#OKSTATEHASANAPP4THAT

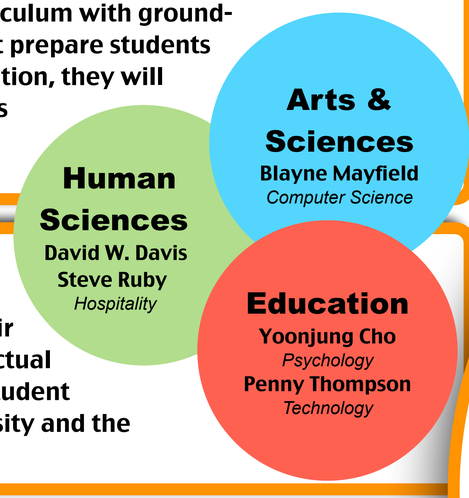
ENGAGING STUDENTS, COMMUNITY, AND ENTERPRISE

OUTCOMES

The team's aim is to imbue curriculum with ground-breaking teaching methods that prepare students for their dynamic future. In addition, they will test prominent learning theories relevant to the environments they design.

INVESTIGATIVE TEAM

A team of five ambitious scholars have strayed from their academic silos to satisfy intellectual curiosity and better serve the student body of Oklahoma State University and the Stillwater community.



TEACHING

By incorporating PBL and SL instructors are able to offer student centric learning environments that promote development of 21st century skills. Moreover, by connecting the two departments together in a real to life scenario the team provides a unique opportunity for students to better understand the roles they will soon play.

RESEARCH

Potential research in human motivation, learning theories, and the like abound with this initiative. The team of investigators seek to add to the theoretical body of knowledge in many areas. This project embodies a constructivist style of learning and encourages thoughtful research questions.

SERVICE

When appropriate the PBL environment has transitioned into SL, which has included using local hotels as observable models to compare and synthesize best practices. Students were able to suggest cost-saving measures as well as design the preference for a suite of mobile apps.

"My interest is in the future because I am going to spend the rest of my life there."

Charles F. Kettering

NEEDS

ethics
communication
self-management
problem-solving
knowledge
decision-making
teamwork
leadership
professionalism

collaboration
project-based learning (PBL)
inter-disciplinary
experiential learning
inquiry
service learning (SL)
innovation

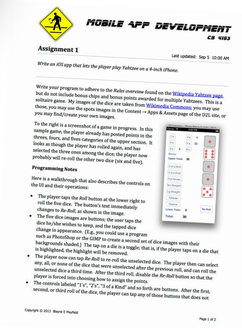
ANSWERS

Hardware for this enterprising and interdisciplinary initiative has been purchased through the generosity of Hyatt Hotels Inc. Additional support was received from Apple Inc. through Orange Tech at OKSTATE.

The Client Phase (1)

The first phase consists of hospitality students engaging in a PBL venture designed to investigate the best possible use of a mobile application to improve operational efficiency in a hospitality enterprise. Students are placed on different teams and each have a specific role to play. They direct their actions, questions, and eventual output with only ambiguous instructions from the professor. Then, students present their desire for a functioning mobile app to be created in phase two. An example of their results and subsequent presentation is playing on an iPad to the right of this poster.

The Contractor Phase (2)


MOBILE APP DEVELOPMENT
CS 4353

Assignment 1

Last updated: Sep 5 10:00 AM

Write an iOS app that lets the player play Yahtzee on a 4-inch iPhone.

Write your program to adhere to the *Rules* overview found on the Wikipedia Yahtzee page, but do not include bonus steps and bonus points awarded for multiple Yahtzees. This is a solitaire game. My images of the dice are taken from Wikimedia Commons; you may use those, you may use the sport images in the Content -> Apps & Assets page of the D2L site, or you may find/create your own images.

To the right is a screenshot of a game in progress. In this Yahtzee game, the player already has scored points in the threes, fours, and fives categories of the upper section. It looks as though the player has rolled again, and has selected the three cues among the dice; the player now probably will re-roll the other two dice (six and five).

Programming Notes

Here is a walkthrough that also describes the controls on the UI and their operations:

- The player taps the *Roll* button at the lower right to roll the five dice. The button's text immediately changes to *Re-Roll*, as shown in the image.
- The five dice images are buttons; the user taps the dice he/she wishes to keep, and the tapped dice change in appearance. (E.g., you could use a program such as Photoshop or the GIMP to create a second set of dice images with their backgrounds shaded.) The tap on a die is a toggle; that is, if the player taps on a die that is highlighted, the highlight will be removed.
- The player now can tap the *Re-Roll* to re-roll the unselected dice. The player then can select any, all, or none of the dice that were unselected after the previous roll, and can roll the unselected dice one more time. After the third roll, disable the *Re-Roll* button so that the player is forced into choosing how to assign the points.
- The controls labeled "1's", "2's", "3's" a "Kind" and so forth are buttons. After the first, second, or third roll of the dice, the player can tap any of those buttons that does not

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Phase two includes students in a computer science course learning about iOs development. Through meeting with their "clients," students are challenged in a short time-frame to learn, listen, and create. They must set realistic and affordable expectations and practice professional standards of business and ethics. The result is a functional beta-version of the requested app. Additionally, students create user manuals and appropriate documents for use and training. Over the past two years, students have created three mobile apps. Two of these apps are displayed in the iPads to the right.

Oklahoma State University

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COLLEGE OF Human Sciences