

SE 3XA3: Development Plan Namcap

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Table 1: **Revision History**

Date	Version	Notes
2016-10-11	1.0	Addition of content to Project Drivers sections excluding Naming Conventions and Terminology
Date 2	1.1	Notes

This document describes the requirements for the redevelopment project Namcap. The template for the Software Requirements Specification (SRS) is a subset of the Volere template (Robertson and Robertson, 2012). If you make further modifications to the template, you should explicitly state what modifications were made.

1 Project Drivers

1.1 The Purpose of the Project

The purpose of this project is to redevelop the classic arcade game Pacman based on an unstructured open-source development. The Pacman conceptual redevelopment, Namcap aims to provide the classic arcade-style experience to a broader player base. The project will be geared towards a computer implementation to provide the most access for the classical gaming interaction without having to pay large amounts for additional hardware. The project will focus on redeveloping the reference open-source project with correct programming standards, modularization, and an emphasis on formal documentation.

1.2 The Stakeholders

1.2.1 The Client

The project is being developed for an external entity that has final say on the acceptance of the redevelopment and will review the project before deployment. The external entity shows interest in the redevelopment of open source projects with emphasis on improvement of programming structure and documentation.

1.2.2 The Customers

The general gaming population are customers for this project. A typical gamer would have access to the internet and have the computer experience to download and run the application.

1.2.3 Other Stakeholders

Another stakeholder of this project is the redevelopment team. VPB Game Studio is responsible for the development of Namcap, with emphasis on the utilization of correct programming principles and formalization of documentation throughout development.

1.3 Mandated Constraints

1.3.1 Solution Constraints

The implementation shall be based on the same mechanics as the original implementation. Mechanics such as sprit movement, collision with various in-game entities, and scoring should reflect Pacman. The project is a redevelopment and aims to stay true to the retro-arcade gaming interaction that Pacman utilized.

1.3.2 Implementation Environment of the Current System

- i All controls associated with the game mechanics shall be integrated to work with any keyboard configuration.
- ii The application shall be executable on both Mac, Windows, and Linux operating systems.

1.3.3 Partner or Collaborative Applications

The implementation does not require any partner or collaborative applications to execute. The application runs independently of any external or pre-existing applications.

1.3.4 Off-the-Shelf Software

The implementation is self-contained and therefore requires no addition OTS software to be incorporated into the project.

1.3.5 Anticipated Workplace Environment

The application shall be usable on desktop and laptop computer platforms. This allows users, once the application is downloaded locally, to run the

game virtually anywhere with a laptop. The implementation does not affect the workplace environment externally as no audio functionality is built-in. The execution of the implementation is only limited to the extent of laptop portability.

1.3.6 Schedule Constraints

Scheduling constraints are not applicable to this redevelopment project. However, self-imposed scheduling guidelines have been put in place for the development process. Specifically, the development team is aiming to have the initial implementation fully functioning by December 2016.

1.3.7 Budget Constraints

Strict budget constraints are not applicable for this project. Any possible budgeting considerations for this redevelopment project focus around the teams time management and availability. Since the redevelopment is based on an open-source implementation, any and all additional resources for the project are readily and freely available.

1.3.8 Enterprise Constraints

The redeveloped implementation shall follow the correct programming and development standards as well as emphasis the creation of formalized documentation.

1.4 Naming Conventions and Terminology

1.5 Relevant Facts and Assumptions

1.5.1 Relevant Facts

- i The existing base implementation is approximately 1600 lines of Java code.
- ii The original project is to be used as a source to conceptualize based on the requirements. No code will be used from the original project.

1.5.2 Business Rules

The redevelopment team shall delegate work as to equalize the amount taken on by each member. This allows for an efficient development process and is mandated by the client of the project.

1.5.3 Assumptions

The redevelopment project assumes that:

- i All required software components (IDEs, Image Editing Software) will be readily available.
- ii Audio functionality shall not be implemented initially (may be implemented in the future following the appropriate decision process).
- iii The implementation will be executed in a verified instance of either the Mac, Windows, or Linux operating systems.
- iv The majority of users will have basic computer knowledge and experience.

2 Functional Requirements

2.1 The Scope of the Work and the Product

2.1.1 The Context of the Work

2.1.2 Work Partitioning

2.1.3 Individual Product Use Cases

2.2 Functional Requirements

3 Non-functional Requirements

3.1 Look and Feel Requirements

3.2 Usability and Humanity Requirements

3.3 Performance Requirements

3.4 Operational and Environmental Requirements

3.5 Maintainability and Support Requirements

3.6 Security Requirements

3.7 Cultural Requirements

3.8 Legal Requirements

3.9 Health and Safety Requirements

This section is not in the original Volere template, but health and safety are issues that should be considered for every engineering project.

4 Project Issues

4.1 Open Issues

4.2 Off-the-Shelf Solutions

4.3 New Problems

4.4 Tasks

4.5 Migration to the New Product

4.6 Risks

4.7 Costs

4.8 User Documentation and Training

4.9 Waiting Room

4.10 Ideas for Solutions

References

James Robertson and Suzanne Robertson. *Volere Requirements Specification Template*. Atlantic Systems Guild Limited, 16 edition, 2012.

5 Appendix

This section has been added to the Volere template. This is where you can place additional information.

5.1 Symbolic Parameters

The definition of the requirements will likely call for SYMBOLIC_CONSTANTS. Their values are defined in this section for easy maintenance.