Calorize
Software Development Plan
Version <1.0>

Revision History

Date	Version	Description	Author
<10/27/2017>	<1.0>	Initial plan	Nguyễn Quốc Bảo Lâm Hoàng Dũng Huỳnh Xuân Khánh Nguyễn Trần Quốc Khánh Nguyễn Lê Tâm

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Software Development Plan

1. Introduction

This Software Development Plan describes the overall plan to be used by the team for developing the Calorize. The details of the plan will be given out below.

2. Project Overview

2.1 Project Purpose, Scope, and Objectives

Orient student to have a healthier lifestyle.
Help people gain their fitness goal by calculating the calories they need and even in their meals.
Provide some simple, easy exercises could be done everywhere.

2.2 Assumptions and Constraints

This is a zero-budget Android project which will be finished in 10 weeks by 5 team members, and all of that will not change during the project.

2.3 Project Deliverables

Requirement

- Use Case
- User Interface Prototype
- Project Functions

Analysis & Design

- Design Model
- Design Classes
- Design Architectures

Implementation

- Beta Application
- Source Code

Tests

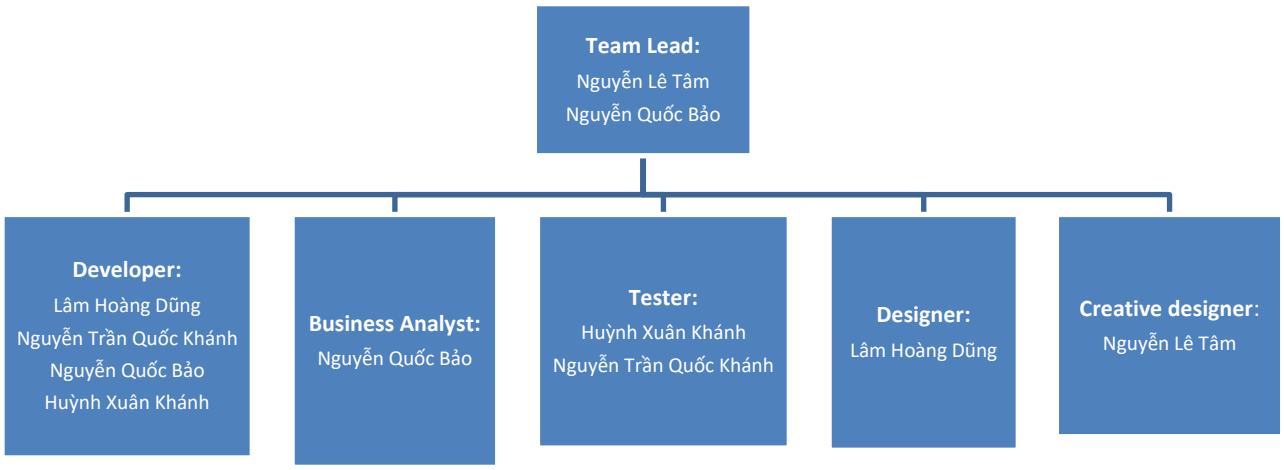
- Test Plans
- Test Cases
- Test Environments

Project Management

- Software Development Plan
- Work and Role Division
- Time Schedule
- Weekly Report

3. Project Organization

3.1 Organizational Structure



3.2 Roles and Responsibilities

Person	***Role***	***Responsibilities***
Nguyễn Lê Tâm *Nguyễn Quốc Bảo*	*Project manager*	*Communicate with customers and make sure the team focus on the right goal. Make plans regarding time, finance, human resource, product quality, etc. Resolve problems in the team and ensure every member does a proper job.*
Nguyễn Quốc Bảo	*Business Analyst*	*Help users better communicate their needs. By having a profound understanding of business, business analyst can participate in reviews of requirements specification and business use cases.*
Nguyễn Lê Tâm	*Creative designer*	*User interface designer works on the user interface of the applications. Give users the best visual experience.*

Lâm Hoàng Dũng	*Designer*	*Design the overall structure of the system. Define the responsibilities, operations, attributes and relationships of several classes and subsystems.*
Lâm Hoàng Dũng *Nguyễn Quốc Bảo* *Huỳnh Xuân Khánh* *Nguyễn Trần Quốc Khánh*	*Developer*	*Write source code based on designs. Perform unit test. Review source code*
Huỳnh Xuân Khánh *Nguyễn Trần Quốc Khánh*	*Tester*	*Responsible for setting up and performing tests, logging the results and any detected bugs.*

4. Management Process

4.1 Project Estimates

- The Inception Phase will take 2 weeks.
- The Elaboration Phase will take 3 weeks.
- The Construction Phase will take 3 weeks.
- The Transition Phase will occur in 2 weeks.
- Number of requirements: 8
- Number of employment: 5
- Effort (Person-hour): 140
- Re-estimation may take place when:
    - In the end of Elaboration Phase when deep analysis of technology, time, efforts, human resources which used in project is acquired and well-understood.
    - In the middle of Construction Phase when technical problems and bugs are fully recognized and explored.

4.2 Project Plan

4.2.1 Phase and Iteration Plan

Phase	***No. of iterations***	***Start***	***End***
Inception	*1*	*Week 1*	*Week 2*

Elaboration	*2*	*Week 3*	*Week 5*
Construction	*2*	*Week 6*	*Week 9*
Transition	*1*	*Week 10*	*Week 10*

Description	***Milestone***
Inception	*Inception phase will develop product requirements and establish the initial use case model, high level project development plan. After this phase, the work products are Functionality Document, Application Overview Document including general information about the application. Business case is not considered for this project.*
Elaboration	*Elaboration Phase will analyze requirements and develop architecture design model as well as UI design prototypes. The work products are detailed use case model document, detailed architecture design document, UI prototypes. The completion of these work products marks the end of Elaboration Phase*
Construction	*Construction phase will base on documents by previous phase to conduct implementation and testing activities and produce Demo Release with complete functionality. In addition, Demo Release will be optimized for non-functional requirements and be well-tested to ensure functional behavior. Final Release after refining Demo Release marks the end of this phase*
Transition	*Transition phase will prepare Final Release for distribution. It provides the required support to ensure smooth installation including user training. At this point, all capabilities are installed and available for users*

Phase	*Iteration*	*Description*	*Associated Milestone*	*Risks Addressed*
Inception	*Preliminary Iteration*	*Define product requirements and initial use case model*	*Functionality Document, Application Overview Document*	*Clarifies user requirements up front.* *Develops realistic project plans and scope.* *Determines feasibility of project from a business point of*

				view
Elaboration	*Develop Architecture, UI prototypes, detailed use case model*	*Completes analysis & design for all use cases. Develops the architectural prototype.*	*Architectural Prototype*	*Architectural issues clarified.*
Construction	*C1 Iteration* *Develop Demo*	*Implement and test use cases with complete functionality*	*Demo Release*	*All key features from a user and architectural prospective implemented in the Beta.* *User feedback prior to release of software.*
	C2 Iteration *Develop Full*	*Highly optimized code and well-tested to ensure functionality behave correctly*	*Full release*	*Software fully reviewed by user community.* *Product quality should be high.* *Defects minimized.* *Cost of quality reduced.*
Transition	*Software Release*	*Package, distribute and install Release*	*Software Released*	

4.2.2 Releases

Demo Release: Complete Functionality

Full Release: Highly Optimized Software, Interactive UI

4.2.3 Project Schedule

Task	**Start**	**End**
INCEPTION	**9/10/2017**	**20/10/2017**
Team formation	9/10/2017	9/10/2017
Set up tools for teamwork	9/10/2017	9/10/2017
Brainstorm Ideas	10/10/2017	12/10/2017

Meeting and Vote Idea	13/10/2017	13/10/2017
Define Functionality and create Functionality Document	14/10/2017	15/10/2017
Revise Functionality Document, Prioritize basic and feasible Features	15/10/2017	15/10/2017
Create Preliminary Use case Model	16/10/2017	16/10/2017
Meeting for discussion about target users, developing environment and tools, create Application Overview document	17/10/2017	19/10/2017
Application Overview deliverables	20/10/2017	20/10/2017
INCEPTION completes	**20/10/2017**	**20/10/2017**
ELABORATION	**23/10/2017**	**10/11/2017**
Business Analysts analyze functionality and create Detailed Use Case Model document	23/10/2017	26/10/2017
Detailed Use Case Model reviewed and approved	27/10/2017	28/10/2017
Architecture Designers analyze components and create Detailed Architecture Design document	29/10/2017	1/11/2017
Detailed Architecture Design document reviewed and approved	2/11/2017	3/11/2017
UI Designers sketch out ideas and create UI prototypes	29/10/2017	3/11/2017
UI prototypes reviewed and approved	4/11/2017	5/11/2017
Re-estimation procedure for subsequent Phases based on existing documents	6/11/2017	9/11/2017
Elaboration deliverables	10/11/2017	10/11/2017
ELABORATION complete	**10/11/2017**	**10/11/2017**

4.3 Project Monitoring and Control

4.3.1 Reporting

- Discuss on Friday weekly with Teaching Assistant.
- Write a documentary report weekly.
- Organize a meeting on Thursday weekly.

4.3.2 Risk Management

Risk ID	Risk Description	Probability	Impact	Priority	Mitigation Strategy or Contingency Plan
1	The time required to develop the software is underestimated.	Moderate	Failed project and losing beliefs of teacher.	1	The progress of project should be managed more carefully by requesting progress of each member about their task.
2	The size of software is underestimated.	Moderate	Maybe make the software runs slowly.	1	Software should be removed some features which are not in main features of software.
3	Members are ill or unavailable.	Moderate	Delaying the progress of project.	1	Reorganizing team to conduct overlap of work.
4	There is a dissent perspective in team.	Low	Time consuming or failed project.	2	Each member has to specify their ideas clearly and follow to main purposes assessed by project manager.
5	Member turnover.	Low	Time consuming or failed project	2	Remaining members of team have to work 2-3 tasks. There probably is a division again about roles of each member.
6	The software cannot be applied to the reality life.	Low	Time consuming and losing cost for developing software.	2	Should do a research to look for which features people need. From the research, some features in the software should be removed to reduce size and cost.
7	There is a lack of experience about technologies which members use.(such as: Java, some tools for designing ui,..etc.).	Low	Wasting time studying new technologies and delaying the progress of project.	2	Organizing a training day-off or carrying out a good method named pair-programming.

8	Some functions cannot be reused for the fairly same features.	Low	Number lines of code can be increased . The size of the software will rise.	3	Always checking old features before implementing new functions.

4.3.3 Configuration Management

- Github will be used for storing and sharing documents and files.
- Source code and related files will be managed and manipulated by Github.