Elves and More – EPICS – Texas A&M University

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Project Objective/Purpose
Goal: Solve technical and logistical issues, providing a streamlined process of data collection and communication between students, teachers, schools and Elves and More.

Introduction & Background
Elves and More is a non-profit organization that helps at-risk children living in Greater Houston. Partnering with schools and teachers, Elves and More rewards with bicycles the children that achieved their personal set of educational goals (that can be related to their behavior in class, attendance, reading level and others).

Methodology
- Initial study of client’s workflow and needs
- Setting of requirements
- Establishment of goals
- Project planning
- Survey with teachers
- Solution design

Requirements List
- Need ability to have an on-line contract with on-line signature
- Need a data base capability to collect the following data:
  - Student identification
  - Student’s set of goals
  - Periodical tracking of student level of achievement
  - Identification of teacher responsible for the student
  - School identification
- Need to provide interfaces to data for:
  - System administrator
  - Students
  - Teachers
  - School administration
  - Parents
- Need to protect the privacy of the student data
- Need to have an user friendly interface
- Need to have an easy maintenance
- Need to have low cost

Requirements List
- Phase 2 activities
  - Interpret survey results
  - Implementation of web based application based on specifications produced in Phase 1
- Set source control
- Organize a development group
- Implement an Object-Relational Database
- Internal Quality Assurance
- Review database
- Security audit
- Create new brand image
- Team level testing process
- Client review process:
  - Get feedback, make sure we met all their needs
  - Limited test run
  - Full production
  - Legacy support

Phase 1 - Results

Conceptual Design
Phase 1: Project Planning / Solution Design
- Documentation
- Database Design
- User Stories
- User Interface Mockups

Phase 2: Project Implementation
- Documentation
- Web Application
- Tests
- Security Analysis

Database model:

Teacher sets goals for each student (contract) → Contract is approved by parent → Teacher updates the progress of each child → If the children reach the goal by the end date, Elves and More provides a bike

Interface Mockups: