TABLE OF CONTENTS

[1 Requirements (GDD) 2](#_Toc168232817)

[1.1 Research 2](#_Toc168232818)

[1.2 Concept Development 2](#_Toc168232819)

[1.3 Prototyping 2](#_Toc168232820)

[1.4 Game Design 2](#_Toc168232821)

[2 System Design (TDD) 2](#_Toc168232822)

[2.1 System Architecture 2](#_Toc168232823)

[2.2 Technical Design 2](#_Toc168232824)

[2.3 Module Design 2](#_Toc168232825)

[2.4 Integration Planning 2](#_Toc168232826)

[3 Implementation 3](#_Toc168232827)

[3.1 Sprint Planning 3](#_Toc168232828)

[3.2 Spike Research 3](#_Toc168232829)

[3.3 Development Sprint 3](#_Toc168232830)

[3.4 Feedback Loop 3](#_Toc168232831)

[4 Testing 3](#_Toc168232832)

[4.1 Minimum Viable Product 3](#_Toc168232833)

[4.2 Beta Release & Testing 4](#_Toc168232834)

[4.3 Quality Assurance 4](#_Toc168232835)

[4.4 Build Finalization 4](#_Toc168232836)

[5 Deployment 4](#_Toc168232837)

[5.1 Distribution 4](#_Toc168232838)

[5.2 Marketing 4](#_Toc168232839)

[5.3 Immediate Post Launch Support 4](#_Toc168232840)

[5.4 Feedback Processing 5](#_Toc168232841)

[6 Maintenance 5](#_Toc168232842)

[6.1 Technical Support & Patches 5](#_Toc168232843)

[6.2 Community Management 5](#_Toc168232844)

[6.3 Updates & Expansions 5](#_Toc168232845)

[6.4 Post-Release Retrospective 5](#_Toc168232846)

# Requirements (GDD)

## Research

### Design Idea Collection

#### Brainstorming

#### Game Concept Idea Bank

#### Visual & Audio Inspiration Bank

#### Narrative Idea Bank

### Market Research

#### Industry Analysis

#### Game Studio Analysis

#### General Game Analysis

#### Played Games Analysis

### User Research

#### Player Analytics & Sales Data

#### User Reviews

#### Player Experience Research

#### User Personas

### Continuing Education

#### Design Education

#### Technical Skills Education

#### Business & Project Management Education

#### Emerging Industry News & Trends

## Concept Development

### Concept Generation

#### Player Experience Goals

#### Genre & Game Hook

#### Core Game Mechanics, Dynamics, and Gameplay Loop

##### Core Mechanic

##### Player Goals

##### Feedback

##### Rewards & Progression

##### End

#### Game Aesthetics & Narrative

### Reference Games

#### Player Experience Data

#### Game Design Best Practices

#### Technical Design Best Practices

#### Marketing & Sales Strategy

### Standard Toolkit Selections

#### Prototype Package

#### Game Platform Starting Points

#### Standard Modules

#### AI Systems

#### End

### Concept Validation

#### Concept Quality Assurance Checklist

#### Technical Feasibility

#### Paper Prototyping

#### Surveys & Questionaires

#### End

## Prototyping

### Gameplay Loop Rapid Prototyping

#### Design Variations

##### A/B Testing

#### Prototype Assets

#### End

### Storyboarding & Concept Art

#### Narrative Outline

#### Asset Planning

#### Level Design Concepts

#### Audio Specifications

#### End

### User Experience/User Interface

#### UI/UX Flow Diagrams

#### Wireframes

#### End

### Prototype Playtesting & Feedback

#### Evaluation Criteria

#### Performance Data

#### Refinement Strategy

#### Bug Tracking & Log Document

#### End

## Game Design

### Scoping

#### Define Minimum Viable Product

##### MoSCoW Prioritization

#### End

### Game Logic

#### Game Logic Features

#### Game Logic Architecture

##### Sequence Diagrams

#### Game Systems Design

#### AI Techniques

### Game Design Document

#### Summary

#### Programming

#### Level Design

#### Assets

#### End

### Product Backlog

# System Design (TDD)

## System Architecture

### Game Design Requirements Analysis

#### Functional Requirements

#### Non-Functional Requirements

#### User Stories

#### End

### Module (Component) Identification

#### Module List (Epic Stories to Backlog)

#### Time Estimation

#### Module Dependencies

#### Module Sequencing

#### End

### High-Level Design Diagrams

#### Game Loop

#### System Mapping

#### Event Systems

#### State Management Systems

#### End

### Performance & Scalability Planning

#### Quality Metrics

#### Cache Locality

#### Memory Bandwidth

#### Parallel Processing

#### End

### End

## Technical Design

### Technology Stack Selection

### Feature Specifications

#### Functionality

#### Performance Requirements

#### Interfaces

#### Existing Solutions from Toolkit

#### End

### Data Management

#### Database Design

##### Data Flow Diagrams

#### Data Persistence

#### Main Loop

#### State Management

##### State Diagrams

#### End

### Design Patterns & Development Standards

#### Data-Orientated Programming

#### End

## Module Design

### Module Feature List

### Module User Stories

### Entity, Component, System Breakdown

#### Dependency Management

### Module Integration & Interfacing

#### Dependency Diagrams

#### API Design Specifications

#### Interface Design

#### Module Testing Plan

### End

## Integration Planning

### Pipeline & Workflow Planning

#### Development Roadmap

#### Asset Pipeline

#### End

### Testing Plan

#### User Testing

#### Manual Testing

#### Automated Testing

#### End

### Continuous Integration/Continuous Deployment (CI/CD) Planning

### Version Control & Branching Strategy

### End

# Implementation

## Sprint Planning

### Sprint Increment Objective

### Sprint ECS Specifications

#### Object Inventory

#### Asset Breakdown

#### Backlog Refinement

#### End

### Sprint Scheduling

#### Critical Path Dependencies

#### Kanban Board

#### Limit WIP

##### Pull System

##### End

### End

## Spike Research

### Visually Model Software

### Technical Specifications

#### Architectural Fit

#### Design Patterns Applied

#### Libraries & Tools

#### End

### Class Diagrams, Data Structures, and Algorithms

### Writing Tests

### End

## Development Sprint

### Programming

### Asset Creation

### Writing

### Branching & Commits

### End

## Feedback Loop

### Sprint Review

### Sprint Testing

#### User Experience Testing

#### Regression Testing

#### End

### Error Handling & Logging

#### Bug Reporting & Tracking

### Optimization

### End

# Testing

## Minimum Viable Product

### Alpha Build

#### Early Marketing

#### Internal Testing

#### End

### Incremental Feature Delivery

### Stabilization Phase

### End

## Beta Release & Testing

### Closed Beta

### Open Beta

### End

## Quality Assurance

### Compliance & Accessibility

### End

## Build Finalization

### Localization

### Release Candidate

### Gold Master

### Certification

### End

# Deployment

## Distribution

### Distribution Platform Set-Up

### End

## Marketing

### End

## Immediate Post Launch Support

### Performance Monitoring

### Incident Management

### End

## Feedback Processing

### End

# Maintenance

## Technical Support & Patches

### End

## Community Management

### User Guides

### Events & Promotions

### End

## Updates & Expansions

### Player Retention Strategies

#### End

### Complete Edition

### End

## Post-Release Retrospective

### End