**Introduction:**

**Purpose:** This vision document will be an outline for a planet and star simulator and generator

**Scope:** The scope of the project will be entirely in Visual Studio 2015, using the C# language

**Positioning:**

**Business opportunity:** A product for people who require a visual representation of a theoretical planet or star based on user specifications

**Problem statement:** The problem of the absence of knowledge of specific possible stars and planets affect those that would like a visual representation. The impact of the problem is the lack of software able to solve this problem. A successful solution would include a visual representation of a planet or star, user-friendly GUI, and easily accessible.

**Stakeholder and user descriptions:** The primary stakeholders is Benjamin Meadows and Zane Celmer, two aspiring college students. The primary users would be astronomy hobbyists and possible astronomy professionals.

**Product overview:**

**Product perspective:** This is an application that will run on a computer that can run an executable.

**Summary of capabilities:**

|  |  |
| --- | --- |
| **Customer benefit** | **Supporting features** |
| Lightweight and User-Friendly | An easy to use GUI coded in Visual Studio using Windows Presentation Foundation |
| An easily accessible planet and star generator and simulator | It is open source and on GitHub |
| A visual representation of planets and star based on user input | An easy to use management system inside the program |

**Assumptions and dependencies:** This will be attempted in 3D, however, if it is too much of a stain on resources so it may be required to move it to 2D. It will be coded entirely in Visual Studio, however, it may require other outside resources in the future.

**Product features:** Features of product include, but is not limited to, open source and easily accessible, User-friendly GUI, a practical management system for stars and planet.

**Constraints:** The potential of this being doable in 3D is limited by both the constraint of Visual Studio and C#, and the abilities of the program creators. It may require outside sources for 3D modeling

**Other product requirements:** It will ideally only require a computer with the ability to run an executable file.