How you will Manage Change**

Technical Process

Part 4:

* **4.1 Methods, Tools and Techniques**
  + Front-end tools:
    - Bootstrap – For templates and overall design
    - Visual studio code – Tweaking, Testing and connecting features of the site
  + Backend tools:
    - Stripe API – payment method
    - Newegg API – Catalog, prices and weights of items in catalog
    - FedEx API – Shipping rates and tracking packages
    - MongoDB – Database
    - GoDaddy – Hosting (subject to change)
    - Mailgun – handles and verifies email through the sites contact page
    - Google reviews API – provides the current reviews and allows for a user to add a review.
  + Methods and Techniques: I will be using Java to test the APIs listed in 2.1.
* **4.2 Software Documentation and 4.3 Project Support Functions**
  + Reviews and revisions will occur after bi-weekly meetings with the client. This will allow for Quality assurance and will give the client agency through opportunities to approve, correct, or change aspects of the design. The design prior to each meeting will be documented in case it needs to be referred to in the future.

Work Elements, Schedule, Budget

Part 5:

* **Work Breakdown Structure (WBS):**

Website

Requirements

Designing system

APIs Integration

Further API test

Select tools

Review

Meet with client

Use Cases

SPMP

Design for main functions

Front-end design through bootstrap

Backend design

Set up

Use and review documentation

Integrate

Test current system

Document

Merge with current site

Testing

Review with client

Configure to meet any changes

Review with client

Fix to new standards

Present final product

* **Project Schedule (Gantt Chart)**

