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# **Kung-Fu Programmers**

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## **Boolean Expression Evaluator Software Development Plan**

**Version 1.0**

Boolean Expression Evaluator	Version: 1.0
Software Development Plan	Date: 25/Feb/24
Project Management Plan	

## Revision History

Date	Version	Description	Author
25/Feb/2024	1.0	Created project management plan	Schmidt, S., Stonestreet, B., Rodenberg, S., Medallada, S., Whitmer, K.

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# Software Development Plan

## 1. Introduction

### 1.1 Purpose

The purpose of the **Software Development Plan** is to gather all information necessary to control the Boolean Expression Evaluator project. It describes the approach to the development of the software and is the top-level plan generated and used by managers to direct the development effort.

The following people use the **Software Development Plan**:

- The **Project Manager** uses it to plan the project schedule and resource needs, and to track progress against the schedule.
- **Project team members** use it to understand what they need to do, when they need to do it, and what other activities they are dependent upon.

### 1.2 Scope

This **Software Development Plan** describes the plan to be used by the project team members during the development of the Boolean Expression Evaluator, including deployment of the BXE. The details of the individual iterations will be described in the Iteration Plans.

The plans as outlined in this document are based upon the product requirements as defined in the *Vision Document*.

### 1.3 Definitions, Acronyms, and Abbreviations

See the Project Glossary.

### 1.4 References

For the **Software Development Plan**, the list of referenced artifacts includes:

- *Vision Document*, 17/Feb/24, KU SoE, EECS Dept.
- *Vision Statement*, 25/Feb/24, KFP
- *Glossary* v1.0, 25/Feb/24, KFP
- *Configuration Management Plan* v1.0, 25/Feb/24, KFP
- *Risk Assessment* v1.0, 25/Feb/24, KFP

### 1.5 Overview

This **Software Development Plan** contains the following information:

Project Overview	—	provides a description of the project's purpose, scope, and objectives. It also defines the deliverables that the project is expected to deliver.
Project Organization	—	describes the organizational structure of the project team.

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Management Process — explains the estimated cost and schedule, defines the major phases and milestones for the project, and describes how the project will be monitored.

Applicable Plans and Guidelines — provide an overview of the software development process, including methods, tools, and techniques to be followed.

## 2. Project Overview

### 2.1 Project Purpose, Scope, and Objectives

The purpose of this project is to gain hands-on experience with an Agile Software Development model.

This project is defined and motivated by the KU SoE, EECS Dept. Software Engineering course.

The final product of this project will be a small program that can evaluate Boolean expressions with error-detection.

See section 4.2 for a list of deliverables.

### 2.2 Assumptions and Constraints

- Programming Language – C++20.
- Equipment/Platform – KU SoE Cycle Servers.
- Timeframe – see section 4.2 for project schedule.
- Staff – see section 3.3 for project team member listing.
- Software Development Model – UPEDU

### 2.3 Project Deliverables

#### Deliverables

- Project Management Plan
- Requirements Document
- Design Document
- Test Cases
- Source Code
- User Manual

Deliverables are delivered towards the end of the iteration, as specified in section 4.2.4 *Project Schedule*.

### 2.4 Evolution of the Software Development Plan

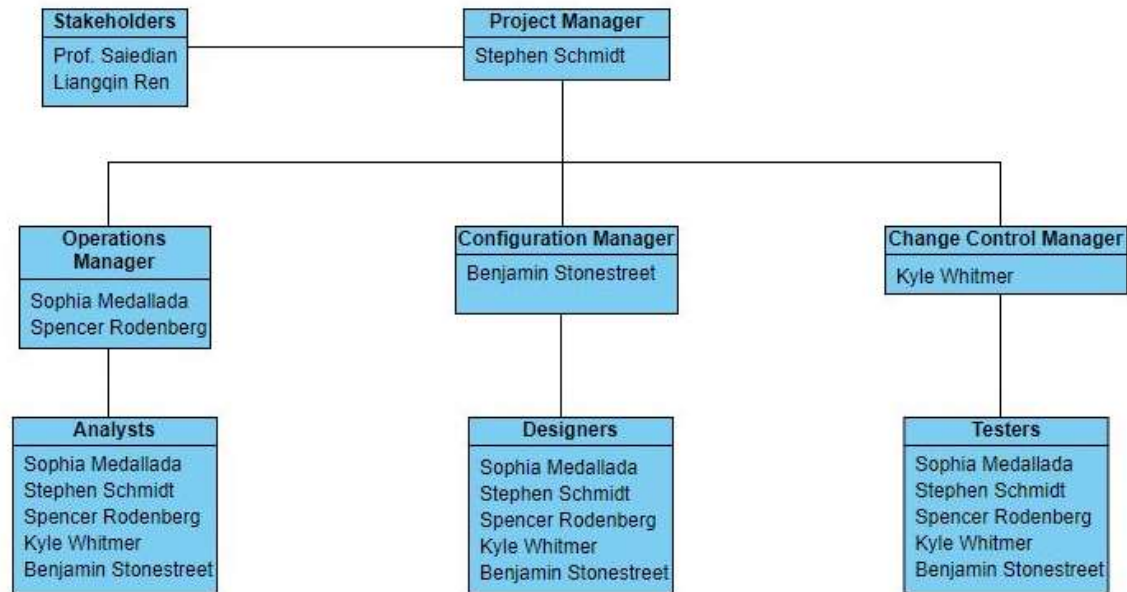
The *Software Development Plan* will be revised prior to the start of each Iteration phase.

Version Number	Purpose	Date
2.0	Consider revisions after first artifact is completed.	Week 10

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### 3. Project Organization

#### 3.1 Organizational Structure



#### 3.2 External Interfaces

Not Applicable.

#### 3.3 Roles and Responsibilities

Person	Unified Process for EDUcation Role	Contact Information
Benjamin Stonestreet	Configuration Manager	B425s231@ku.edu
Sophia Medallada	Analyst	s768m426@ku.edu
Kyle Whitmer	Change Control Manager, Tester	kyle.whitmer@ku.edu
Spencer Rodenberg	Designer	rodenbers@ku.edu
Stephen Schmidt	Project Manager, Tester	stephen@ku.edu

Anyone on the project can perform [Any Role](#) activities.

### 4. Management Process

#### 4.1 Project Estimates

Not Applicable.

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#### 4.2 Project Plan

##### 4.2.1 Phase Plan

Not Applicable.

##### 4.2.2 Iteration Objectives

###### Inception Phase

- Project Management Plan

###### Elaboration Phase

- Software Requirements

###### Construction Phase

- Software Architecture

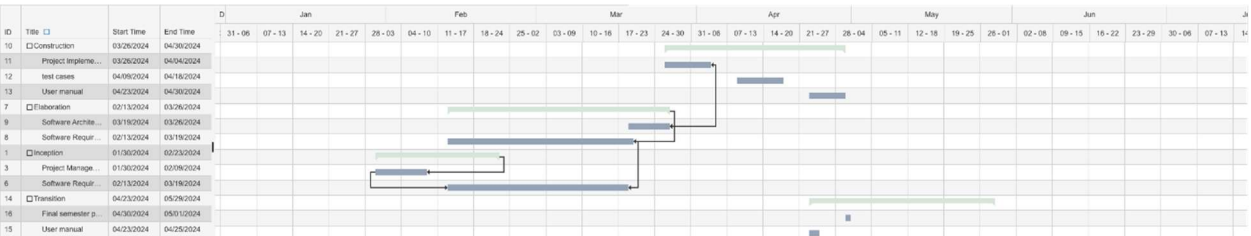
###### Transition Phase

- Project Implementation
- Test Cases
- User Manual
- Source Code

##### 4.2.3 Releases

Version Name	Release Date
Final Product v1.0	01/Apr/2024

##### 4.2.4 Project Schedule



##### 4.2.5 Project Resourcing

Not Applicable.

#### 4.3 Project Monitoring and Control

##### 4.3.1 Requirements Management

The requirements for this system are captured in the Vision document. Requested changes to requirements are captured in Change Requests and are approved as part of the Configuration Management process.

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#### 4.3.2 Quality Control

All deliverables will be reviewed informally before submission. A window of time of at least 48 hours will be allowed for change requests from team members to be submitted before a deliverable itself is submitted. The review is required to ensure that each deliverable is of acceptable quality, using guidelines defined in this document and references.

#### 4.3.3 Reporting and Measurement

Not Applicable.

#### 4.3.4 Risk Management

Risk	Control
Project team members are not available when required.	Responsibilities will be shared, and personnel will let the team know at least one week before needing to be absent from a meeting, if possible.
Requirements altering.	Requirements and due dates are supplied by stakeholders. Management element will report any changes to the project requirements or the project plan as soon as the changes are given. Change Control Manager will execute change request process for this document if required.
Project team members are pulled from project.	Responsibilities and Roles will be shared to avoid a single-point-of-failure if a team member must leave the project.
Development team is unfamiliar with the environment being used.	Language, platform, and the development framework are unfamiliar to the project team. Extra care will be taken to identify any weaknesses during the project and remediation techniques will be discussed if necessary.

*Refer to the Risk List Document (Risk Assessment.docx) for detailed information.*

#### 4.3.5 Configuration Management

GitHub and Microsoft Teams have been selected to provide a database of Change Requests and a controlled versioned repository of project artifacts.

All source code, test scripts, and data files are included in baselines. Documentation related to the source code is also included in the baseline, such as design documentation. All customer deliverable artifacts are included in the final baseline of the iteration, including executables.

The Change Requests are reviewed and approved by one member of the project, the Change Control Manager role. If the Change Control Manager is not available, the Configuration Manager, then the Project Manager will review Change Request forms.

*Refer to the Configuration Management Plan (Configuration Management Plan.docx) for detailed information.*

## 5. Annexes

The project will follow the UPEDU Software Development process. More information on that process can be found at their website: [<https://www.upedu.org/>].



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Other applicable process plans are listed in the references section, including Programming and Design Guidelines inside the Configuration Management Plan.