Document Structure

Cover Page

Acknowledgments (optional)

Table of Contents

Lists of Tables, Figures/Illustrations, Plates/Photographs

List of Abbreviations, Symbols, Specialized Nomenclature (if any)

Abstract

Main Text of the Report

*“The main body of the report is usually arranged into consecutively numbered chapters or sections. The structure presented here should be adhered to as far as possible. However, the importance of each chapter (size and content) is likely to vary significantly from project to project, given the variety of projects undertaken. Therefore, in some cases it may be appropriate to devote several chapters to a particular topic or to add/remove chapters on topics not mentioned below.”*

Chapter 1: Introduction

Chapter 2: System Requirement Specification

Chapter 3: System Analysis and Modeling

Chapter 4: System Design

Chapter 5: Implementation and Testing

Chapter 6: Conclusion and Future Work

References

Appendix

Chapter One: Introduction

*“This chapter is concerned with similar concerns to the abstract and should provide an overview of the report with more detail. The methodology should be stated and described here as a different section. The contribution of the student should be stated precisely and in detail. The structure of the report should be given detailing where each chapter fits within the overall and what each contributes; it may be useful to provide a diagram showing dependencies and relationships between chapters.”*

*“Chapter 1 is often the last chapter to be written, and to be checked carefully before submission. It is a key chapter, which the external examiner may read when making his assessment.”*

~~1.1 Background of the organization~~

*“The organizational background section of a grant application may be called the introduction or the applicant description. Whatever the title, this is where you explain what your organization is all about and convince the funder that you are capable of doing what your proposal says you will do.”*

We’re a team of software engineers…

1.1 Project background

*“A* ***Project's Background*** *is a formal document containing a common description of what is expected to be done within the* ***project****, what prerequisites for the* ***project*** *are, and how to produce the expected amount of work.”*

The use of technology in our daily lives has become more and more prominent to help us accomplish our tasks. People are making use of the available knowledge pool to advance in a certain field or solve existing problems. In recent times, scientists are noticing unprecedented types of threats to the human species which are less direct and more self inflicted. An example to demonstrate this point can be, while the technical advancements we made in the medical sector has made it easy to diagnose several cases faster and with more accuracy than ever with innovations like the X Ray, MRI, and other less popular lab instruments, gadgets like the television, smartphones, social medial, and several others have had dire consequences and been linked to the detriment of users’ health.

This doesn't mean technology is bad and people should stay away from it, anything has the potential to become a negative; even water which is famously referred to as the base for life, can be lethal if consumed overly. Moral of the story is use don’t abuse.

So what does all this have to do with the project at hand? Well, our team intends to use technology for good and make an application that works on desktop and mobile devices and serve as a platform for people to get any information they need to keep themselves healthy, fit, and even athletic.

...

1.2 Problem statement

*“A* ***problem statement*** *is a concise description of an issue to be addressed or a condition to be improved upon. A simple and well-defined* ***problem statement*** *will be used by the project team to understand the* ***problem*** *and work toward developing a solution.”*

Problem:

These days humans are going through major lifestyle changes; we’re exercising less, eating unhealthily and since everyone can’t afford the time and money to go to the gym every day, the toll is adding up. A Class of illnesses that are caused by the environment we create to live in, and the daily choices we make are giving rise to new epidemics called Lifestyle Diseases like diabetes, heart diseases…

Evidence:

* *Research/Literature/Scientific Study, Surveys, Diagrams, Critical Analysis & Summary, References…*

The above paragraph is not just an assumption or a bold generalization; There have been several scientific studies across different parts of the world that indicate the trend of bad diet, inactivity, and increasing health complications heavily correlated with the lifestyle changes humans are going through. In this section we’ll try to present, dissect, and analyze some of these researches.

* *Show how life styles are changing across the globe*
* *Show how certain types of diseases are on rising*
* *See if there is any correlation and/or causality using statistics*

Let’s start with the positives; over the past couple of decades, society has made some great strides in the areas of knowledge, standard of living, and life expectancy collectively known as the Human Development Index (HDI). And it’s self-evident that to achieve what we have now, we’ve worked with science, and leveraged one of its applications technologies. Innovations like the engine, electricity, telecommunication systems, computers, and so on changed how we go about our days in a radical manner and some of the ripple effects we’re still studying and discovering, but more on that later…

*“Technology has always flourished for the gain of mankind. The major achievements of technology have left man spell-bound and every part of the world today is enjoying the comforts provided by technology. Thanks to technology, all the countries are interlinked and we are now living in a global village. Modern technology has greatly improved people's lives through different fields such as medicine, work, education, industry as well as warfare.”* [a]

It's not all sunshine and rainbows though; as many people reaped the several benefits of technology while everyday tasks became easier, deadly pathogenic diseases got under control with advancements in medicine, and earth turned into a village by globalization, a set of problems started to appear as a side effect…

*“However, we cannot say that technology is all good in itself. It is a two-edged sword and we have to see to what extent it has really helped improve people's standard of living… Mechanization has made many people jobless. Mass media have their bad effects too. TV, smartphones cause addiction and everybody seems to be much interested in watching the big 'box' rather than having a stroll around. Sitting in front of the TV for long hours can cause obesity. Nuclear technology has also seen major death rates whereas sophisticated gadgets have their own disadvantages… After considering the various aspects of modern technology, we cannot say that it is all good or bad. Man has to know how to use it for his benefit and should not abuse its use. On the overall, technology HAS improved man's lives but man should not be a slave of it!”* [b]

Summary:

As impressive our technical advancements are, we still have ways to go in understanding how our own inventions affect us, and maybe an extreme 180 from the olden ways of living is not the most optimal thing to do for our primal bodies. Therefore, we need to look after our bodies and leverage technology for good.

...

References:

^ a b (2013, 05). How Has Modern Technology Improved People's Lives StudyMode.com. Retrieved 05, 2013, from<https://www.studymode.com/essays/How-Has-Modern-Technology-Improved-People's-1724734.html>

…

1.2.1 Existing system

There are several apps out there that provide similar service. Functionality wise, there isn’t much difference than that of what we are aiming to give our customers. What makes the real difference is the rich customizability of our service to meet the exact needs of our users or come the closest to their requirements. That being said, Here are some of the well known fitness-mobile apps:

* MyFitnessPal
* Samsung Health
* Cronometer
* Exercise Timer
* BodySpace
* ...

1.2.2 Major problem of existing system

As we mentioned earlier, the main there are plenty of existing systems that have give the same services but most have their issues some of the major complaints we have came across while doing our background researches are:

* **Poor Accessibility:** Most of the systems that give the best services charge the users a fairly huge amount of money through their premium packages; and even if they are relatively affordable, they are bound to specific regions in the world and exclude many potential global users.
* **Unusability:** Hard or complicated to use by a non experienced user...
* **Inconvenience:** To get essential tools in order to get started and use such tools to aid the self care process, one usually needs to use multiple apps to get a super specific use case, and this can be annoying and tedious sometimes
* **Unattractive user interface:**
* **Language:** Almost all of the apps listed above do not support the Amharic language out of the box
* **Proprietariness:**
* **Some issues: ...**

1.2.3 Proposed system

The proposed system will include the following features:

* Identifying users and gathering initial data upon system registration,
* Integrated learning through videos and articles,
* Personal profile management,
* Fitness workout plan generation and guided creation process,
* Session and stat tracking such as weight and body measurements through bodily metrics,
* Meal, nutrition manager and automatic calorie calculator,
* Weekly leaderboards and competition through stats maintained inside the system,
* Community support through in-system chat platform,
* Eventboard and email notification upon new and latest events,
* Nearby gym locator and gym membership reservation,
* Interface for the content creators,
* Authentication and authorization, in collaboration with a facial recognition, API
* And more...

…

1.2.4 Advantage of proposed system

What makes our app special?

Well, for starters it’s first of its kind...and bla bla bla

…

1.3 Motivation

*“The* ***motivation*** *section explains the importance behind your research. Why should the reader care?”*

For a long time, programmers have stayed away from the ‘Health and Fitness’ category of applications; this has led to clunky and buggy apps in the market, but with more and more research suggesting that regular exercise and a clean diet regiment greatly improves health while lowering the risks for many of the killer diseases, both people and tech developers are paying attention to invest in lifestyle. Our team is also determined to study this in detail and come up with a solution that can be used by anyone with no hassle to improve their lives.

…

1.4 Scope and limitation of the project

*“****Scope and limitations*** *are two terms that address the details of a research* ***project****. The term* ***scope*** *refers to the problem or issue that the researcher wants to study with the* ***project****.* ***Limitations*** *is the term used for constraints that impact the researcher's ability to effectively study the* ***scope*** *of the* ***project****.”*

…

1.4.1 Scope of the project

...

1.4.2 Limitation of the project

...

1.5 Objective

*“A* ***project objective*** *describes the desired results of a* ***project****, which often includes a tangible item. An* ***objective*** *is specific and measurable, and must meet time, budget, and quality constraints. ... A* ***project*** *may have one* ***objective****, many parallel* ***objectives****, or several* ***objectives*** *that must be achieved sequentially.”*

…

1.5.1 General objective

...

1.5.2 Specific objective

...

1.6 Methodology

“***Methodology*** *refers to the overarching strategy and rationale of your research* ***project****. It involves studying the methods used in your field and the theories or principles behind them, in order to develop an approach that matches your objectives.”*

...

1.6.1 Data collection methodology

...

1.6.2 System design and analysis tools

...

1.6.3 System development tools

...