PROJECT PROPOSAL FOR FHC

Abstract
To design and develop a web-based clinical and research data repository for the "For His Children" Orphanage in Ecuador.

Contents

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CHAPTER 1

Problem Identification Phase

1.0.1 Overview

Through the work of Dr. Lorna Hayward, Northeastern University has been bringing evidence-based practices to the treatment of the children at the "For His Children" Orphanage. There are two physical therapy tests: the Alberta Infant Motor Scale (AIMS) and the Pediatric Evaluation of Disability Inventory - Computer Adaptive Test (PEDI-CAT). These evaluations allow a physical therapist to assess progress in mobility across time. Northeastern University plans to train the physical therapist at the orphanage in administrating these tests. It also plans to measure the assessment results of the newly trained on-site Ecuadorian physical therapist to the assessment results from an expert PT as well as to the assessment results of DPT students from Northeastern University.

1.0.2 Problem Definition

The proposed problem is to design and develop a web-based clinical and research data repository, focused on physical therapy practices, for the "For His Children" Orphanage in Ecuador.

1.0.3 Objectives of The Project

- To collect information of the patients.
- To collect information about the on-site Ecuadorian physical therapists and expert physical therapists.
- To collect information about the DPT students.
- To track the details of the examinations administered including when, by who and the results of the exam.
- To provide a facility to track the adoption details of the children.
- To track the answers provided by the Ecuadorian physical therapists after training.

CHAPTER 2

System Study

2.1 Existing System

No system in place to track the records.

2.2 Proposed System

The methodology would employ a combination of both human interaction and technology application. The proposed research strategy has designed a tool that is technologically compatible to collect data that comprise of a close-ended query.

2.3 Advantages of Proposed System

- The system helps in collecting the results of the two examinations AIMS and PEDI-CAT performed.
- The system helps in tracking the adoption records of the children.
- The system provides a better maintenance of the records.

2.4 Constraints

- From the developer's end, there are no constraints.

CHAPTER 3

Software Requirement Specification

3.1 Introduction

3.1.1 Purpose

The purpose of this project is to collect necessary information for the web application that will be developed to focus on physical therapy practices, for the "For His Children" Orphanage in Ecuador.

3.1.2 Scope

The scope of this project is to be able to design and develop a web-based application that will be used to focus on physical therapy practices, for the "For His Children" orphanage in Ecuador. The application will be able to track the two tests performed: AIMS and PEDI-CAT for the children of the appropriate age groups. It will also be able to track the adoption details of the children.

3.1.3 Intended Audience

- Developers
- DPT students
- Ecuadorian Physical Therapists
- Expert Physical Therapists

3.2 Overall Description

3.2.1 Product Perspective

The application must track the patients, on-site Ecuadorian physical therapists, expert physical therapists and the DPT students. It must also track both the AIMS and PEDI-CAT tests performed for the corresponding patients. The tool should provide a method for retrieving the children appropriate for each test. It must also allow a PT to enter a test's results on a patient. It should provide at least two different user roles.

3.2.2 User Classes and Description

Sl. No	User Class	Characteristics
1	Administrator	The administrator role allows a user to EDIT and DELETE data in the database. The administrator is responsible for populating the database with the patient and clinician demographic data. The administrator is also responsible for entering the pairing between the patients and the clinicians.
2	Clinician	The clinician role is limited to entering test results for their assigned patients.

3.2.3 Operating Environment

The operating environment of the system includes the following

Processor	Windows Server 2008 R2 minimum 1.4 GHz (x64 processor) or better Windows Server 2012 R2 minimum 1.4 GHz (x64 processor) or better
Memory	4 GB or greater (2 GB minimum)
Operating System	Microsoft Windows 2012 R2 Server – 64 Bit Microsoft Windows 2012 Server – 64 Bit Microsoft Windows 2008 R2 Server – 64 Bit Microsoft Windows Terminal Server
Web Server	Internet Information Server (IIS) 6.0,7.0 or 8.0
Client	Microsoft Internet Explorer 10 and 11 Mozilla Firefox 31 Apple Safari 5 Google Chrome
Database	Relational (SQL)
DBMS	MySQL
Languages Used	HTML, CSS, JavaScript, Python, Flask

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CHAPTER 4

System Design

4.1 Introduction

4.1.1 Summary

4.1.1.1 Purpose

The purpose of this design document is to present the system design on both the AIMS and PEDI-CAT tests performed for the corresponding patients. This Design Document will verify that the current design will meet all requirements contained in the system model.

4.1.1.2 Scope

This document is for FHC application, where in it collects information on both the AIMS and PEDI-CAT tests performed for the corresponding patients, the Ecuadorian physical therapists, expert physical therapists and the DPT students.

4.1.1.3 Intended Audience

The design document is intended for

- Developers
- Testers
- FHC
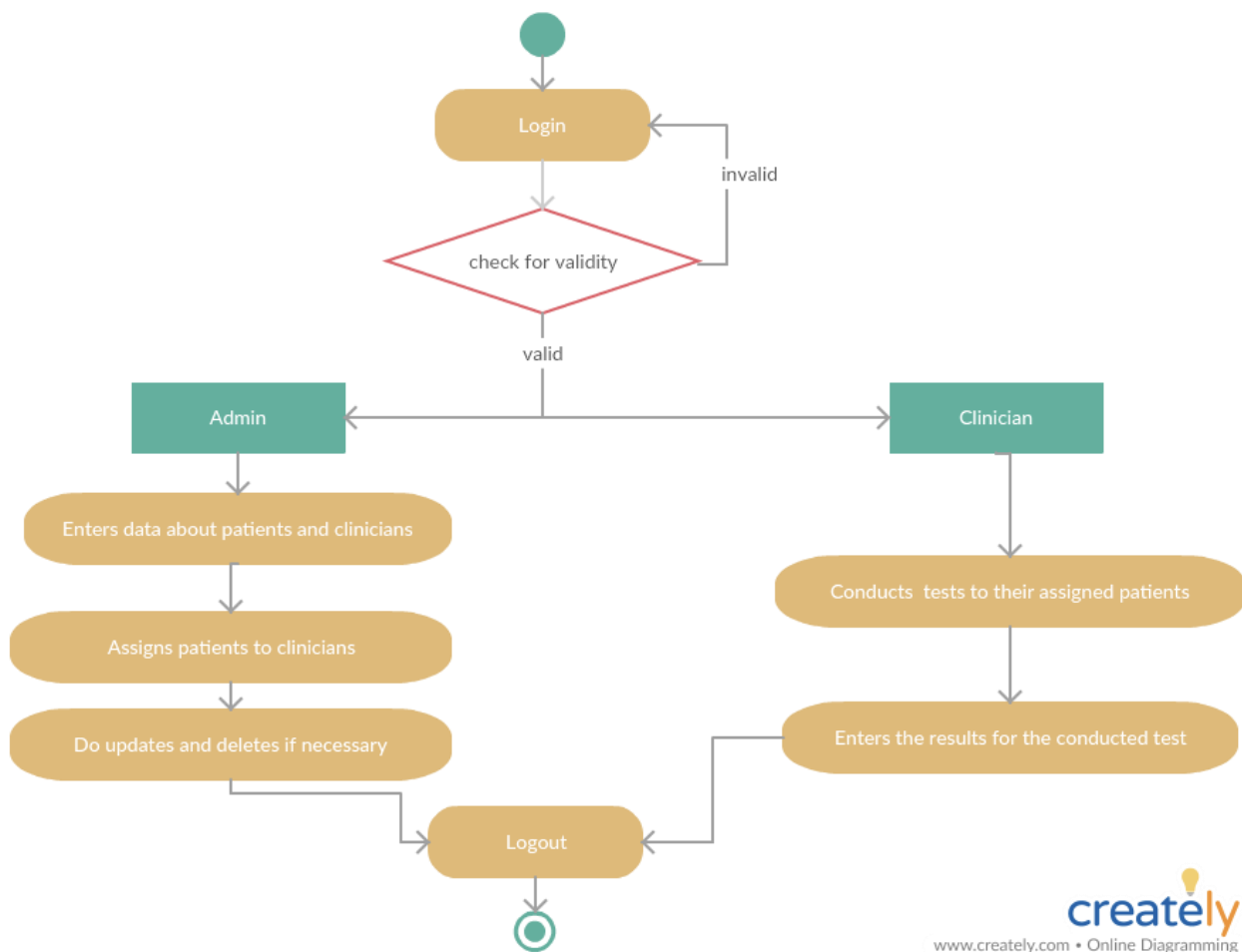- Evaluators

4.1.2 Common Scenarios

Common Scenarios:

- Administrator will authenticate using user ID and password.
- Administrator will populate the database with children's and therapist's information.
- Administrator will link a therapist to a child.
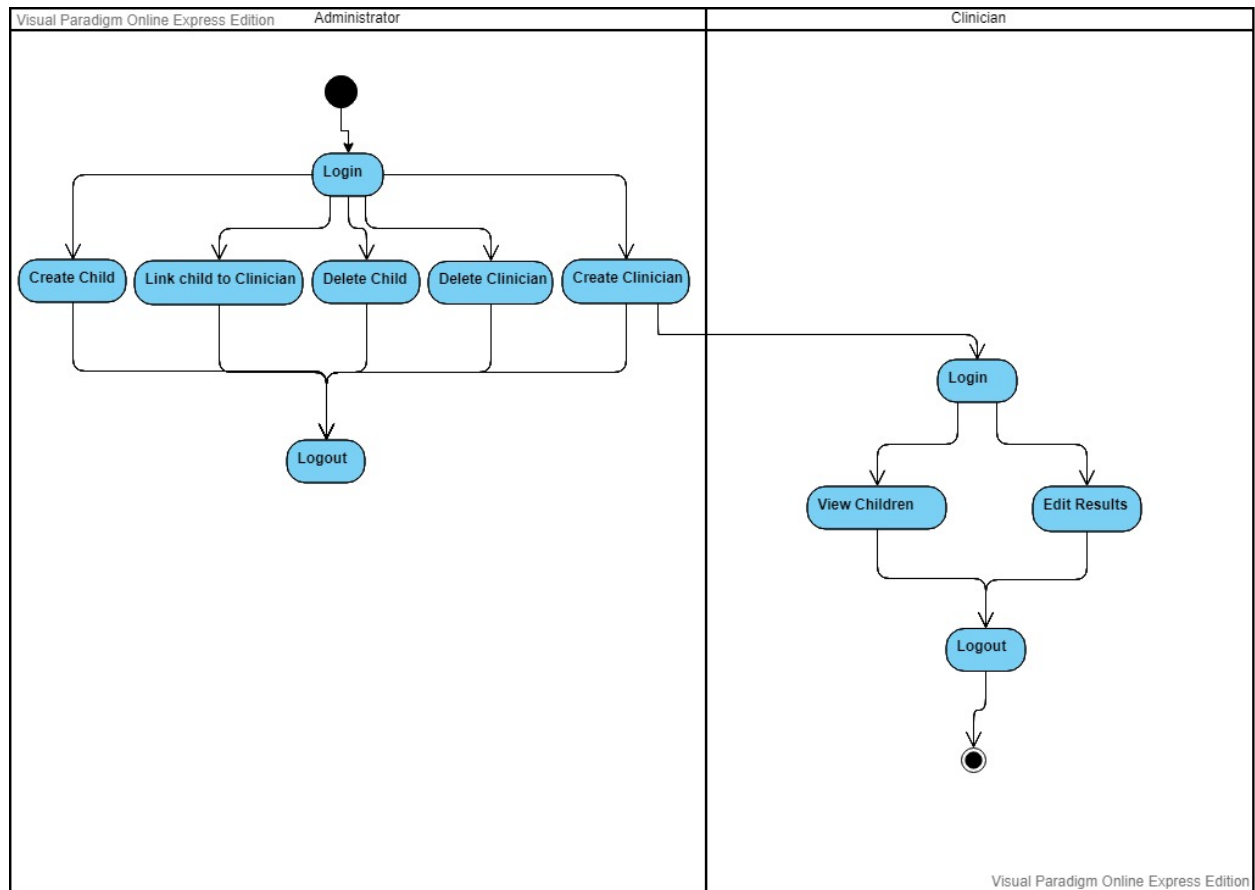- Therapist will login using his/her user ID and password.

- Therapist will retrieve information of the children assigned to them.
- Therapist will update the results of the test for a child.
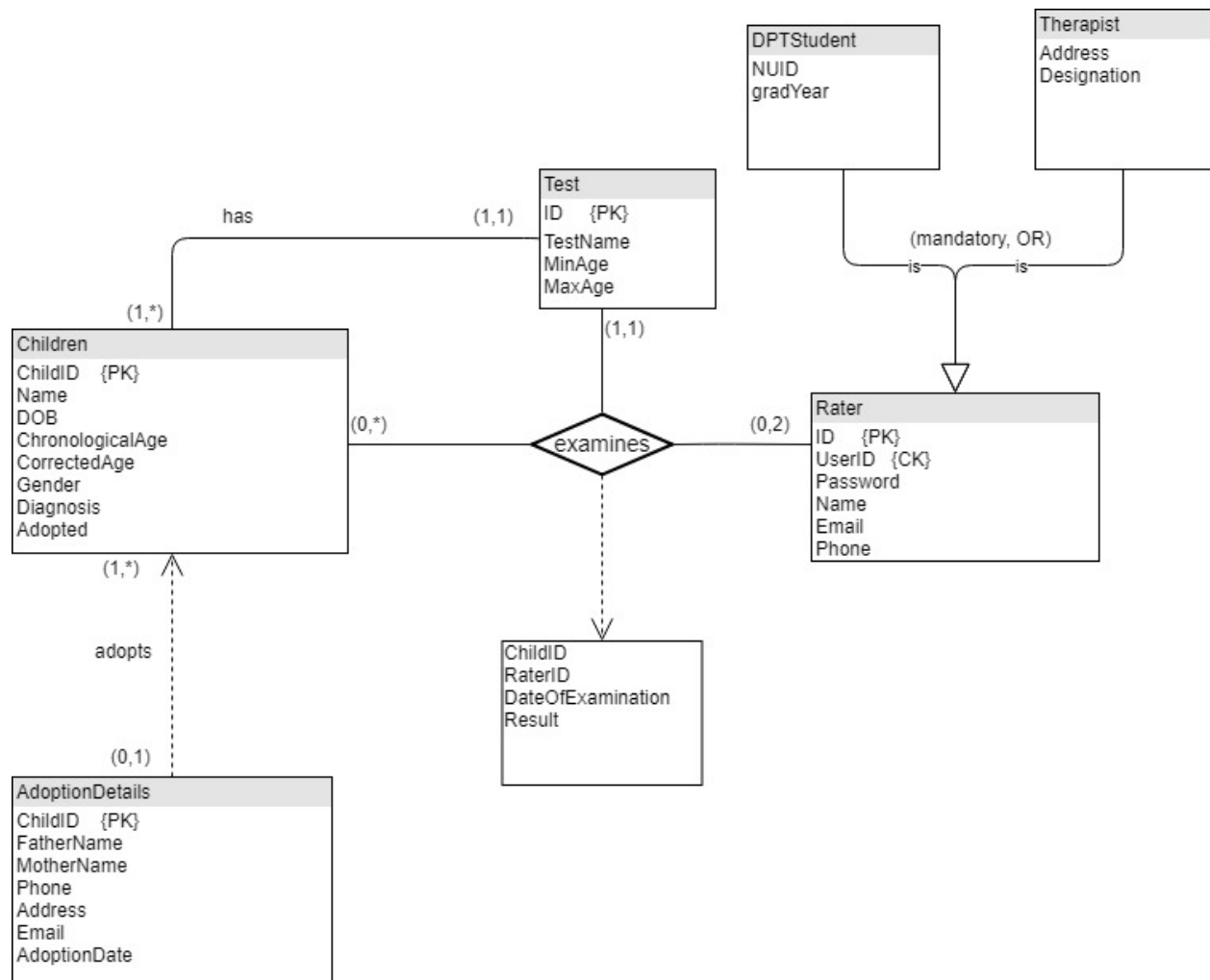
4.2 Detailed Design

4.2.1 Flow Chart

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4.2.2 Activity Diagram

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4.2.3 Conceptual Design

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Chapter 5

Appendix

5.1 Why does this project or this data domain interest you?

Keeping track of all the tests and studies conducted on a patient is helpful for the clinicians to monitor the health status of the patient and aids in checking for regular improvements of their health and to prescribe medications further.

Our project aims to help the clinicians to keep track of the results for the conducted tests namely (AIMS and PEDI-CAT) for all the participants involved in the study.

The reason we decided to take this up as our project is because we believe implementing our technical knowledge on a social cause is a way of us giving something back to the society.

5.2 Glossary

- FHC: For His Children Orphanage
- PEDI-CAT: Pediatric Evaluation of Disability Inventory - Computer Adaptive Test
- AIMS: Alberta Infant Motor Scale
- DPT: Doctor of Physical Therapy

5.3 References
- FHC documents provided by the faculty.