**Software Requirements Specification**

1. **Introduction**
   1. **Purpose**

Allow users to plan factory buildings in the Satisfactory Game. This tool would be available on Google Play Store, as there is currently no tool available. Users will be able to simply and intuitively use this tool, even if they are unfamiliar with specific mechanisms of the game.

* 1. **Intended Audience**

Users of the Satisfactory Game.

* 1. **Intended Use**

Planning factories based on users’ needs.

* 1. **Product Scope**

Implementation of features described in this document throughout the course of the school year. Learn and develop other features as desired, no strict scope.

* 1. **Definitions and Acronyms**

Satisfactory Game – Game made by Coffee Stain Studios available on the Steam store.

Steam – Game distribution service.

Factory (In-game) – a user defined collection of production buildings.

Factory (In-tool) – a full pipeline of production buildings from the desired start item to the desired end item.

1. **Overall Description**
   1. **User Needs**

This tool will process user input of desired item and number of those items per minute into a full production pipeline from the ore itself. Users will log in to the system to be able to save their factories for future use. Users will be able to edit the output directly and watch the factory pipeline change based on their input.

* 1. **Assumptions and Dependencies**

Users are generally familiar with the Satisfactory Game.

Users can understand a simple graph or spreadsheet.

1. **System Features and Requirements**

**3.1 Functional Requirements**

**1. Create Account**

Description: User will be able to create an account.

When I input a username and password, my account should be created.

**2. Log in**

Description: User will be able to log in to their account after creation.

After I have created an account and input my credentials to log in, the system shall verify my credentials and proceed.

1. **Delete Account**

Description: User will be able to delete their account

When I am logged in and press a button to delete my account, the system shall remove my credentials from the database.

1. **Input Desired Product**

Description: User will be able to input their desired product.

When I have decided on my product and am on the production planning page, the system will have an input box for the product.

1. **Process Desired Product**

Description: User will be able to view the factory plan.

When I have input my desired product, the system shall process the pipeline from ore and display a graph of the factory.

1. **Input Start Item**

Description: User will be able to input an item they are already creating, allowing the factory to begin with that item instead of ore.

When I input an item other than the product, the system shall process that item into the factory and adjust the supply chain accordingly.

1. **View Map**

Description: User shall be able to view a map of the Satisfactory Game.

When I click on the map symbol, the system shall open the map on the page.

1. **Modify Map**

Description: User shall be able to modify the map, such as adding a miner on a node.

When I click on a resource node and add miner, the system shall display a miner picture on that node and the number of items it’s mining per minute.

1. **Map Processing**

Description: System shall be able to process information on the map that’s input by users to create factories.

When a miner is added to the map, the system shall remove that node as an option for future factories.

1. **Factory Localization**

Description: System shall be able to find nodes based on new factory requirements in a centralized location on the map.

When I create a new factory, the system shall find the resources required that are still available on the map in a central location.

1. **Process Factory Build Requirements**

Description: New factories will display building requirements for the user (total items needed to build the factory)

When I create a new factory, the system shall calculate the item cost for the factory.

1. **Other Requirements** 
   1. **Database Requirements**

Production buildings cost to build

Resources

Item build recipes

Items alternate build recipes

Node location

User miners on map locations

* 1. **Risk Management**

Users shall only be able to input integers into the result item count.

Users shall only be able to select from a list of items after input (program will not process user input directly, except to populate a list of items.

**Similar Tools**

Satisfactory Calculator: [[SCIM] Satisfactory - Calculator | Gaming Tool/Wiki/Database to empower the players.](https://satisfactory-calculator.com/)

Functionality: Resource map, Game progression, blueprints, workbench, interactive map, planners