SCHOOL OF COMPUTING

CS 4500
DEMO DAY
April 28th

SCHEDULE

Room 130 WEB

10:00 am - 12:00 pm
Demonstration viewing and judging

12:00 pm - 12:30 pm
Pizza (room 122 WEB)

12:30 pm - 1:00 pm
Awards ceremony

COURSE DESCRIPTION

CS 4500 is the senior software engineering laboratory where computer science students engage in a semester-long project to build a software system based on their own interests. Formally, the purpose of the course is the development of significant software systems by small student groups, with emphasis on applying sound, disciplined software engineering practice. Less formally, the purpose of the course is to give seniors the experience of planning, designing, and implementing a software system of their own choosing, while working collaboratively with a team of colleagues.
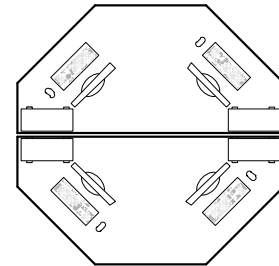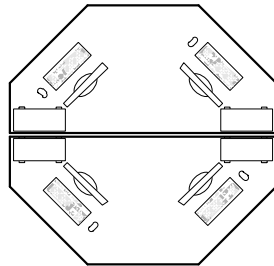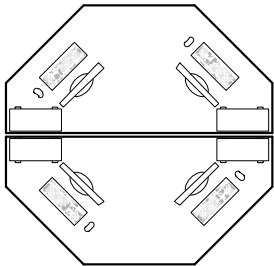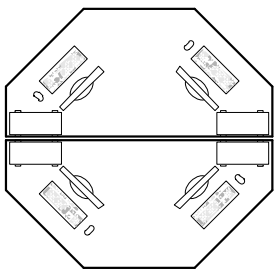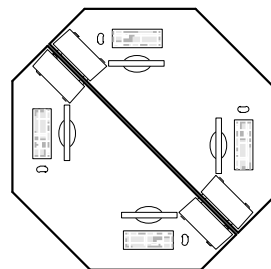
BluBox

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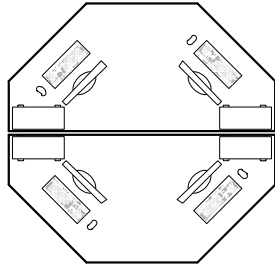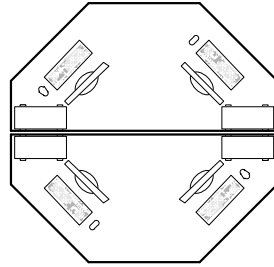
Turing
Terminators

Orange

The Architects

Ambiguous

Stopgap

Mercurial Madness
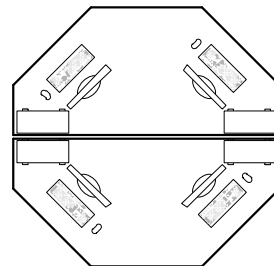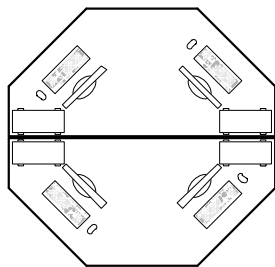
Noodle

Alpha Zulu

Minor Threat

Casavir

Mysterious
Trousers

Askar

Team name: Alpha-Zulu
Project name: Smart Tray Interface
Team members: Adam Harmon, Mike Killpack, Ryan Clark, Apple So
Website: http://somepurpose.org/alphazulu
Project description: Smart Tray Interface is an Android application that works with data from both the USDA database and IHC hospital menu for users to monitor various nutritional data while eating. It interfaces wirelessly with the Smart Tray, which is equipped with seven scales for the various food items. Our system allows for users to identify the food items from one of these two data sources and assign each to a specific scale on the tray. Once the user has setup their meal, they can begin to monitor the nutritional data based on weight measurements sent from each scale as they eat. We provide a means for the user to save his favorite meals, and also the capability for the user to upload his meal information to a remote database, where it can be used by health care providers.
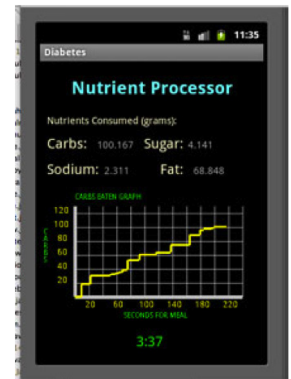

Team name: Ambiguous
Project name: Tactical Warfare
Team members: Kyle Anderson, Zach Cook, Greg Danne, Navid Sobhani
Website: http://www.eng.utah.edu/~zcook/cs4500/TacticalWarfare/index.php
Project description: Tactical Warfare is a turned-based strategy game that allows a player to take command of an army in a multilayer skirmish. The game takes place on a grid based map similar to chess. However each tile on the map is comprised of different terrain with varying affects. One of these terrain types are cities which produce income each turn. During a players turn their units can each be controlled in a number of ways: movement, capture, and attack. Movement allows the unit to navigate the map. Certain units are able to capture cities, and enemy headquarters. All units are able to attack if they are within range of an enemy unit. Once a player is able to capture another player's headquarters through strategic maneuvering, battle decisions, and a bit of luck they have won the day and the game is over.
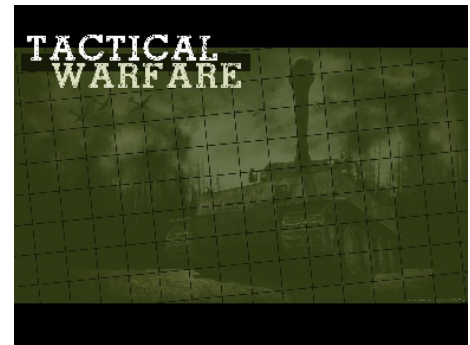
Team name: Architects
Project name: Restaurant Application
Team members: Andrew Bowles, Denis Vaslov, Simon Chulin, Joseph Clark
Website: http://eng.utah.edu/~vlasov/restauarant
Project description: Our Restaurant Application brings modern technology to the restaurant, and hands the control over to the customer, allowing them to order food, call for service, and leave feedback, via simple electronic devices such as a Smart Phones or IPads that many of us carry with us nearly everywhere we go.
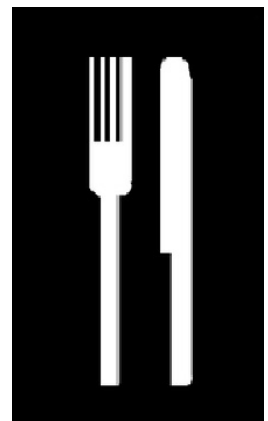
Team name: Askar
Project name: Askar Media
Team members: Nicholas Pope, Timothy Ryan Beavers. Eric Fish
Website: http://askarmediaproject.blogspot.com/
Project description: Askar Media is your solution to sharing your media from your home computer to your android device. Install our Askar Media server on your computer and our Askar Media app on your Android device. Point the Askar server at the folder containing the media you wish to serve, fire up our Android app and enjoy all your media.

Team name: BluBox
Project name: BluBox
Team members: Michael Goleniewski, Nathan Platt, Chongwen Fan
Website: http://4500blubox.webs.com/
Project description: BluBox is an application that combines the fun and addictiveness of a platform shooter with the versatility and usefulness of a music player. It is comprised of 2 components: a basic music player that plays mp3s with multiple customization options for the user as well as being able to detect and display the lyrics for that song currently playing and a platform-based shooter game that takes whatever song is currently playing and turns it in to a randomly generated game level with enemies, platforms/level design, and powerups all affected and configured depending on the aspects of the given mp3 file.

Team name: Casavir
Project name: RoboUtes
Team members: John Reed, Daniel Andersen, Russel Weber
Website: http://code.google.com/p/casavir
Project description: Take a robot with cameras. The robot runs on a Beagleboard based on Linux. Images are processed with OpenCV to locate colored rocks. The videois then encoded in MPEG and transmitted back over the limited bandwidth of a Verizon wireless internet card. We receive the video in our Java based command center, it allows the driver to control which camera, and the pan, tilt, and zoom of the cameras. We provide the video system for controlling a robot that will be used in a NASA robot competition.
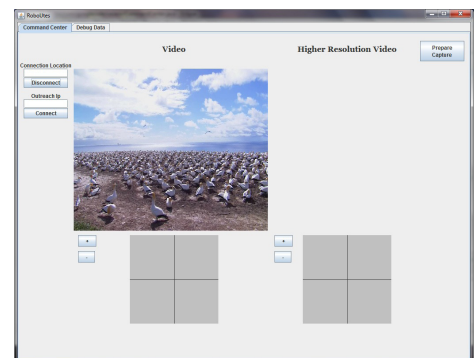
Team name: Initech
Project name: Manatee
Team members: Calvin Furano, Tyler Bettilyon, Nicki Ortman, Stephen DeBies
Website: http://goo.gl/YWhZg
**Project description:** Project Manatee is a visual programming tool for use with the Arduino Duemilanove. Our system makes the Arduino more accessible to people who have little or no programming experience, or who have never programmed in C. Our software will map visual "Crumbs" to code snippets; the Crumbs can be snapped together to create a complete program. Once the user creates a program they can use our software to generate the executable (via a GCC back end) and deploy it to the Arduino automatically; no assembly required.

This software eliminates esoteric concerns about C for users, making the Arduino much more user friendly for hobbyists, artists, high school students, etc. The System helps students to be able to have a visual understanding of imperative programming.
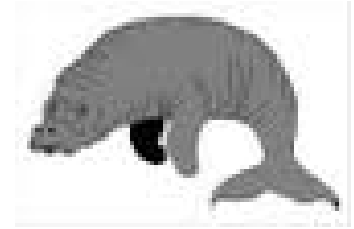
Team name: Mercurial Madness
Project name: Board Game Builder
Team members: John Daniels, Bradley Tolman, Steven Bayles
Website: http://eng.utah.edu/~johnd/bgb.html
Project description: Our Board Game Builder allows designers to easily prototype and create multiplayer board games. It automatically provides networking capability and the ability to handle UI and mouse input, in addition to a class library that keeps designers from having to reinvent the wheel with each new game they create. It includes a WYSIWYG editor to create the layout of the board, along with a Python editor to modify the logic and rules of the game as necessary. The combination of these features makes it easy to write rules for any board game a designer can imagine.
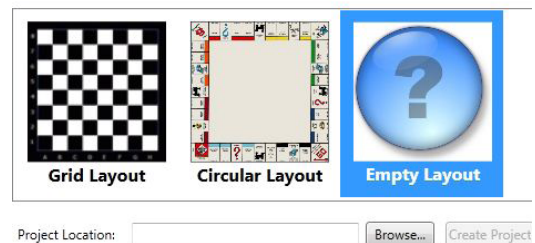
Team name: Minor Threat
Project name: Smarty Clock - Intelligent Alarm Clock
Team members: Tom Bailey, Weiyun Dai, Michael Saltsman
Website: http://smartyclock.heroku.com
Project description: SmartyClock is a truly intelligent alarm clock. By creating rules based on environmental conditions, SmartyClock allows you to dynamically plan your sleep schedule. For example, if you're a runner and want to go running in the morning unless it is raining, create a rule and add it to your morning alarm and SmartyClock will check the weather before waking you up. If it is raining, SmartyClock will let you sleep in for the amount of time you have designated. "Be more smarty - SmartyClock"

Team name: Mysterious Trousers
Project name: Columns & Rows
Team members: Adam Kirk, Quenton Jones, Ross Solomon, Brent Jensen, Richard Bliss

Project description: Columns & Rows is a list manager at heart. On the surface, your lists are represented as tables, with columns so that you can keep track of and organize the items on your lists and the information about each item. Along with many bells an whistles to make managing your lists a piece of cake, we've added a few signature elements to increase its usefulness by orders of magnitude. First, each item on a list can have a list of its own, heck, many lists of its own. Each item on your to-do list can have a list of items needed to do it. This is an extremely powerful way to organize the things in your life that might otherwise fall through the cracks. Lastly, how useful would this be if you couldn't easily access it from your iPhone, your iPad and your computer? With our syncing web service, you can do just that, all handled automatically.

Team name: Noodle
Project name: Quick Quote Cabinet
Team members: Jeff Bodily, Oli Ikeme, Kameron Sheffeld
Website: http://quickquotecabinet.com

Project description: Cabinet salesmen will often become dealers for different manufacturers in an effort to get the best price for the customer. Current software requires that dealers create different bids in order to see the prices from various manufacturers. This is largely due to non uniform standard for naming of cabinets, parts, and accessories amongst different manufacturers. The goal of Quick Quote is to help cabinet salesmen and dealers by creating a uniform standard coupled with a translator to allow dealers to effectively manage multiple manufacturers on the same bid. Quick Quote is a SaaS modeled solution that requires little to no retraining for the end user while offering a long needed solution which addresses multiple problems in the industry. Features include a modern user friendly interface for both administrators, company owners and salesmen, a custom built robust and highly scalable database as well as seamless automation for common and repetitive tasks alike including cost calculation and analysis for multiple aspects of a bid such as installation and shipping.

Team name: Orange
Project name: Cloud 9
Team members: Wesley Simon, Gregory Larson, Jason Butcher, Bryon Wheeler
Website: http://www.konkop.com/orange/

Project description: Cloud 9 is a file syncing program. It will synch documents, projects, pictures, favorites, music or any other type of computer file across multiple machines. It consists of two parts. The first part is a server, which must be installed on a single machine that is always running. The second part is the client, which must be installed on the computers in which you want your files to be automatically synchronized. If desired, the server machine may also be a client.

Team name: StopGap
Project name: StopGap Software
Team members: Brad Van Duker, Farah Faruque, Lin Zhang
Website: http://www.eng.utah.edu/~zhang/cs4500/stop-gap-project.html
Project description: StopGap Study is a versatile, robust, and easy-to-maintain platform for conducting scientific user studies. But why stop there? From foreign language studies to the training and testing of medical imaging technicians to marketing research, our software is easy to customize for a variety of industrial uses. Interchangeable components provide a flexible solution that can be tailored to your company's specific needs. The testing interface is easy to use and requires no installation -- just open your web browser!

Team name: Turing Terminatrors
Project name: Click & Command
Team members: Cameron Dadgari, Sanhyun Park, Jason Patterson, Brandon Miner
Website: http://clickandcommand.wordpress.com/
Project description: Now you have the ability to command an army on the field of battle. This unique take on the turn-based strategy genre will pit you against your friends in this highly addictive multiplayer game. In Click & Command you act as the general on the battlefield, leading your forces to victory. Begin by choosing from three unique characters to build your perfect team. Then take them and fight against your friends via Bluetooth or by using GameCenter. With each win, your reputation will grow as you fight for the top spot on the GameCenter leader boards. So Click now and Command your way to glory.

Thanks to the following companies for donating prizes:

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ARTIS LLC

CS 4500 Course Web Page
www.cs.utah.edu/classes/cs4500