Grant Title: **Accelerated Pathways in Advanced Manufacturing (APAM)**

Author: **Community College of Rhode Island**

Link: http://www.ccri.edu/

Document: Record Management

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Abstract

CCRI TAACCCT-3 APAM Grant

"Creation of a Dynamic Web-Based Solution for Management Student's Records"

By *David Dos Santos*

The Community College of Rhode Island was awarded a TAACCT-3 Grant in March 2014. "*TAACCCT-3 is a U.S. Department of Labor grant awarded to the Community College of Rhode Island to develop streamlined, industry-recognized credentials training to move Rhode Island's unemployed and dislocated workers back into the work force*"[i].

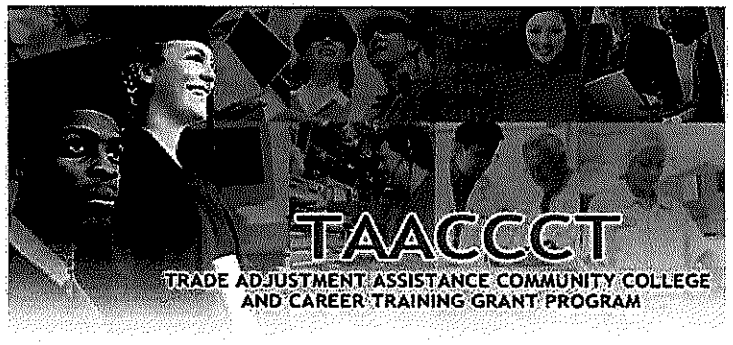
In order to capture the data necessary for tracking the required grant outcomes, a dynamic web-based solution was developed and implemented to allow a limited set of multiusers to sign-in with secured passwords. The web solution was developed using a Server Scripting Language, known as ColdFusion version 9, within a Database environment of MySQL Server version 5.6. Additionally, the system has the capacity to interact with BANNER, "the world's leading higher education ERP."

Solution Structure:

- A well-defined normalized database that provides for an unduplicated headcount tracking of participants' activities
- Tracking of user's activities; this feature allows the staff to review activities within different components of the project's activities
- Use of stored procedures, functions, and views to centralize the logic of the application within the Database Server that includes the option of adding in additional layers of security
- Connect to BANNER to query students' records as well as import the students' data into the treatment/activity database
- Ability to extract a student's data from uploaded Excel files
- Ability to work outside of the Campus Network
- Ability to send emails to students (individual or group)
- User's authentication is based on Windows Active Directory authentication. If the user is disabled in the College Network Active Directory, then, the user will be unable to sign-in the solution
- Customization reports in pdf formats with a variety of statistical charts

Sign-in

In order to sign-in to the web solution the user has to pass the system security which is based on the Campus Windows Network Active Directory Authentication.



Security:

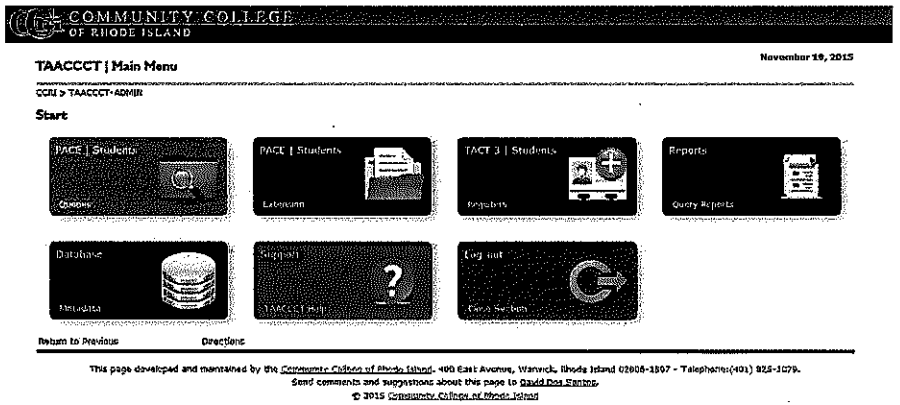
- **HTTP Secure (https):** The system redirects the user to a secure tunnel, https, if the website origin is not coming from a HTTP secure protocol. This allows the staff to maintain the protection of the privacy and integrity of the exchanged data.
- **Session time-out:** When there is not activity in the application during a 20 minute interval, the system will clean the session variables, forcing the user to signin in the login page.
- **Ajax secured with API component:** All calls to the Server to retrieve student data areas are reviewed by a server authentication method that avoid a remote call leading to non-secure access/ Once the called method meets the authentication procedures, the flow process resides on the server.
- **SSN:** The data is store in Oracle BANNER.
- **The authentication method is LDAP.** This prevents access to students' records once they stop working at CCRI to student's records.
- **Lock account after multiple failed login attempts.**
- **No Front-side reset password module.** If the account is locked, user has to contact Help Desk to unlock the account, since the account credentials are from Banner.
- **Data sources are highly protected.** Not even the application developer knows the password of the sources.

Start Menu

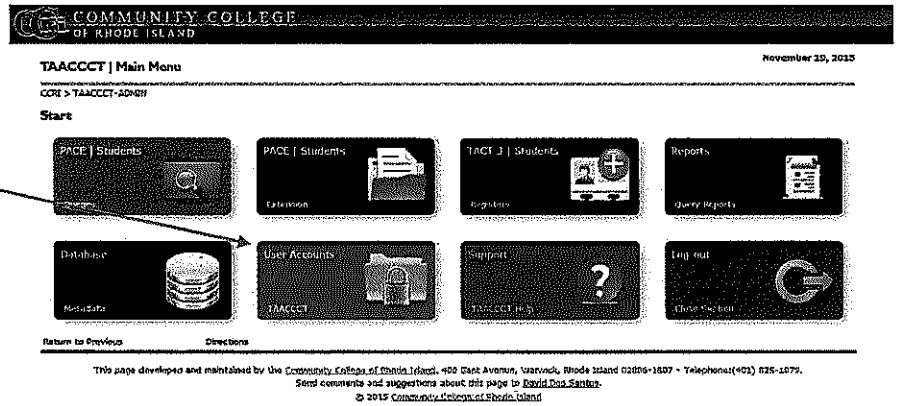
The start menu has the follow options:

1. TAACCCT (Queries)
2. TAACCCT I Students (No-Cost Extension)
3. TAACCCT 3 | Students (Registers)
4. Reports
5. Database
6. User Accounts (**Administrator Staff Only**)
7. Support
8. Log-out

Version Staff:



Version Administrator:



Search box:

In different places the user will find useful text boxes that allow users to quickly search related data

If the user wants to display all data stored in the table that is related to the search box, press: *

Otherwise, start entering the required text, and the system will filter the information

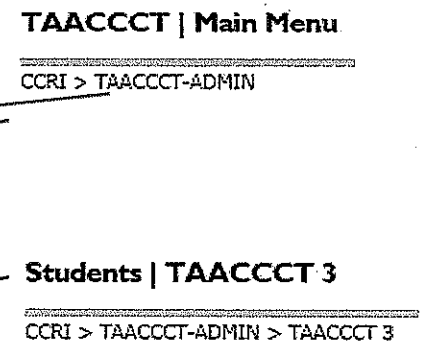
And click the option found

Navigation:

There are multiple ways to navigate within the application, one is to entered in the browser the url of the module:

- https://webfor.ccri.edu/tact/
- https://webfor.ccri.edu/tact/students.cfm
- https://webfor.ccri.edu/tact/students_extension.cfm
- https://webfor.ccri.edu/tact/students_tact.cfm
- https://webfor.ccri.edu/tact/report.cfm
- https://webfor.ccri.edu/tact/users.cfm

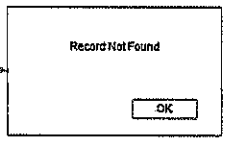
The other method is to click the navigation breadcrumbs, by clicking TAACCCT-ADMIN, which it takes the user to the Main Menu, where the user can choose where to go.

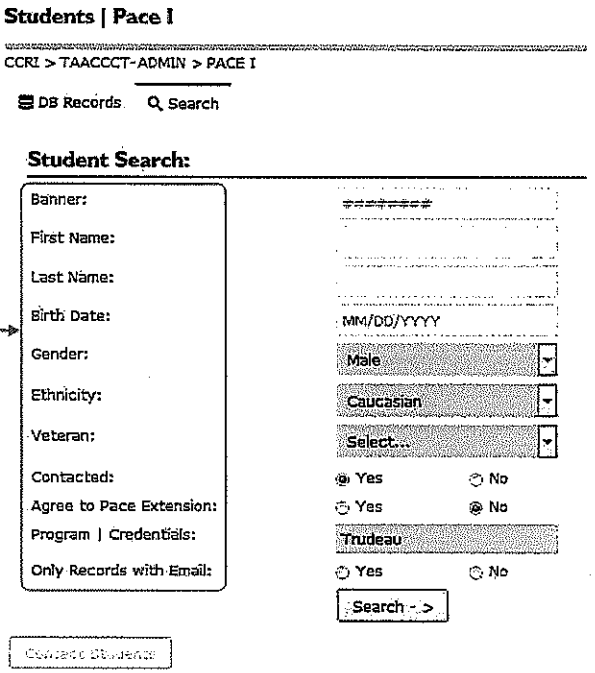


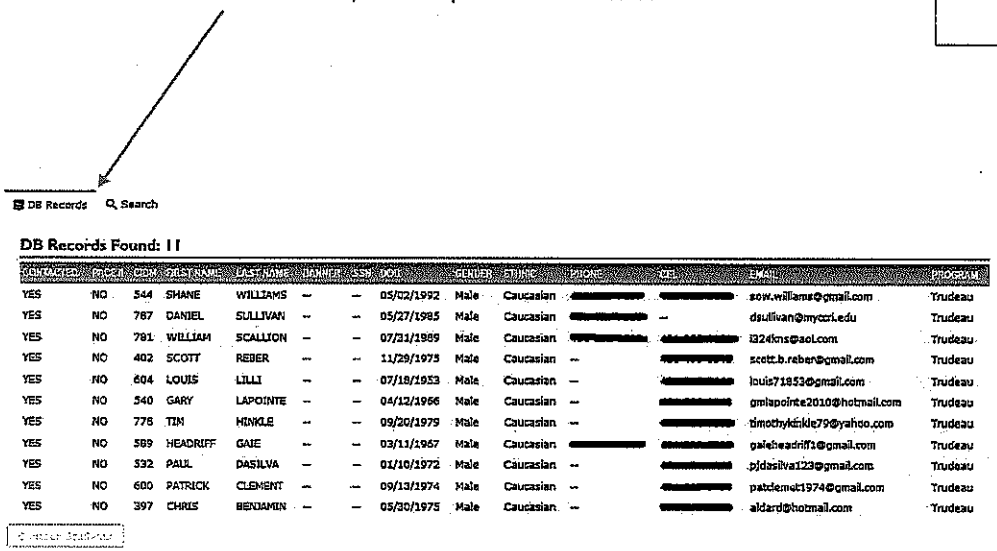
TAACCCT | Students (Queries)

This module allows:

- Search dynamically students based on their conditions
- If data is not found, the system will emit an alert.
- When Data is retrieved, it will be placed on DB Records:



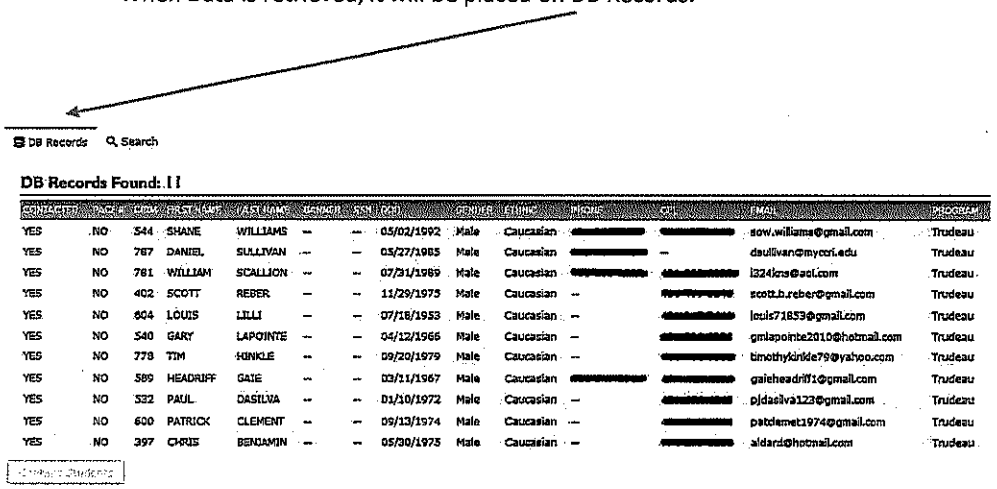




Students (Queries)

This module allows:

- Search dynamically students based on their conditions
- When Data is retrieved, it will be placed on DB Records:



The Contact Students button will send an email to Students that are enrolled in the TAACCCT -1 No-Cost Extension in the PACE 1 Extension.

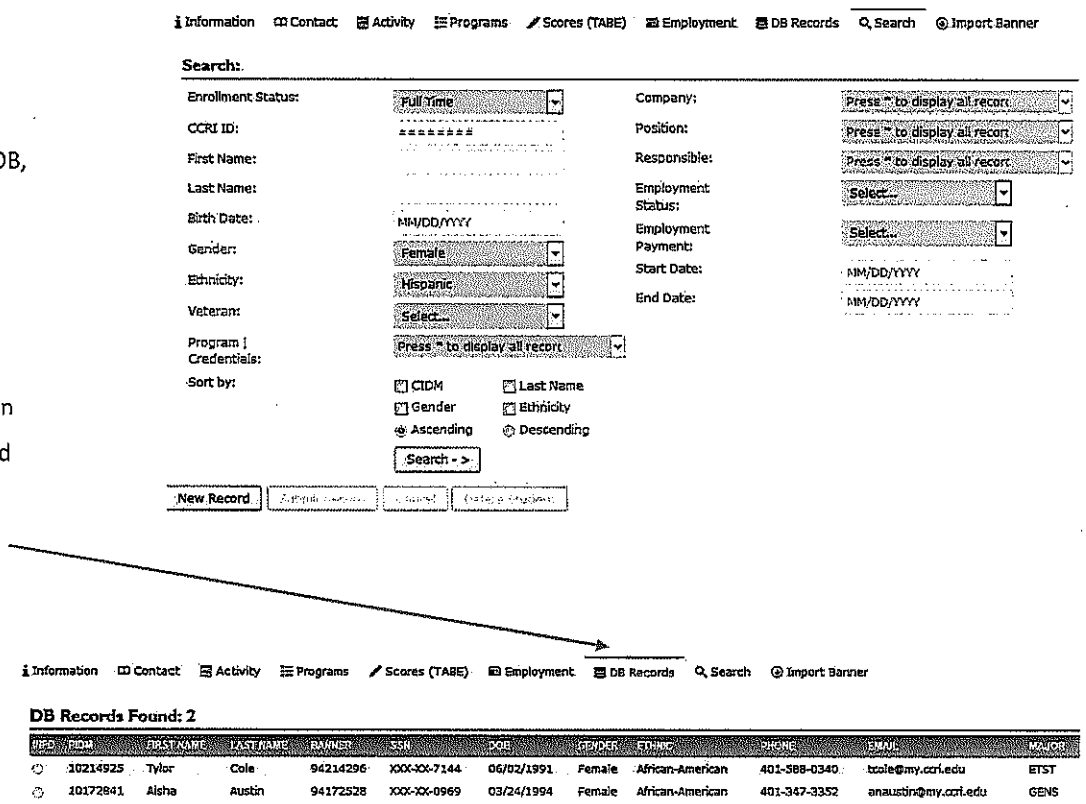
Contact Students

TAACCCT 3

This module allows:

- Search dynamically students based on their conditions(ID, Name, DOB, Gender, Ethnicity, Veteran, etc.)
- Select a student record from a matched student's group conditions
- Register or update student's record.
- The output of sensitive student's record information (ssn) is based on the user's privilege access (Administrator and Staff). When it is based on Staff, the SSN with placed with dash symbol "-" plus the last four digits.

How records are displaying when the user's privilege is Staff, instead of Administrator



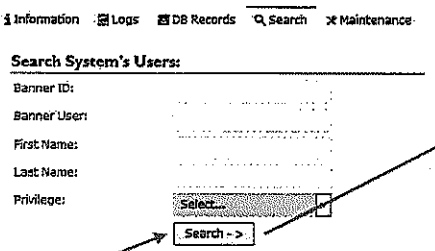
User Accounts

This module allows:

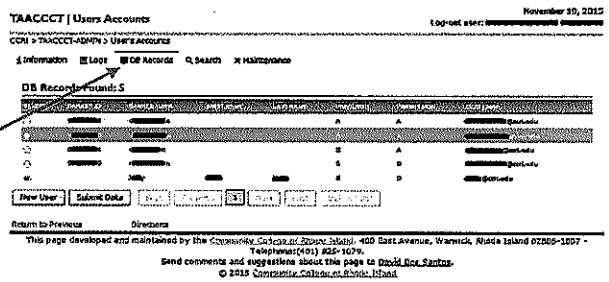
1. Create or Update a internal account, which the credentials MUST match the user's Banner login access.
2. Search Accounts (Enter any if you wish any information in the inputs, or simply just click Search. It will display all accounts created)
3. Get User Log of Activities
4. Change User Privilege or Access

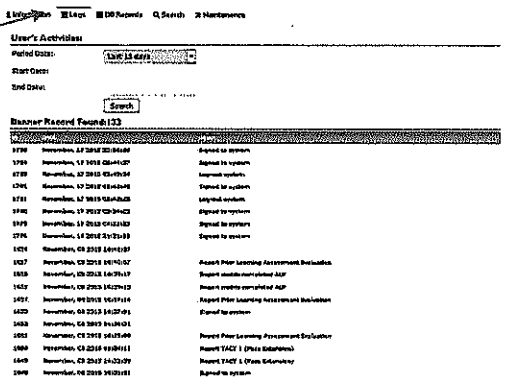
   (By changing the privilege permission of the account, the user will not get the full length of SSN) When user is staff, SSN will be marked with user ID

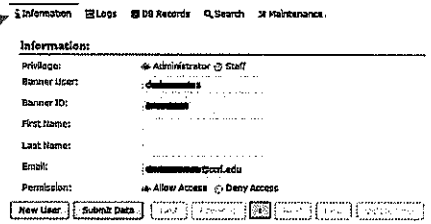
Search a User:



DB Records:







Community College of Rhode Island

Migration of the Current Database System into **MySql Server** to become an efficient, friendly-user, and secure system.

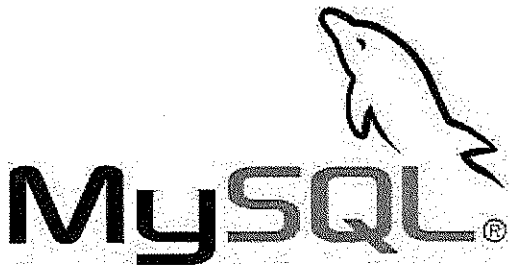
CCRI-APAM PROGRAM

Community College of Rhode Island

Objectives and Activities

Design, develop, migrate and implement a multi-user database system that will allow the Staff working on the Accelerated Pathways in Advanced Manufacturing Program at CCRI-Warwick to work with an efficient, friendly-user, and secure system.

Community College of Rhode Island

Benefits of Implementing MySql Server integrated with .NET App.

1. MySQL privileges and user security
2. Relational Database System
3. Client/Server Architecture
4. Replication
5. Transactions
6. Foreign key constraints
7. Platform independence
8. Speed