



PROCESS CONTROLLER

High Level Design Version Draft v0.4

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Table of Contents

High Level Design

1. Introduction	
1.1	Purpose
1.2	Scope
1.3	Overview
2. General Description	
2.1	Product Perspective
2.2	Tools used
2.3	General Constraints
2.4	Assumptions
2.5	Special Design aspects
3. Design Details	
3.1	Main Design Features
3.2	Standards
3.3	Data Flow Level-0
3.4	Data Flow Level-1
3.5	High Level Design
3.6	User Interface
3.7	Error Handling
3.8	Help
3.9	Performance
3.10	Reliability
3.11	Maintainability
3.12	Portability
3.13	Reusability
3.14	Application compatibility

High Level Design

1. Introduction

1.1 Purpose

The purpose of this High-Level Design (HLD) Document is to add the necessary detail to the current project description to represent a suitable model for coding. This document is also intended to help detect contradictions prior to coding and can be used as a reference manual for how the modules interact at a high level.

1.2 Scope

This document provides a comprehensive high level design overview of the Process Controller. It highlights the high-level flow of the functionalities of the system and serves as an input to the low-level design documents that would further elaborate on the proposed system design.

1.3 Overview

This HLD Document is arranged in the following format:

-Section1: Introduction

A brief explanation about the purpose, aim, scope, and design format of the proposed project.

- Section 2: General Description

This section is all about the general constraints, assumptions, and design aspects associated with the proposed project. The product perspective will give an overall description of the process controller.

- Section 3: Design Details

This section documents the detailed design of all modules associated with the development of the process controller.

2. General Description

2.1 Product Perspective

Process controller is a system software which takes the input and display the output accordingly, the user can give the program input and can perform multiple operations on the given program and can display various statistics information of that process by giving the process name.

2.2 Tools used

1. C and System programming tools.
2. Lucid chart application is used for pictorial representations.

2.3 General Constraints

1. The user needs to be authorized by the server before logging into the system.

2.4 Assumptions

We are assuming that the user enters the user can give the program input and can perform multiple operations on the given program and can display various statistics information of that process by giving the process name.

2.5 Special Design aspects

One of the design aspects is that the system will work with two clients at a time.

3. Design Details

3.1 Main Design Features

The main design features include four major parts: the architecture, the user interface design, the files, and functionalities. To make these designs easier to understand, the design has been illustrated in attached diagrams.

3.2 Standards

- Security –NA
- Quality – by keeping the interface simple and direct, quality should be kept at a maximum.

3.3 Data Flow Diagram (Level - 0)

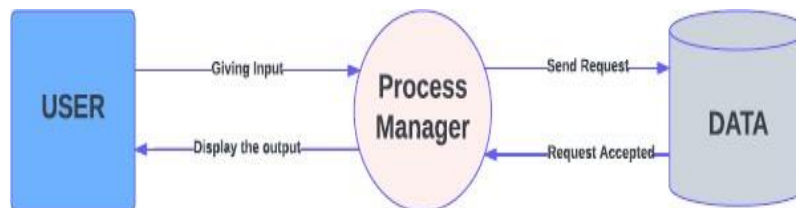
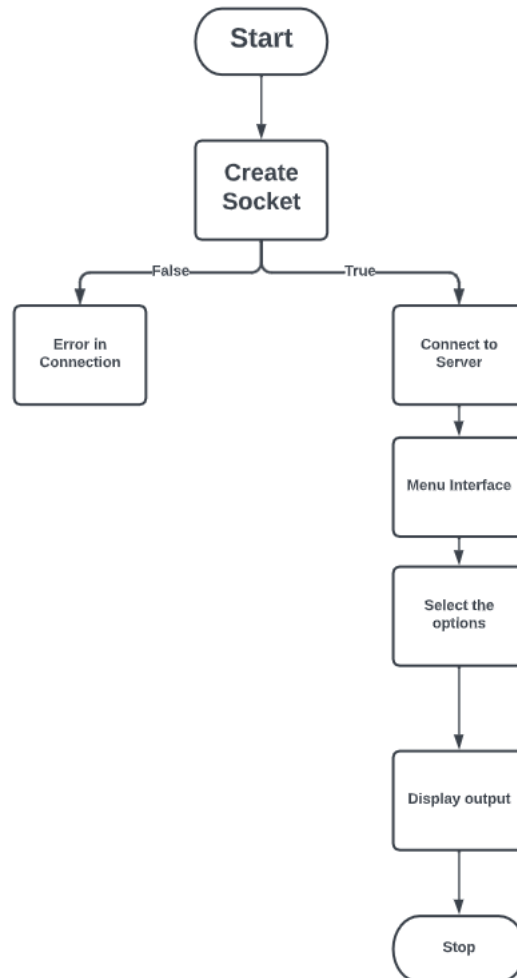


Fig 3.3 Level-0 DFD

3.4 Data Flow Diagram (Level - 1)



Description:

A data-flow chart is a way of representing a flow of data through a process or a system. The DFD also provides information about the outputs and inputs of each entity and the process itself.

3.5 High Level Design

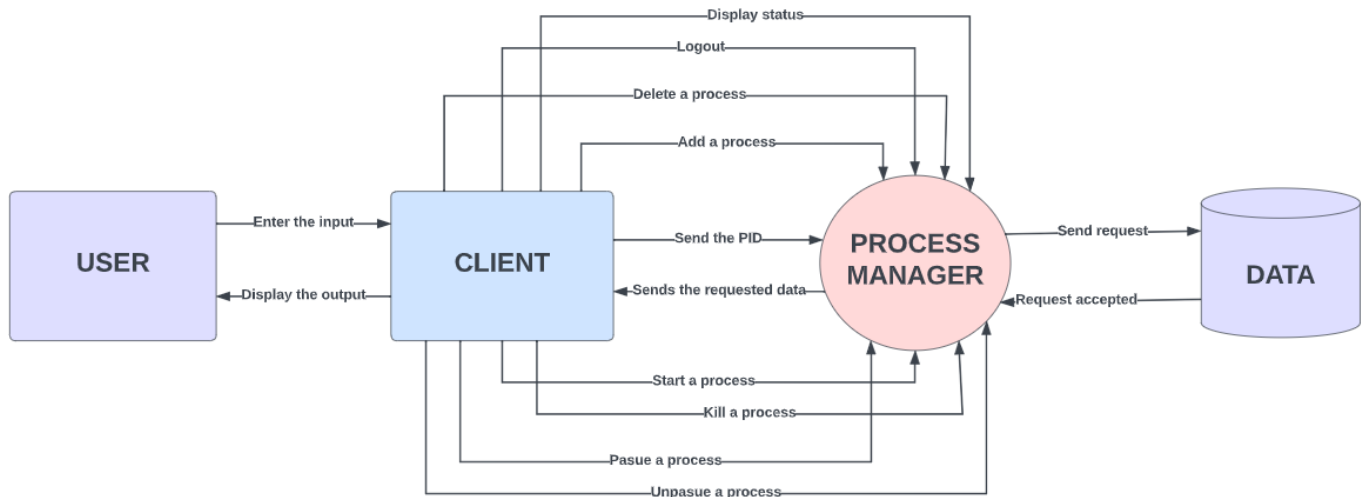


Fig 3.5 HLD

3.6 User Interface

Menu Driven interface.

3.7 Error Handling

Should errors be encountered, an explanation will be displayed as to what went wrong? An error will be defined as anything that falls outside the normal and intended usage.

3.8 Help

Help will come in the form of all the documentation created prior to coding, which explains the intended uses. Source code can be created by including proper comments that describe the functionality being implemented.

3.9 Performance

Performance is going to be very important for this project. For everything to run smoothly for this project, The process controller will work on the user terminal, performance depends upon the software of the user.

3.9.1 Reliability

The system can perform multiple operations on a single process without causing any errors.

3.10 Maintainability

NA

3.11 Portability

Code and program portability should be possible between kernel-recompiled Linux distributions. For everything to work properly, all programs should be in one folder.

3.12 Reusability

The code can be reused with no problems. Everything will be completely reusable to anyone.

3.13 Application compatibility

This was designed as an independent system. As it is not connected to any other components or interfaces, application compatibility is not a concern.