SANTA CLARA UNIVERSITY
DEPARTMENT OF COMPUTER ENGINEERING

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I HEREBY RECOMMEND THAT THE THESIS PREPARED UNDER MY SUPERVISION BY

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ENTITLED

On the Construction of Matter, or Is There a God Particle?

BE ACCEPTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF

BACHELOR OF SCIENCE IN COMPUTER SCIENCE AND ENGINEERING

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On the Construction of Matter, or Is There a God Particle?

by

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Submitted in partial fulfillment of the requirements
for the degree of
Bachelor of Science in Computer Science and Engineering
School of Engineering
Santa Clara University

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On the Construction of Matter, or Is There a God Particle?

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ABSTRACT

A good abstract is a concise summary (1–2 paragraphs) of the entire project: introduction, problem statement, work accomplished, results, conclusions, and recommendations. When you write the abstract, imagine that the reader will not read anything else, but that you must get your major point across immediately. This requires efficiency of words and phrases. An abstract is written to stand alone, without jargon or reference to figures and tables in the report body.

Table of Contents

List of Figures

Chapter 1

Introduction

1.1   Motivation

This is the introduction to your thesis and should be page number one. The main body of your thesis should be double spaced.

1.2   Solution

Chapter 2

Requirements

2.1   Critical

Bitch you must be smoking crack

2.2   Solution

Chapter 3

Use Cases

Use case diagrams demonstrate how users will interact with our system. In our case, users will be able to take photos, then accept or reject them.
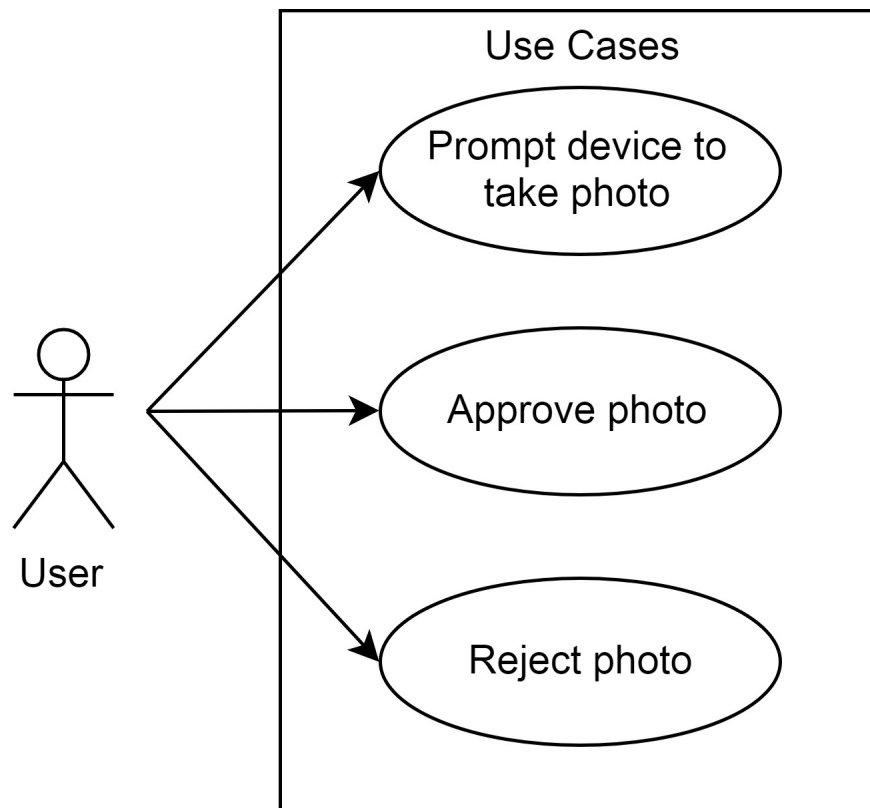

Figure 3.1: Figure 3.1: Use Cases

1. Prompt device to take photo

    (a) Goal: Take photo

    (b) Actors: User

    (c) Pre-conditions:

        i. Application must be open on device

    (d) Steps:

        i. User presses button to prompt device to take photo

    (e) Post-conditions:

        i. None

    (f) Exceptions:

        i. Application must have device permission to use camera

1. Approve photo

    (a) Goal: Save photo to phone storage

    (b) Actors: User

    (c) Pre-conditions:

        i. Must have taken a photo

    (d) Steps:

        i. User presses accept button when prompted after taking a photo

    (e) Post-conditions:

        i. None

    (f) Exceptions:

        i. None

1. Reject photo

    (a) Goal: Delete photo and try again

    (b) Actors: User

    (c) Pre-conditions:

        i. Must have taken a photo

(d) Steps:

    i. User presses reject button when prompted after taking a photo

(e) Post-conditions:

    i. None

(f) Exceptions:

    i. None

1. Reject photo

   (a) Goal: Delete photo and try again

   (b) Actors: User

   (c) Pre-conditions:

      i. Must have taken a photo

   (d) Steps:

      i. User presses reject button when prompted after taking a photo

   (e) Post-conditions:

      i. None

   (f) Exceptions:

      i. None

Chapter 4

Conceptual Model

Users will navigate to the application on an iPhone to begin using the system. Upon launching the app, a camera feed appears, as shown in Figure 5.1. They can press the camera icon to prompt the device to take a photo.

Figure 4.1: Figure 5.1: Mockup of camera user interface

After they has pressed the camera button, the application will wait until all subjects are in frame with their eyes open to capture the image. Upon capturing the image, they will be greeted with an alert asking whether they want to save the photo or reject it, as seen in Figure 5.2.

If the user chooses to accept the photo, then it will be saved to the user's storage and they will return to the camera screen. If the user chooses to discard the photo, then it will be delete and they will return to the camera.
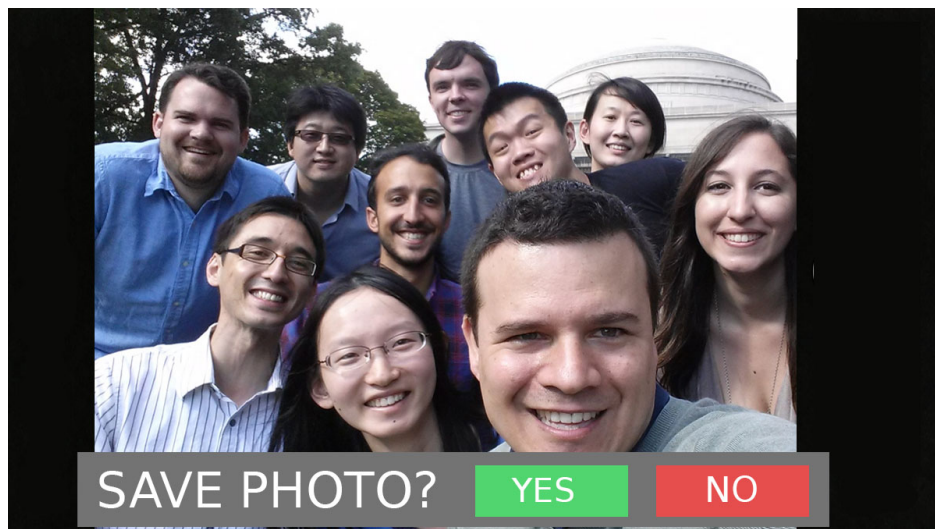
Figure 4.2: Figure 5.2: Mockup demonstrating the approval dialogue

Chapter 5

Architectural Diagram

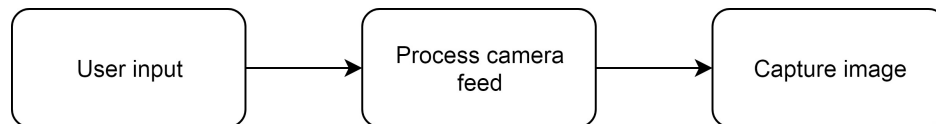We plan to utilize a data flow architecture to complete this project as shown in Figure 6.1.

Figure 5.1: Figure 5.1: Data Flow Architecture

Users will provide input with their phone's touchscreen, which triggers the device to begin analyzing the camera feed. Once the system determines the input is acceptable, it captures the image.