

Software Configuration Management Plan

Blur1

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Contents

1	Introduction	2
1.1	Project Description	2
1.2	Software Configuration Items (CIs)	2
1.3	Software Life Cycle	3
1.4	Limitations	3
1.5	Assumptions	3
1.5.1	Cost	3
1.5.2	Schedule	3
1.6	Omissions	3
2	SCM Management	4
2.1	Organization	4
2.2	Responsibilities	4
3	SCM Activities	5
3.1	Configuration Identification	5
3.2	Configuration Control	5
3.2.1	Requesting Changes	5
3.2.2	Evaluating Changes	5
3.2.3	Approving or Disapproving Changes	5
3.2.4	Implementing Changes	6
3.3	Configuration Status Accounting	6
3.4	Configuration Evaluation and Reviews	6
3.5	Interface Control	6
3.6	Subcontractor/vendor Control	6
3.7	Release Management and Delivery	6
4	SCM Schedule	7

5	SCM Resources	8
5.0.1	Environment	8
5.0.2	Infrastructure	8
5.0.3	Software Tools	8
5.0.4	Personnel	8
5.0.5	Training	8
6	SCM Plan Maintenance	8

1 Introduction

1.1 Project Description

BlurBodyBalance helps keep track of your weight, diet, and workouts all in one place to motivate you to meet your goals. The main screen of the app will be able to be customized with the most relevant information for the user. The main screen will also contain tabs that will give more detailed information on the users weight, diet, and workouts.

The weight tab will display the user’s last weight entry, display a graph showing their weight changes over the last 30 days, and allow the user to submit new weight entries. In the workout tab, the user can keep a record of daily workouts in order to allow them to be consistent in daily workouts. Lastly, the diet tab will allow the user to enter calories they ingest and display their total daily calories. Entered data can be collected and put together into a printable report for the user.

The app will also allow the user to set weight, diet, and workout goals and will display their progress on those goals.

BlurBodyBalance will become a friend/ motivational coach. When you are living a healthy lifestyle and reaching your goals the app will be your best friend. It will compliment you on your progress to keep you motivated. On the other end if you start becoming lazy and not meeting your goals it will get on your case. It will start off by giving friendly reminders to get moving. If you continue to fall short the comments will become more passive-aggressive and less friendly. This way it will motivate you get back to work and to get the app to start complimenting you again.

1.2 Software Configuration Items (CIs)

- Firebase Database
- Flutter
- User Interface
 - Login/Register
 - Main Menu

- System Settings
- Weight Tracker
- Diet Tracker
- Exercise Tracker
- Progress Bar
- Line Graph
- Testing

1.3 Software Life Cycle

1. Versions of components are in a shared project repository
2. Developers copy these into their workspace and make changes
3. Use system building tools to create a new system on their computer for testing
4. Once changes are approved, return modified components to the project repository

1.4 Limitations

Our biggest limitation is Time. Between assignments, exams, and even other projects for our other classes this semester, we will most likely not be able to complete the entire plan.

1.5 Assumptions

1.5.1 Cost

We are assuming all tools we need to complete the project will be free.

1.5.2 Schedule

The schedule is made with the assumption that we can't devote all our time to the project. With this assumption, the schedule will be made as a sequence of events rather than absolute dates.

1.6 Omissions

In Introduction:

- Ability

In Resources:

- Techniques

- Equipment

In Management:

- Applicable Policies, Directives and Procedures

2 SCM Management

2.1 Organization

Blur1 will be using Github for version control. The master branch in the Github repository will be used as version management.

Flutter will be used to build the system.

2.2 Responsibilities

- Product Owner
 - Manages the product backlog
 - Orders the items in the product backlog
 - Makes the product backlog visible to all
 - Determines what is "done" and is acceptable in the sprint
 - May cancel a sprint if the sprint goal becomes obsolete
- Scrum Master
 - Makes sure the development team is practicing in scrum properly
 - Facilitates the product owner's and development team's work
 - Interfaces with external entities
- Development Team
 - Determines the work that needs to be done in a sprint
 - Works with the product owner to determine what "done" is
 - Implements the user stories in the sprint
 - Manages the sprint backlog

Each sprint a different team member takes the role as product manager and scrum master. All other team members are developers.

3 SCM Activities

3.1 Configuration Identification

Configuration Items:

- Firebase Database
- Flutter
- User Interface
 - Login/Register
 - Main Menu
 - System Settings
 - Weight Tracker
 - Diet Tracker
 - Exercise Tracker
 - Progress Bar
 - Line Graph
- Testing

3.2 Configuration Control

3.2.1 Requesting Changes

Change request should be submitted using a Change Request Form in order to properly document the request so that it can be evaluated and approved.

3.2.2 Evaluating Changes

There are many things to consider when evaluating a change request.

- What are the consequences of making the change? Minor/Major change?
- Does it affect many users or just a few?
- Is it a costly change? Does it affect many system components? Will it take a long time?
- Production release cycle: If a new version of the app was just released, maybe make the change in the next one.

3.2.3 Approving or Disapproving Changes

Using the evaluation criteria described above, change requests are either denied and discarded, or approved and added to the kanban board/backlog.

3.2.4 Implementing Changes

Once the change request has been accepted and is added to the list of things to do, when it is actually implemented may depend on the change's estimated priority.

3.3 Configuration Status Accounting

The product/sprint backlog and kanban board shows what CIs have been worked on/completed.

A more frequent/detailed description of a CIs status is discussed in daily scrum meetings which are documented.

3.4 Configuration Evaluation and Reviews

In sprints of one week, a goal on what features should get finished/worked on. All team members participate in the development of these features to reach the sprint goal.

All team members are involved in the evaluation and review of CI. If the CI does not meet a requirement, or another team member makes a suggestion, the change is placed on the kanban board.

3.5 Interface Control

New releases or updates of any interfacing items outside of the scope of this plan will be closely monitored.

If there is a change to a interfacing item that breaks a CI, changes will be made to the CI in order to restore its function.

3.6 Subcontractor/vendor Control

- Firebase Database
- Flutter (Mobile UI framework)

3.7 Release Management and Delivery

Release Components:

- Executable code of the system
- Installation program
- Documentation

New system releases may be necessary because of competition, marketing, platform changes, and technical quality of the system.

4 SCM Schedule

1. Baseline v1:

- Login v1
- Register v1
- Main Menu v1

2. Baseline v2:

- Login v1
- Register v2 - Enter User Specific Info
- Main Menu v2 - Tab for Weight Tracker
- Weight Tracker v1

3. Baseline v3:

- Login v1
- Register v2
- Main Menu v3 - Tab for Exercise Tracker
- Weight Tracker v1
- Exercise Tracker v1

4. Baseline v4:

- Login v1
- Register v2
- Main Menu v4 - Tab for Calorie Tracker
- Weight Tracker v1
- Exercise Tracker v1
- Calorie Tracker v1

5. Baseline v5:

- Login v1
- Register v2
- Main Menu v5 - User Settings
- Weight Tracker v1
- Exercise Tracker v1
- Calorie Tracker v1

5 SCM Resources

5.0.1 Environment

IOS and Android

5.0.2 Infrastructure

5.0.3 Software Tools

- IDE: VSCode and Android Studio
- Flutter
- Firebase
- Github
- Zenhub

5.0.4 Personnel

- Anthony Arbour
- Samuel Beaudoin
- Jacob Boudreau
- Henrikus Freeman
- Kenneth Seneres
- Adam Smith

5.0.5 Training

Using Flutter and Firebase's documentation and Youtube tutorials for personnel training.

6 SCM Plan Maintenance

The plan will be monitored by the current Product Owner and Scrum Master. After each baseline is achieved, the plan will be evaluated again by the entire team in the next scrum.

If development and resources are still in line with the current plan no change will be made. Otherwise the changes will be discussed with the team and made by the Product Owner or Scrum Master. Revisions to the plan will be saved as a separate document in order to keep a history of changes made to the plan.