



FIU School of Computing & Information Sciences

Senior Project, 2016, Spring

VIP 2.0

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Problem

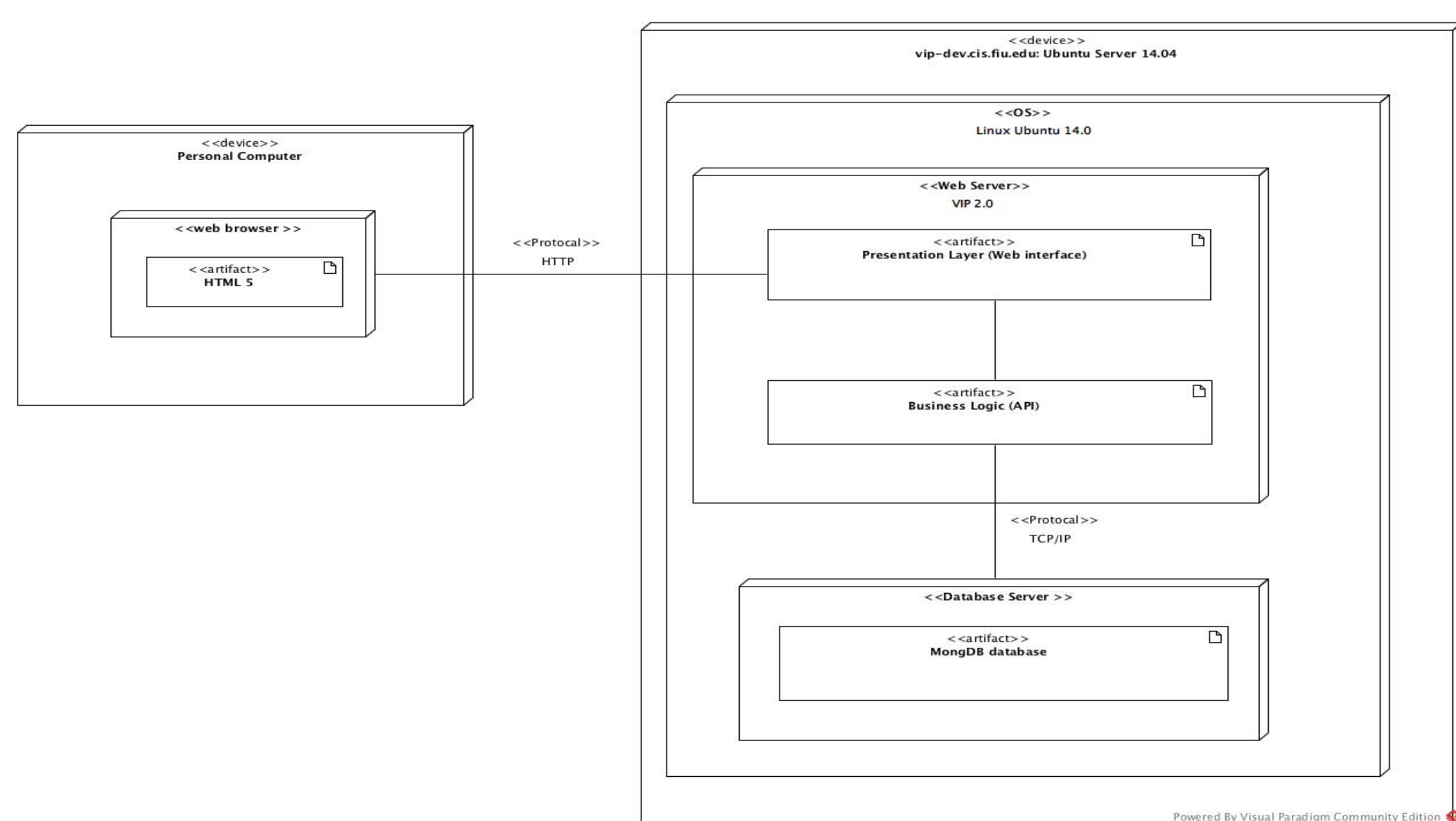
The Vertically Integrated Projects (VIP) program aims to involve everyone on campus in innovation. VIP unites undergraduate education and faculty research in a team-based context. Undergraduate VIP students earn academic credits, while faculty and graduate students benefit from the design/discovery efforts of their teams.

Solution

The solution is to provide students and faculty, a way to communicate and coordinate their projects. This will allow students to find cross-disciplinary projects and assist faculty in research.

System Design

The system employs a 3 tier client-server architecture. A user will connect to our server using a HTTP protocol and will be served the index.html file located in the presentation layer. All logic is located in the business logic area and it communicates with a mongo database located on the same server using a TCP/IP protocol.



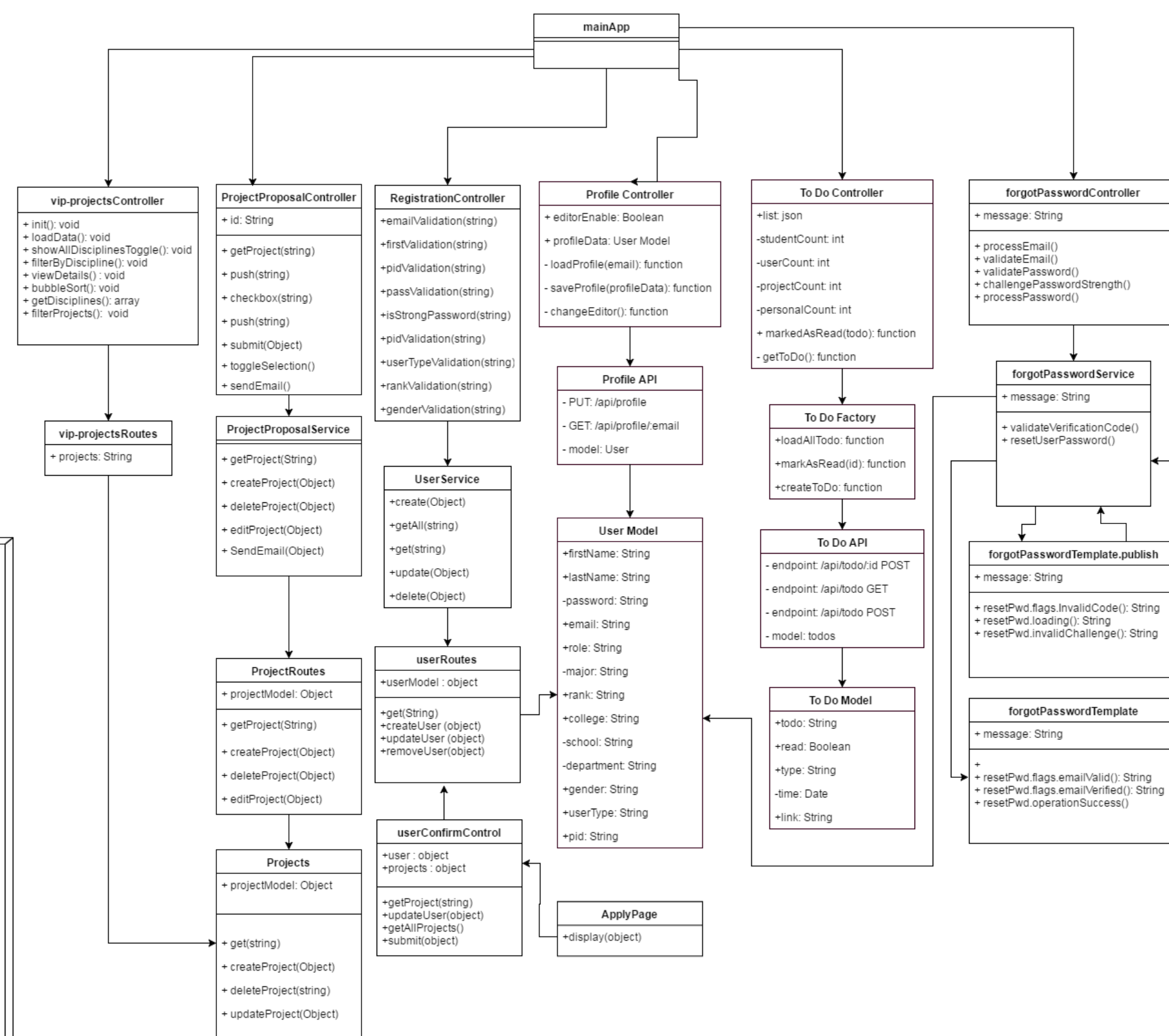
Current System

The current system allows students and faculty to register, login, manage their profile, view projects and schedules. Faculty users can also propose new projects for students to work on. Users are able to view information about current real world problems and see which one sparks their interests. Students of all ranks are able to select and join a project where they will then be able to work side by side with industry leaders and assist with real world research problems.

My Role

- Create main page
- Create a todo that notifies the user what task need to be completed.
- Redesign layout components
- Create profile page

Object Design



Requirements

The system allows for users, depending which role the user has, to be able

- Register
- Login
- Logout
- Apply for projects
- Edit your own projects
- View currently active projects
- Accept/Reject project proposals
- Edit user profile
- View task that need to do be completed

Implementation

- HTML5/CSS3 was used for designing the UI components.
- AngularJS allowed us for rendering pages dynamically using javascript.
- MongoDB and MariaDB was used for our database to hold our consistent data
- Sencha was used for mobile support as well as cross browser support
- NGINX was used as our server where we were able to run all of our API.

Verification

Test Case 1 (Sunny Day)

ID: VIP-SD-914-01

Purpose

- Test if user is able to see if all unread todos get populated

Precondition

- User is signed into VIP
- User is of faculty/PI/CoPI
- User is add todo page

Expected Result

- User sees all unread todos

Actual Result

- User sees all unread todos

Test Case 1 (Rainy Day)

ID: VIP-RD-914-01

Purpose

- Test if any user, including guest and students, can read todos

Precondition

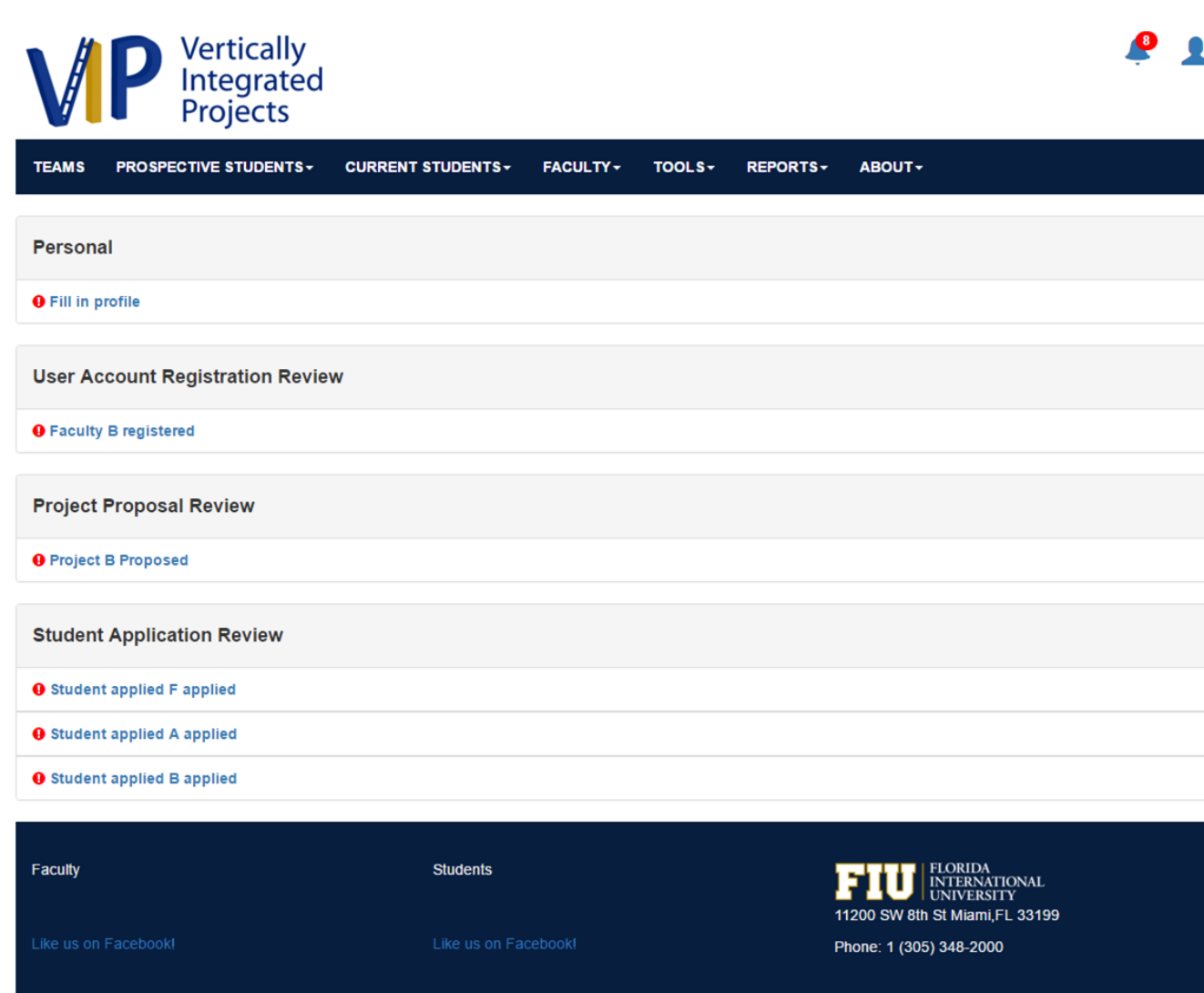
- Guest or student is on the site

Expected Result

- Guest and student can not see todos

Actual Result

- Guest and student can see todos



Manage Profile

View list of tasks that need to be done

Summary

This project is the second version of a system that will be in the works for years to come. This version allows students to start the process of getting involved in a unique team outside of their curriculum classes. It has been very beneficial to apply software engineering methodology to such a unique system. Developing this project began with a feasibility study which lead to requirements elicitation and documentation and finally system design. This was followed by an iterative cycle of object design, implementation, and verification which finally resulted in an unique system which allows students to join Vertically Integrated Projects

Acknowledgement

The material presented in this poster is based upon the work supported by Marlon Rowe, I am thankful to the help that I received from my group members, Tiago Moore, Victoriano Vega, Jorge Perez, Andres Villa, Miguel Conde, and Rodolfo Viant