

University of Houston
College of Technology
Department of Engineering Technology
Computer Engineering Technology
Program

ELET 430 8/420 8 Senior Project
Final Presentation

Exercise Reward 7000

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Team #7

Team Members:

Omar Bonilla

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Raul Rodriguez

Project Advisor:

Dr. Farokh Attarzadeh

Introduction

- Motivation
 - Childhood obesity is on the rise
 - Children are spending an excessive amount of time watching television and playing video games.
- Existing Products
 - Manual and electronic timers
 - Do not guarantee exercise
 - Exercise machines used as controllers
 - Do not limit playing time



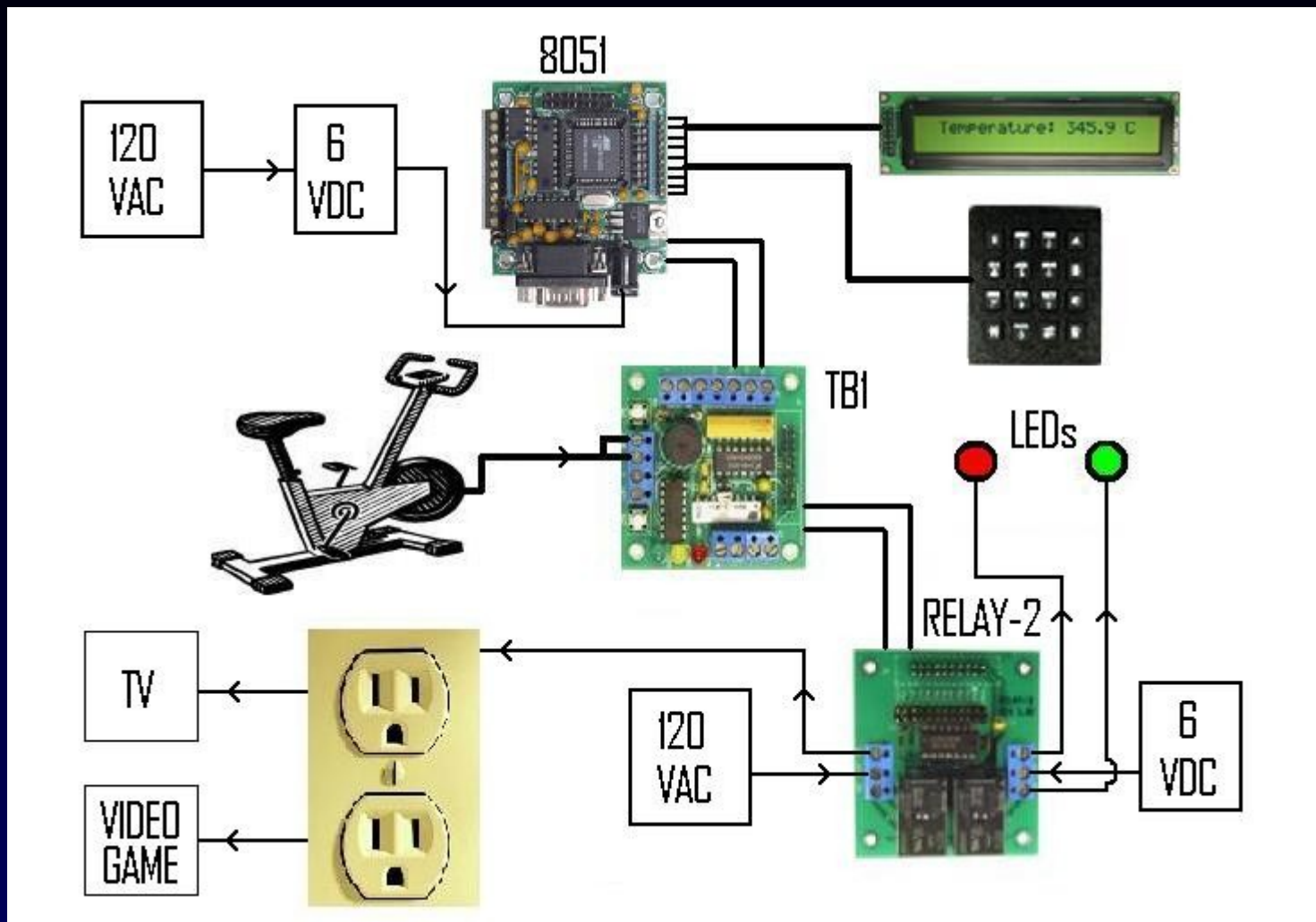
Project Objectives

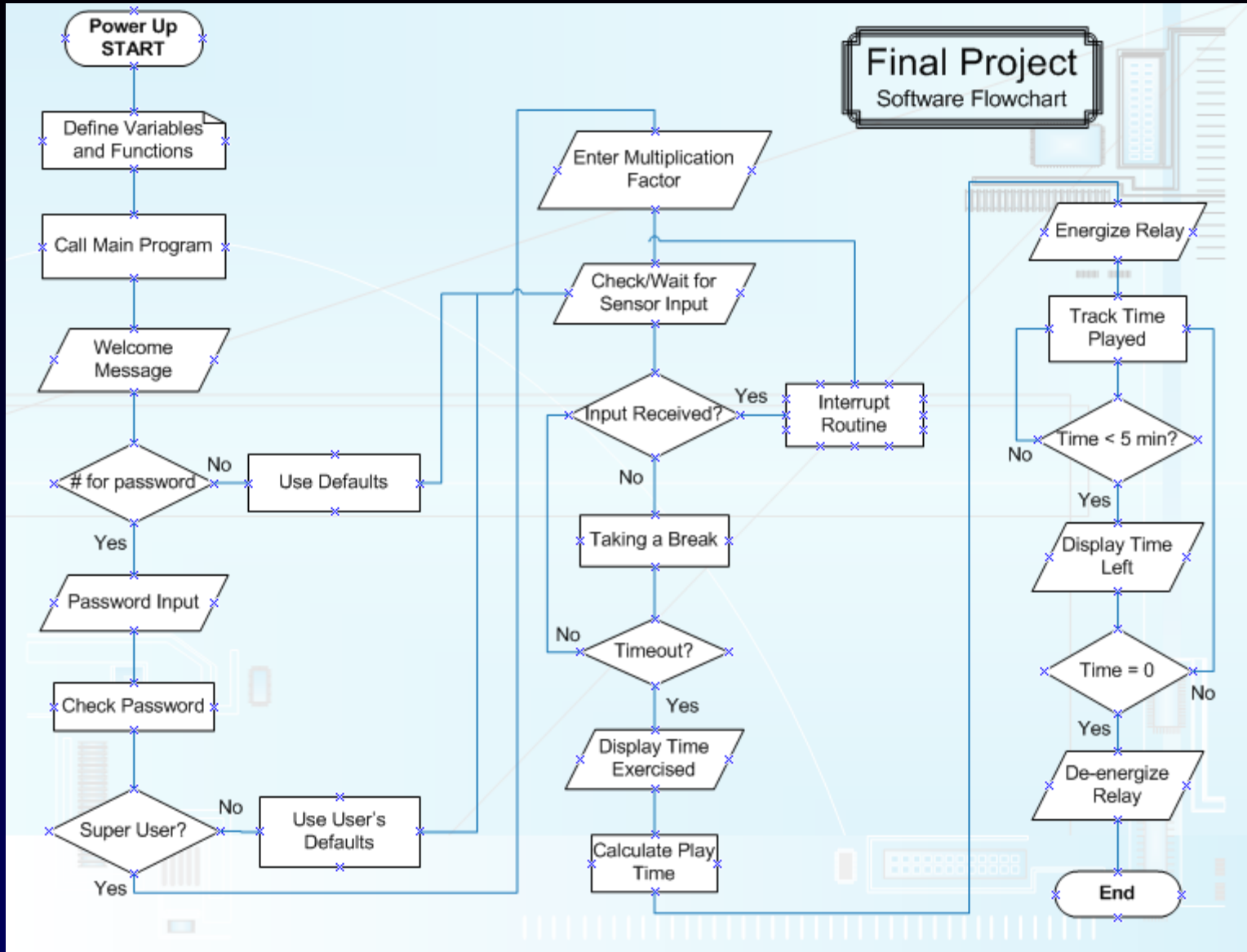
- Goals of the Exercise Reward 7000
 - Integrate an exercise bike with a microcontroller to limit the time spent watching TV or playing games.
 - Provide parents with a tool that is:
 - Affordable
 - Easy to use
 - Flexible in its application

Exercise Reward 7000 Features

- ICD Display and keypad interface.
- Connection for two 120 VAC devices
- Red and Green LEDs indicate power availability, alternate to indicate less than 1 minute remaining.
- Superuser selectable multiplication factor and manual override.
- Locking cover to prevent unauthorized access and equipment removal.

Hardware Layout

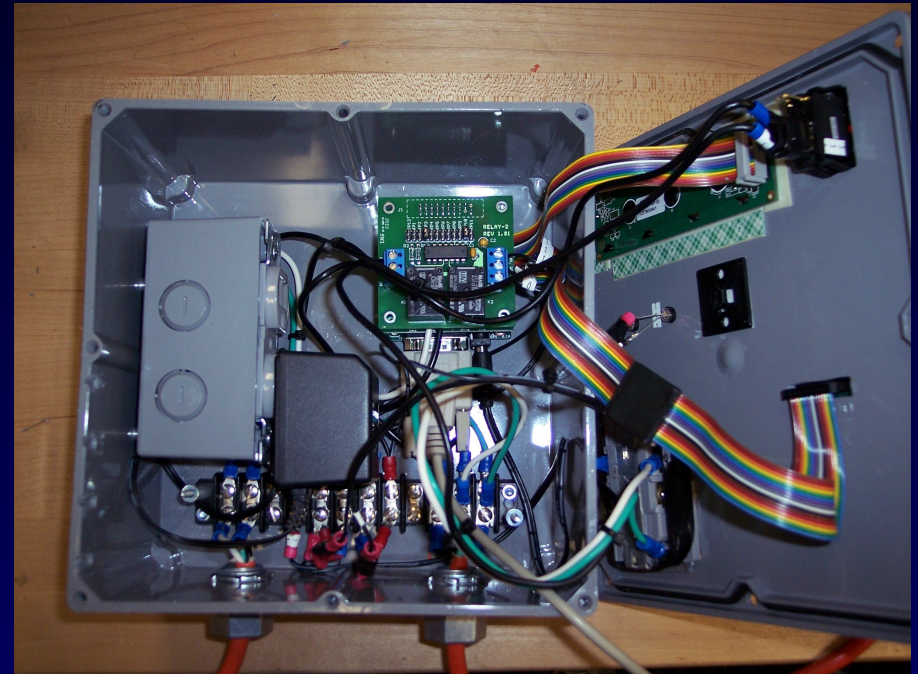
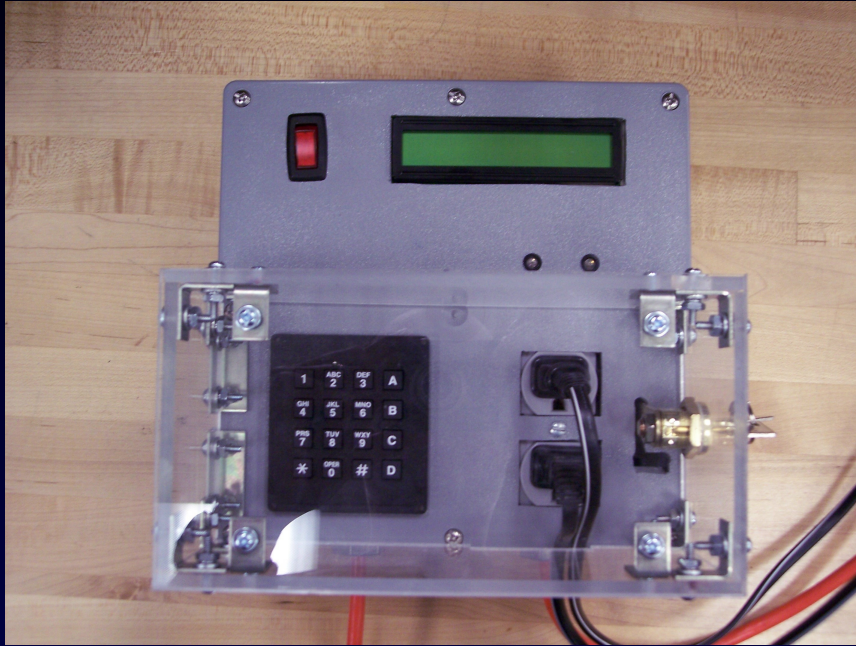


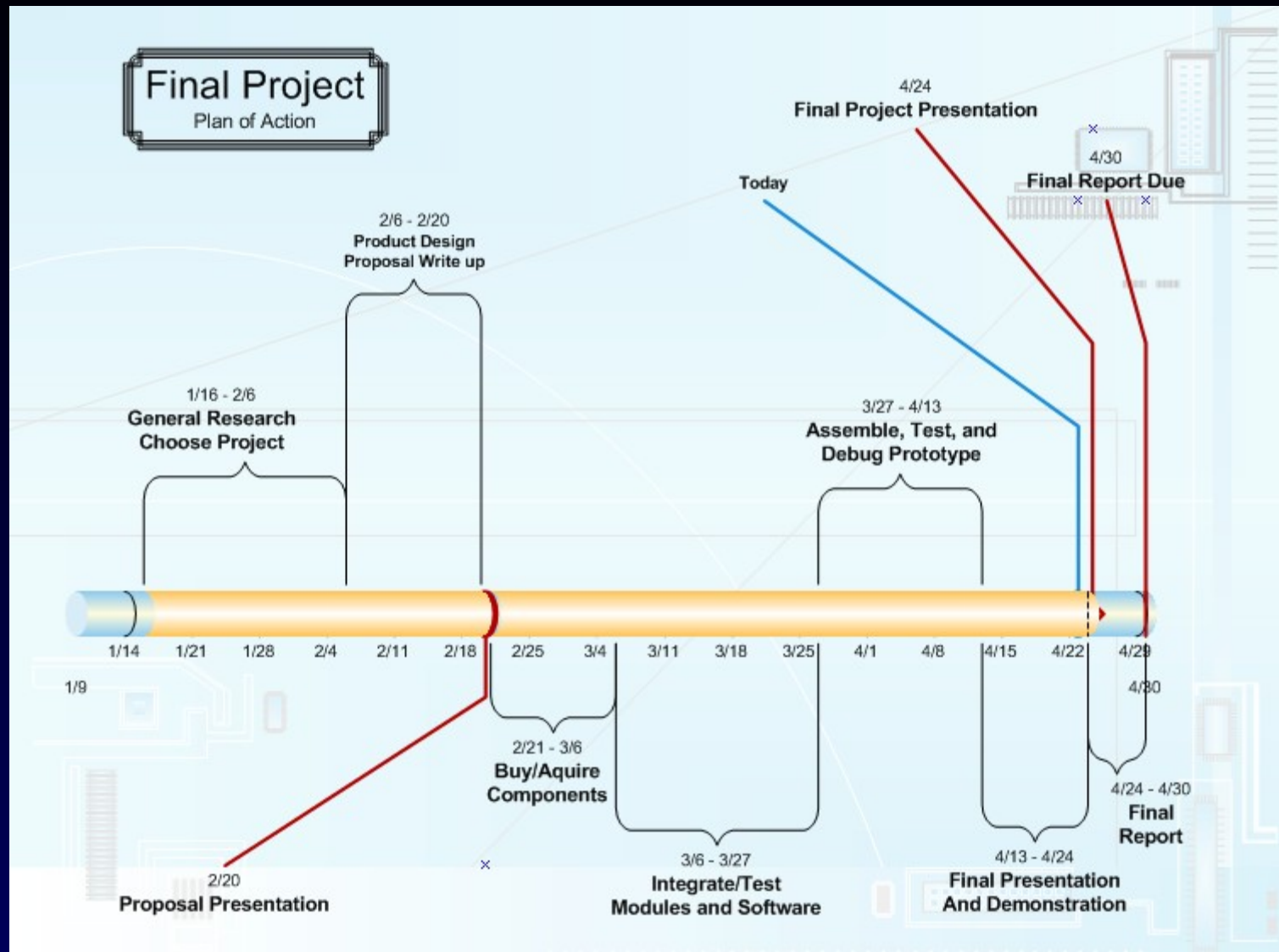


Exercise Bike and Sensor



Exercise Rew ard 70 0 0





Cost Analysis

Item	Actual Cost
Microcontroller 8051	\$99
Exercise Bike	\$40
Sensor	\$0
Plexiglass	\$700
Junction Box	\$25
Relay	\$30
Miscellaneous	\$6100
TV & Game	Donated (Demonstration Purpose Only)
Total Hardware Cost	\$283.00

Cost Analysis Cont'd.

Member	Hourly Rate	# of Hours	Salary
Omar Bonilla	\$25	156	\$9,750
Roy Duff	\$25	156	\$9,750
Ammar Mansoor	\$25	156	\$9,750
Raul Rodriguez	\$25	156	\$9,750
		Total Labor Cost:	\$39,000
		Total Project Cost:	\$39,283

Questions

