

UREC

WEBSITE/WEBPORTAL



Presented To:

Dr. Kundu, Sukhamay

Louisiana State University

Department of Computer Science

Presented By:

Deontrea Campbell, Adam Chapman, Michael Gerges

Introduction Statement:

This project is a solution presented to UREC of Baton Rouge and is part of the Louisiana State University (LSU) service-learning program. The project was solely developed for the sole use of UREC and was administered by Dr. Sukhamay Kundu during his CSC 4330 course at LSU. All authors of the project are presenting their work for class purposes and for no return or profit from any party.

We, the authors, present the project in order to better help UREC succeed in their community efforts. We hope that this project will be a reflection of the quality of LSU students and achieve its main goal of helping the Baton Rouge community small business owners and starters.

Project Summary:

UREC is a non-profit organization dedicated to helping the Baton Rouge community in the state of Louisiana. As part of their efforts, they are organizing programs funded by several organizations in order to serve classes for new small business owners or small business starters. In order to achieve that mission, UREC needs a software solution that would enable them to track their progress in every course they offer in order to report back to UREC's funders. This is why we developed UREC Progress Tracking System. It's a software designed to handle UREC clients' applications and course statistics. This way, they are able to track their progress during "Project Succeed" which is the program UREC designed to help the small business members of the Baton Rouge community.

UREC Progress Tracking System will provide a web-site through which UREC clients can create accounts and register for any course UREC chooses to offer. Furthermore, the project will allow UREC to extract all their required statistics, such as success rates, financial components, amount of money invested, progress achieved based on a certain race, etc, to MS EXCEL files from which UREC can generate any graphical report to present it to any party.

Finite State Modeling

The project is modeled around four main groups.

1. Administrators

UREC members who will administer the web-site. These are the people responsible for uploading offered courses, course admission, application approval, etc.

2. Funders

Several entities that donate money to fund UREC services; specifically, "Project Succeed." Funders may choose to invest in specific courses based on the feedback provided by UREC or they may choose to target a certain set of clients. Funders of UREC maybe governmental or private entities.

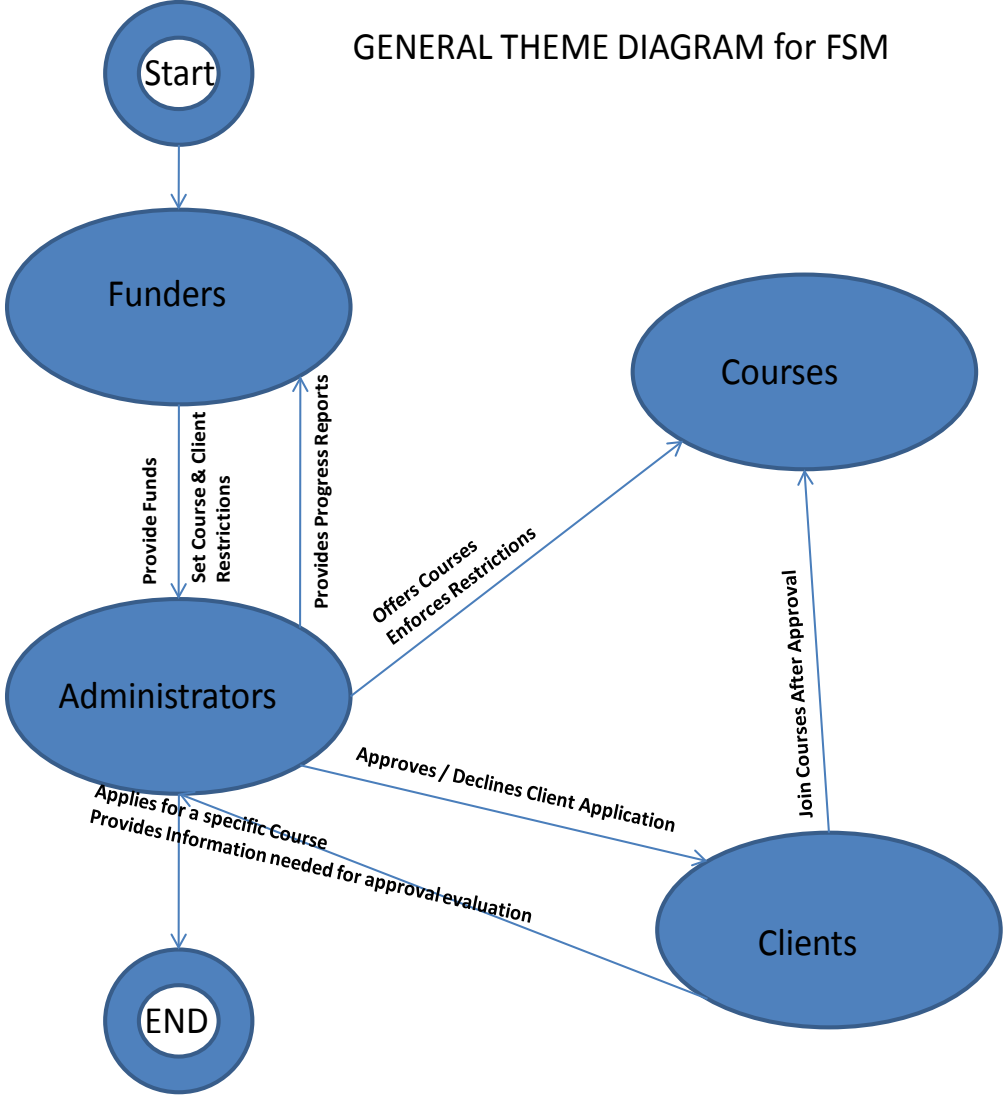
3. Clients

This entity is made by the services recipients. Typically they are new small business owners who are trying to learn business managements, planning, etc. They have to meet certain restrictions enforced by both Administrators and Funders before they can receive any service (join a course).

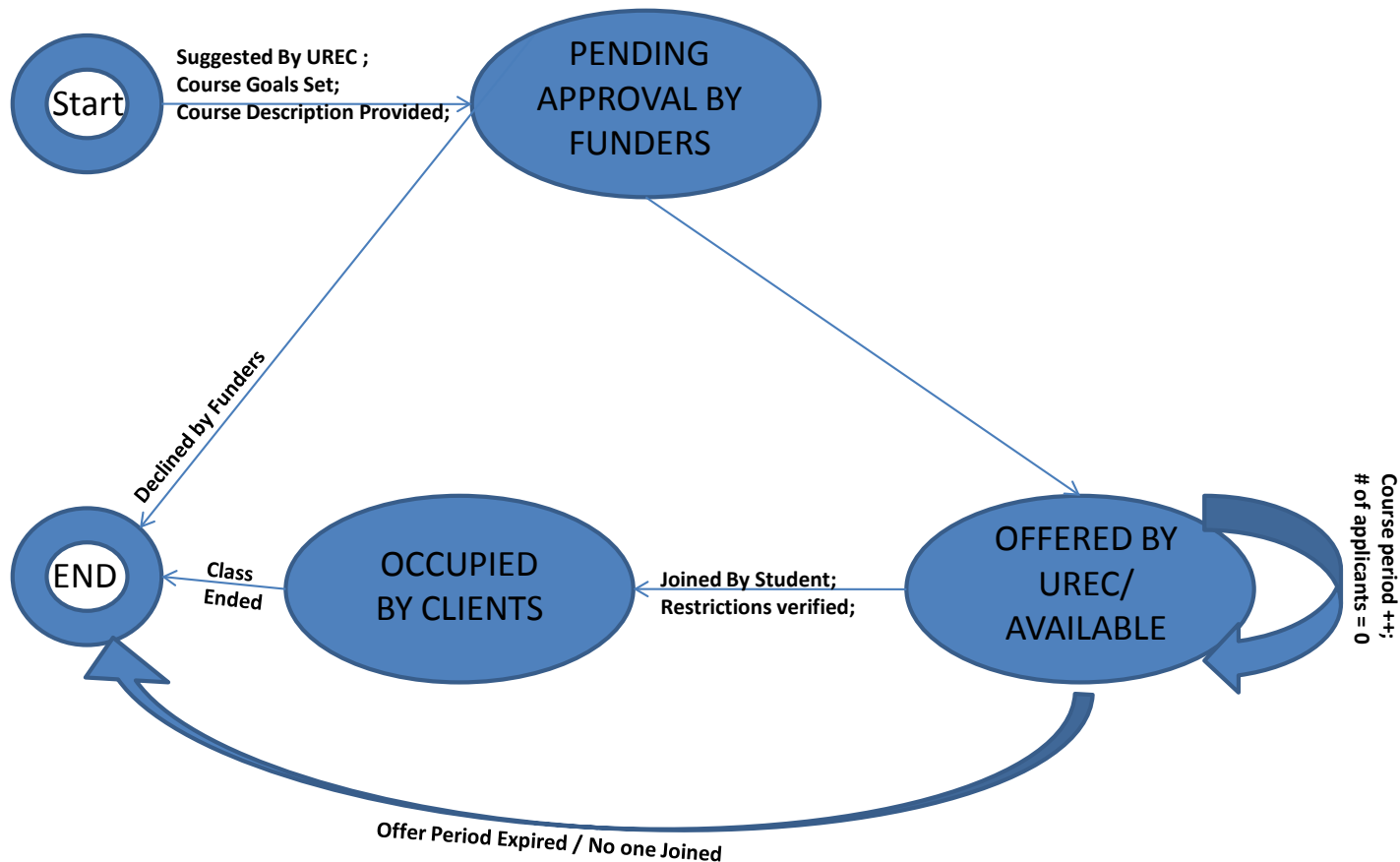
4. Courses

This entity is the service offered by UREC to its clients. Each course may have different restrictions based on what UREC and UREC's Funders decide. For example, a Funder from the government sector may restrict all funds to courses that produce 80% or more "success rate." Success rate is agreed upon by UREC and its funders to be, say, the number of people who actually start a business AFTER taking the course.

GENERAL THEME DIAGRAM for FSM



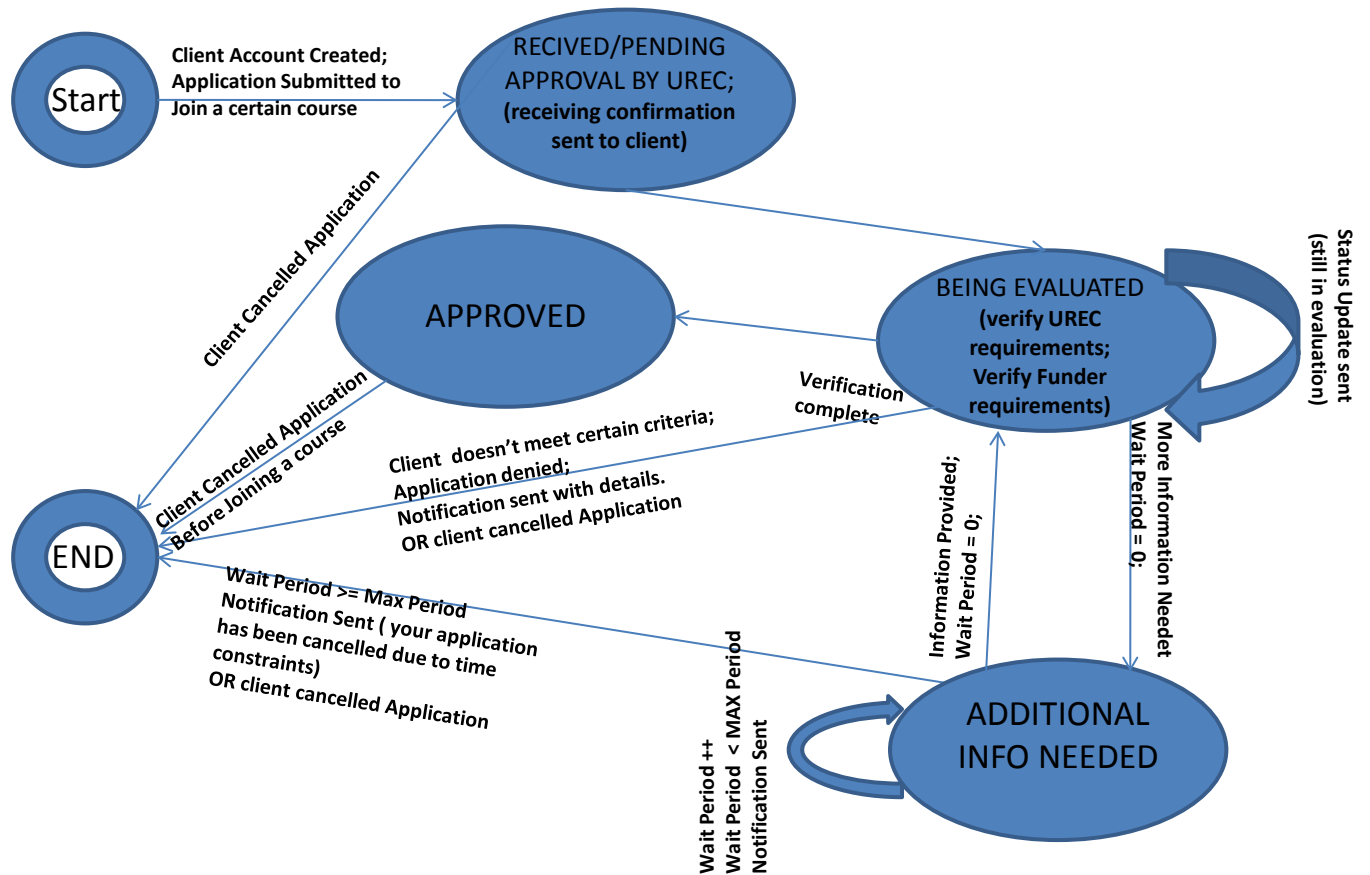
FSM for a specific Course



The Above Model Assumes:

- All Courses Must be approved by UREC and Funders before being offered.
- At least one client joins otherwise the course is terminated
- Eligibility is verified for all clients based on the criteria both UREC and Its funder set.
- There is a max period a course will be available before it's terminated
- Clients have NO contact with the Funders. Clients may only contact and submit information to UREC.
- All course restrictions is verified before any course become available.

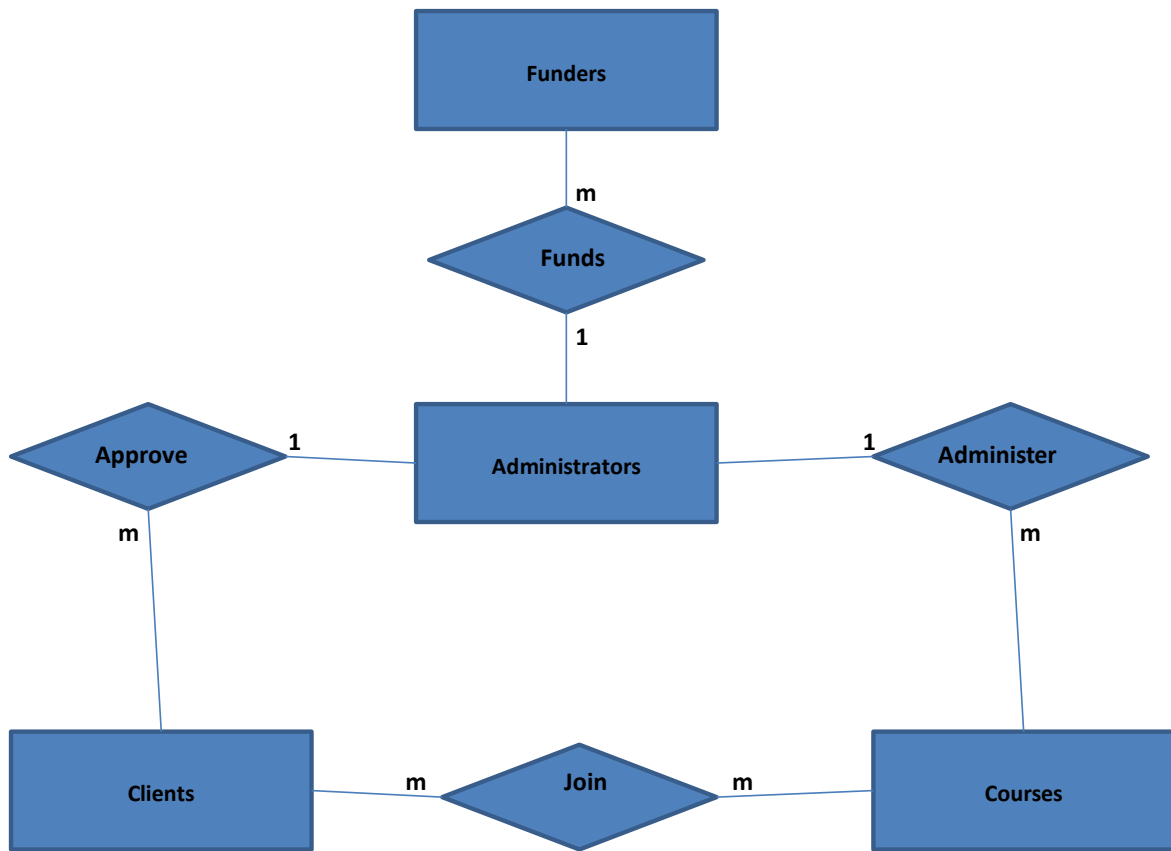
FSM for a specific Client Application



The Above Model Assumes:

- Only one client can submit one application per course
- There is a "Period MAX" which is a time pre determined by UREC in which the client must respond and provide any required additional information or the application is declined.
- There is a status notification sent periodically to notify clients with application status
- Client May Cancel application AT ANY TIME prior to joining a course.
- After Application termination, Client must submit a new application (no appeals are made).

ER Model For All Major Entities



The Above Model Assumes:

- There will be only one administrator group (UREC)
- Clients have no direct interaction with the Funders
- Clients must be approved first before they can join any courses
- Funders restrict courses offered **indirectly** through administrators
- A certain course maybe funded by more than one organization

Administrators

(managementID, controlLevel, program)

Funders

(organizationID, type, amountOfFund, governmental (flag))

Courses

(courseId, program, funderRestriction, adminRestrictions)

Clients

(clientID, name, address, financialGroup, race)

TESTING

- Validating all information entered by the registration form on the web-portal
- Validating all database operations and interactions (updating, adding, editing, or deleting a record)
- Verifying all access control levels: user groups vs. administrator groups
- Validating all return values from data base
- Verifying all integrity with MS excel (because clients use the data from our project as an input for MS excel in order to generate reports)
- Verifying data integration (database duplicates, user access level, etc)
- General website functionality tests (displaying correctly, responding correctly, all links are functional)
- Code testing (debugging environment & pair programming techniques applied)

Technology Used

DRUPAL & DRUPAL Modules

Drupal is a PHP-based open-source content management system (CMS). It contains an easy-to-use modular framework system, which makes the creation of all types of websites a breeze. The users can use Drupal in order to create websites of all types and genres ranging from personal sites to forums and social networking websites.

The program itself automates various features dealing with all other CMS such as user registration, customizing design and layout and blogging system. Other functions can also be added to the website by using dozens of freely available add-on modules created by the Drupal community. The Drupal interface suits both novice and advanced users.

Drupal can run on a web server which supports PHP, Apache/IIS and MySQL/PostgreSQL. In the new version 6.6, some bugs were fixed, as well as the critical security vulnerabilities. Thus, Drupal helps its users to create dynamic websites easily and quickly, althout being behind other PHP-based Content Management Systems in terms of speed - compared to Joomla, for example.

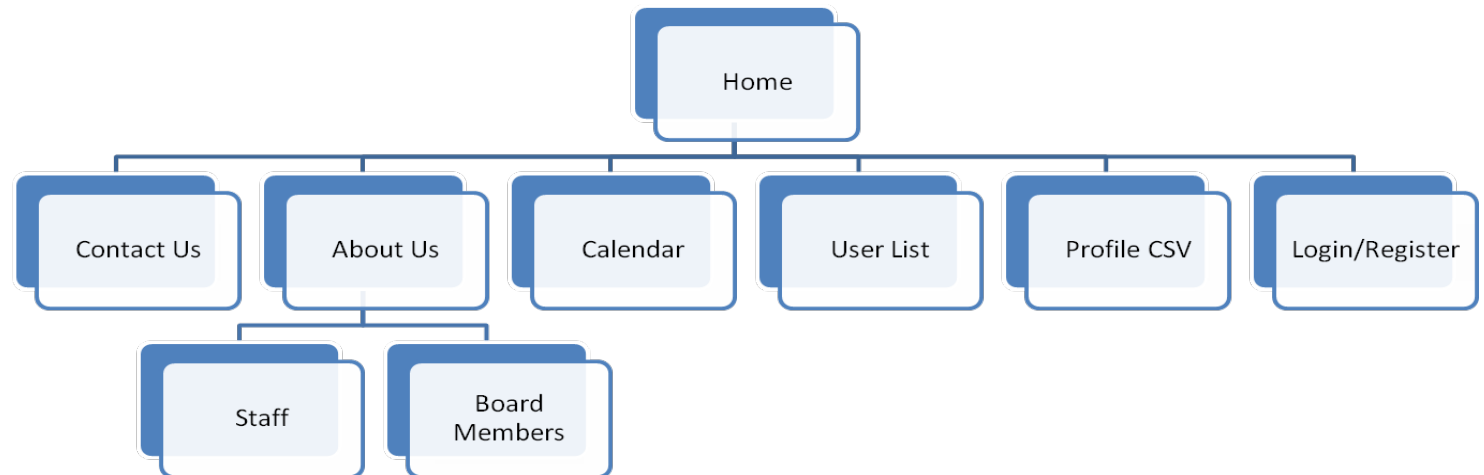
PHP

PHP, or PHP: Hypertext Preprocessor, is a widely used, general-purpose scripting language that was originally designed for web development, to produce dynamic web pages. It can be embedded into HTML and generally runs on a web server, which needs to be configured to process PHP code and create web page content from it. It can be deployed on most web servers and on almost every operating system and platform free of charge. PHP is installed on over 20 million websites and 1 million web servers. Used mainly for debugging the website and creating custom pages.

JAVASCRIPT

JavaScript is an object-oriented scripting language used to enable programmatic access to objects within both the client application and other applications. It is primarily used in the form of client-side JavaScript, implemented as an integrated component of the web browser, allowing the development of enhanced user interfaces and dynamic websites. JavaScript is a dialect of the ECMAScript standard and is characterized as a dynamic, weakly typed, prototype-based language with first-class functions. JavaScript was influenced by many languages and was designed to look like Java, but to be easier for non-programmers to work with. Used mainly for customizations of our webpages.

UREC Website ---- STRUCTURAL DIAGRAM



Web Pages:

Description:

<p>Home</p>	<p>The page was designed using a module in Drupal named Panels, which allows you to place different nodes into regions of the page and resize them as need be. Some nodes used includes: flash node (containing flash video), a calendar node which display events.</p>
<p>Contact Us</p>	<p>This page was created using the Panels module as well. The content for this page was written in html and then put into the different panel regions.</p>
<p>About Us</p>	<p>This page was created using the Panels module. This page nodes used the content types of slideshow, image and a calendar node. The calendar node was placed on the right side while the image was placed on the left and the slideshow was placed in the center.</p>
<p>Staff</p>	<p>This page was created using the Panels module. This page nodes used the content types of Image and a calendar node. The calendar node was placed on the right side while the image was placed in the center.</p>
<p>Board Members</p>	<p>The Board Members page was created exactly like the Staff page.</p>
<p>Calendar</p>	<p>The calendar page was implemented using the views module along with creating a content type specifically for calendar events.</p>

Login/User Register	This page allows a user to register or login. This page will check the users credentials against the database using php. The database server is MySQL.
User List	This is a php script that outputs the names of the registered users along with any other information you would like to know about them.
Profile CSV	This tab, once clicked, will output a .csv file of all the registered along with any information you would like to capture.