Antplanner Requirement Specification

Introduction

This document presents a description of Antplanner, a web based course-scheduling tool. This document will describe the problem that Antplanner intends to address and software requirements of a proposed solution. It will detail the main features and constraints of the system.

Antplanner will integrate with the University of California, Irvine's web schedule tool, known as WebSOC. The application will include a visual representation of student schedules in which student are able to click on schedule search results and automatically populate a Monday to Friday schedule. Students should have the ability to save their created schedules with a username. Finally, the application will have features related to printing a student's schedule. This web application will allow students to easily visualize and create possible combinations of course offerings.

This project is being created with the intention of selling a comprehensive scheduling tool for the university, for use by students. There are no other solutions in the market place that would compete with this product and we may be able to market this solution to other universities.

Description of Problem

Currently the university is using several solutions that are not meeting students' needs, tools in use are either not visual enough to be understood by most students or are not fully integrated with universities' scheduling systems.

WebSOC, the university's schedule tool, does not contain any visual component nor does it allow students to compare class times or offering easily. Many students attempt to register for overlapping courses or forget to add required discussion or lab sections required for enrollment. This causes many students to drop from courses and results in unnecessary traffic on the school's registration system. The university has also found that students are creating illogical schedules, leaving unnecessary long gaps between classes, or scheduling class too close to one another. The client reports this causes student fatigue and lower overall course attendance and lower knowledge retention.

The client has expressed several problems regarding the usability and visibility of the university's planning tool built into their 'Electronic Education Environment." The main problem with this existing tool is, that is it inaccessible to student until after enrolling in classes. Thus, it does not serve as an effective *planning* tool for enrollment in future quarters. Secondly, the client reports low utilization of this tool, hidden amongst other functions of the EEE website.

Use Cases

Student – copy class information from WebSoc to Antplanner
Student – remove class information from Antplanner

Description of Software Solution

Enhancement Requests

- The client has requested that the scheduling tool be visual, allowing students to see and adjust their schedule. This includes classing showing in different classes appearing in different colors.
- The ability to save several possible versions of the student's schedule and a print functionality, are important client requests.
- Integration with WebSoc is an essential request, the client has asked that the information and system not be duplicated, but rather implement within the new scheduling tool
- Our client has requested that a login not be a prerequisite for using the tool, as they want incoming students to be able to use the tool while registration is processing.
- Should include a Monday to Friday schedule from 6 am to 11 pm.

Features and Functional Capabilities

This system should have two panes, on one side a schedule and the other an integration of the WebSoc tool. Classes on the WebSoc pane should be clickable, automatically populating the Monday to Friday, 6am to 11 pm schedule pane. Each class should display in a different random color. Classes should be able to overlap, allowing students to compare course offerings. When users click on courses in the schedule pain, the class should disappear. With this user are able to add and eliminate classes with simple clicks. The clear feature will allow the user to clear all classes and course offering at once, allowing the user to start over.

Users will have the availability to save their prospective schedules by providing a name, users will have the ability to save multiple schedules and be able to save over previous schedules. The name will only serve a placeholder for the schedule instance. There is no security built into the schedule-planning tool, as it will contain little personal information. Only one schedule can be loaded on to the schedule pane at a time. To load a schedule again, the user types in the name associated with the instance of the schedule they have created and it appears. Any changes to the schedule require the user to save the schedule again, reentering the name. Schedules are stored for six months on the Antplanner servers.

The schedule pane will have a maximization feature hiding the WebSoc panel, showing the users schedule in full. A print feature will allow printing without the WebSoc panel, and in low color format.

Software Attributes

The system should be fast, defined as loading schedules, returning search results and the webpage in less than two seconds. The system should be reliable, with 99% uptime.

A critical attribute of Antplanner is that it must interface with the university's existing WebSoc system, ideally integrated directly into the system. The software system should be a standalone website, not integrated into the other university websites.

Operational Requirements

The website should work across four most used internet browsers, Google Chrome, Mozilla Firefox, Internet Explorer and Safari browsers. The system should also include a FAQ and About page explaining the usage of the website.

Long Term Plans

Future plans for this project includes further development to ensure mobile phone usage. Giving users the ability to choose color assignments for classes, replacing the random distribution model. Future development may also give departments the ability to create suggested student schedules.

Maintenance and Support Costs

Our development team will be responsible for maintenance and any needed development for the first academic year. From there on the university's information technology division will take up development of the system, with continual support as needed from our team.

All user support will be directed to university IT division, any unanswerable questions will then be directed to our team.