Phase III: System Modeling and Prototype

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## Abstract

The “Fraction Worksheet Creator” (FWC) is an off-line worksheet generation tool designed by Elementary Engineers to help elementary school teachers to create a lot of exercises for students to study and practice fractions. The fractions worksheets are randomly created and never repeated so the teachers have an endless supply of quality fractions worksheets to use in the classroom or at home.

The purpose of this document is to explain the designed system model using class diagram for the “Fraction Worksheet Creator” (FWC) software for the user. It will illustrate the partial prototype version and demonstrate the features of the software.

This document is primarily intended to be proposed to a customer and the board of directors for their approval and a reference for developing the first version of the system for the development team.

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## Overview

Basics

The Fraction Worksheet Creator should be installed by the person you will designate as your administrator. They will have the ability to add/remove teachers from the system and can assist in resetting teacher passwords.

Users will first be presented with a login screen.

From this screen they can also reset their password using the FORGOT PASSWORD button.

All Users

All users will have standard buttons available on the top menu bar.

* HELP – For context sensitive help using a pop-up window
* ACCOUNT – For account information and options based on user level (ADMIN, TEACHER, STUDENT)
* LOGOUT – To exit the system

All users will have a secondary menu bar located below the main logo.

These buttons available will differ based on user level (ADMIN, TEACHER, STUDENT)

Admins

Admins have three available screens.

* HOME – Where they can edit teacher profiles
* PASSWORD RESET – Where they can reset teacher passwords
* ADD TEACHER – Where new teachers can be added

Teachers

Teachers will have five available screens

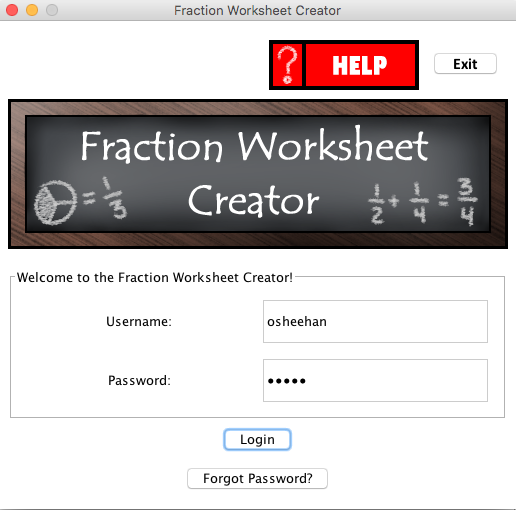
* HOME – Shows all available worksheets for printing
* TUTORIALS – Shows all available tutorial videos
* HISTORY – Show teacher worksheet history
* CLASSES – Shows student rosters for each class, allows editing of student accounts, allows editing of class rosters, allows viewing of student worksheets and answer sheets.
* PASSWORD RESET – Allows teacher to reset student passwords

Students

Students will have three available screens

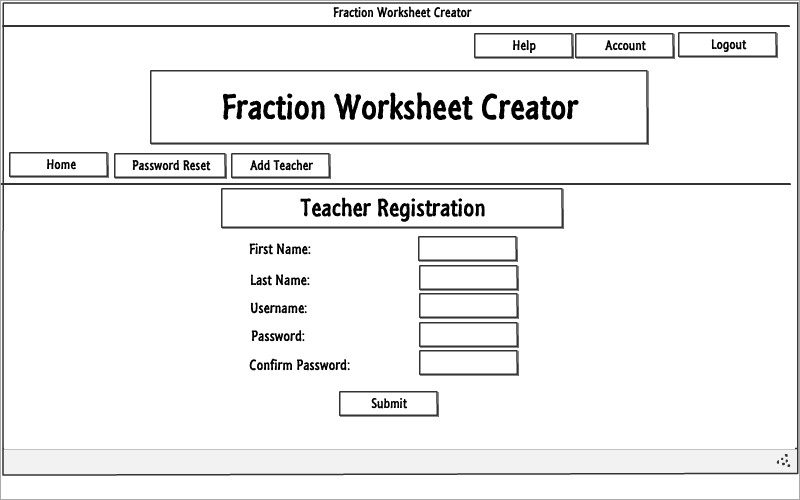
* HOME – Shows all available worksheets for printing
* TUTORIALS – Shows all available tutorial videos
* HISTORY – Show student worksheet history

**Teacher/User Login Profile**



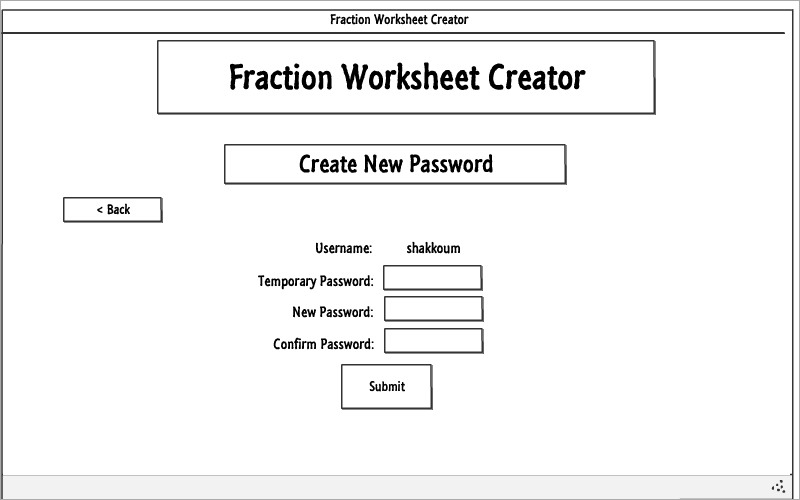
This is a teacher’s profile as viewed by the Admin, where the Admin can reset a teacher’s password on-demand or delete the teacher account, as well as makes changes to the teacher name and username.

## Teacher registration



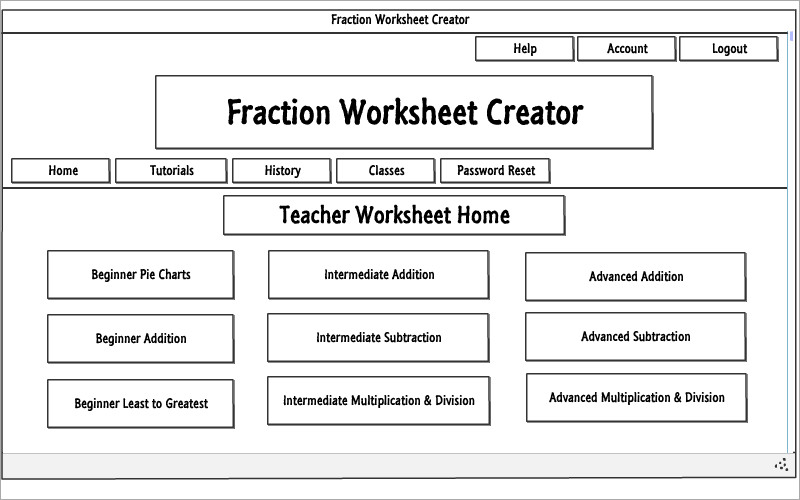
Teachers are registered by the Admin using this page, which is reached by clicking the Add Teacher button in the menu.

## Teacher – Forced password reset



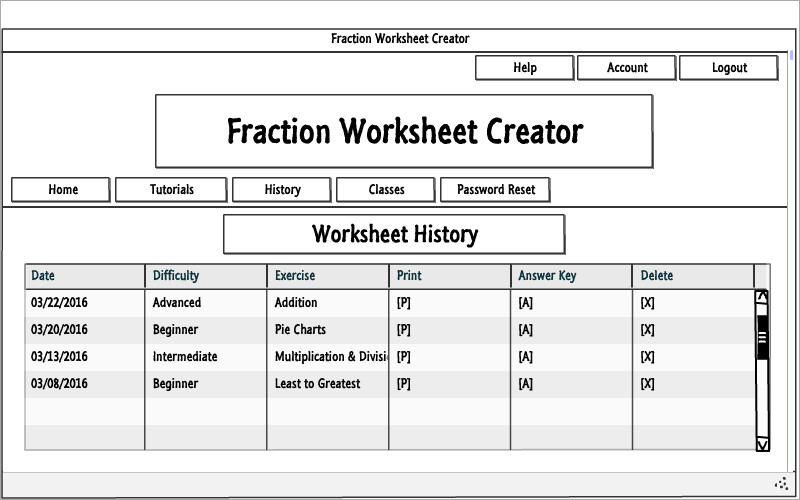
When the Admin resets a teacher’s password, this is the page the teacher sees the next time he/she logs in with the temporary password set by the Admin. The teacher must reset his/her password before logging in.

## Teacher Home



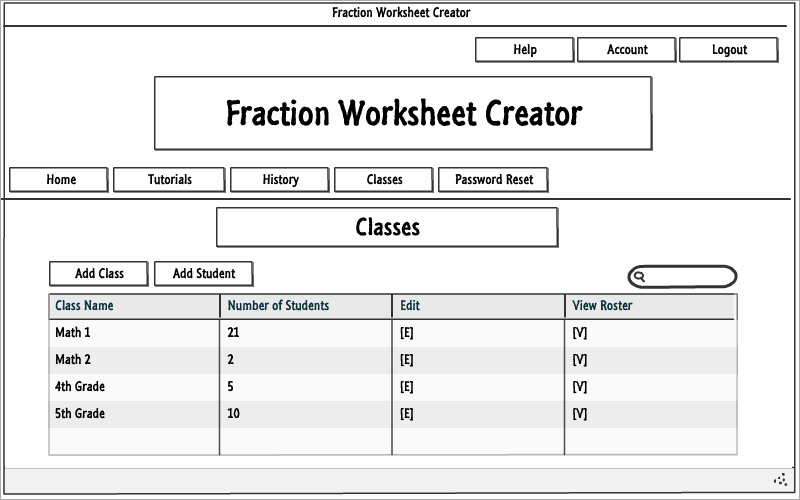
The teacher homepage is where the teacher can generate random fractions worksheets of different difficulties and exercise types.

## Teacher – Worksheet History



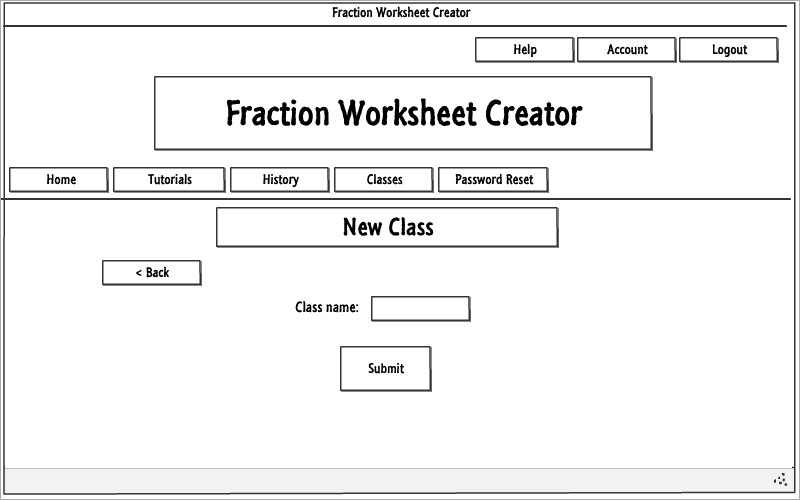
The History button takes the Teacher to this page which displays his/her worksheet history, allowing the Teacher to print old worksheets, view their answer sheets, and delete them from the history.

## Teacher – Classes



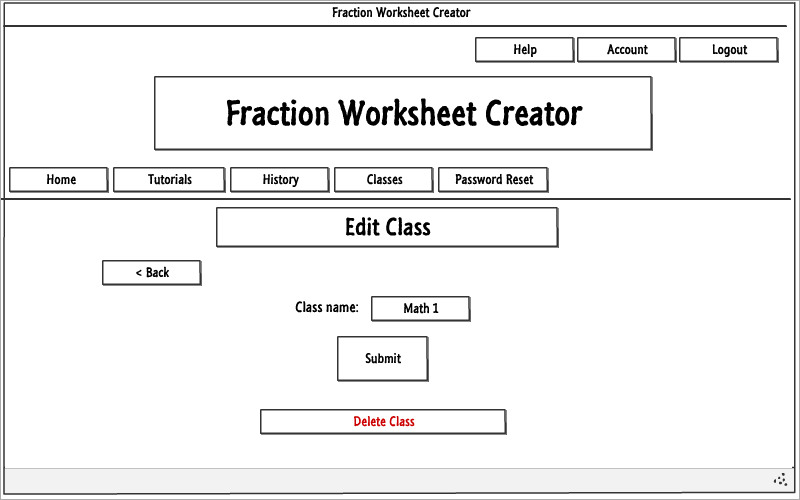
The Classes button displays this page which allows teachers to add a class, add a student to an existing class, search classes, modify classes, and view a class’ roster.

## Teacher – Adding a New Class



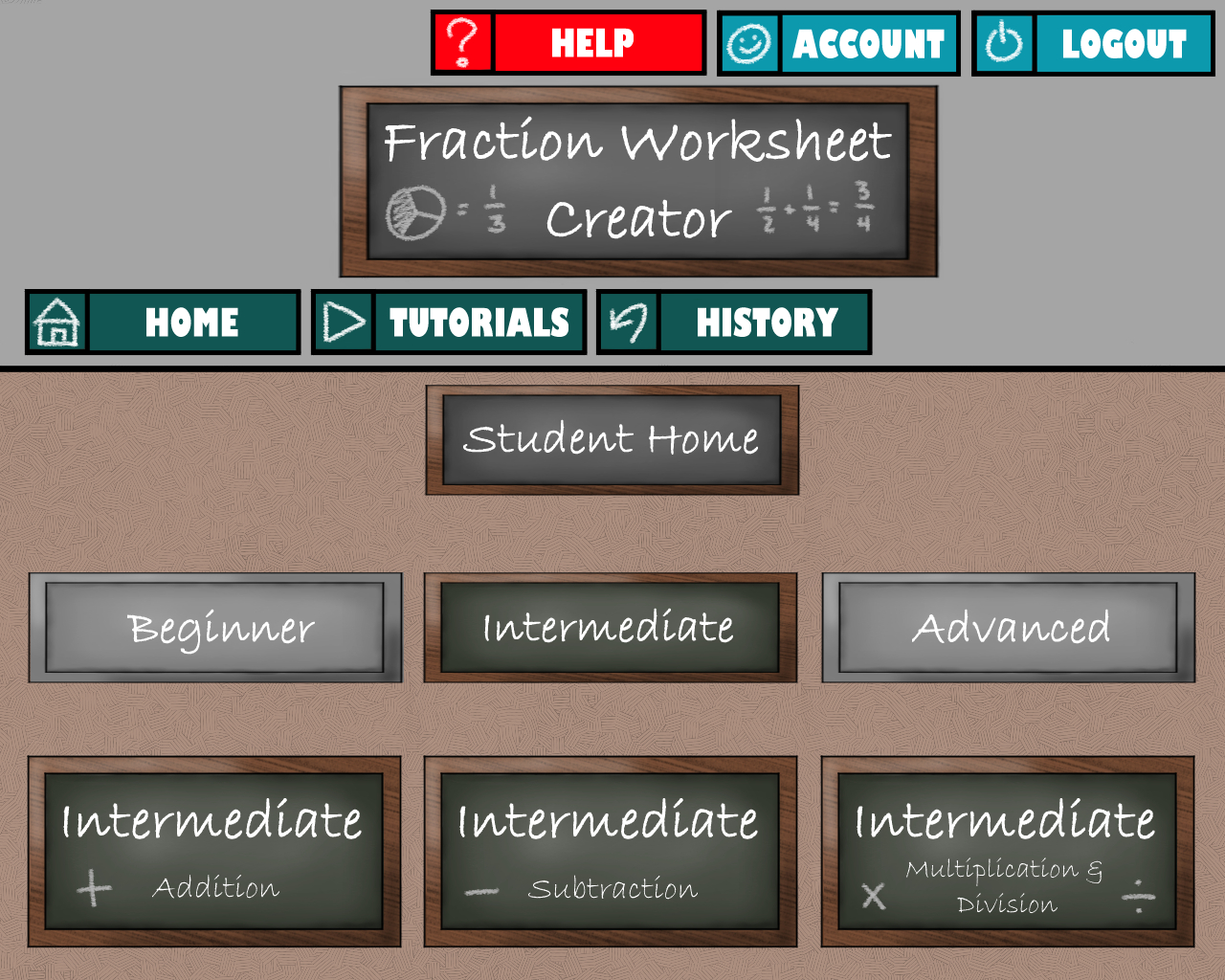
The Add Class button on the previous page takes the Teacher to this page that allows him/her to easily create a new class to add students to.

## Teacher – Edit Class



Clicking the Edit button next to a class on the Classes page displays this page which allows teachers to rename a class or delete the class, which also deletes all the students in that class. A warning message will be displayed.

## Graphical Mockup



This is a sample of what the finished user interface may look like after including

graphical components.