NUS SoC Presents:

The Fourth SoC Term Project Showcase

23 April 2014 18-22:00
@ SoC COM1 block

http://steps.comp.nus.edu.sg
Programme

18:00 Event Starts
19:00 Catering (Level 2 and B1) Opens
21:00 Last Call for Votes
21:15 Closing Ceremony
22:00 End

Overall Layout

4th STePS (OVER ALL LAYOUT)
10 courses, 95 Projects in THREE floors

4th STePS Events:
7.00 - Catering Opens
9.15 - Closing Talks / Award Ceremony

Remember to Visit:
Level B1 (2 Courses, Food)
Level 1 (2 Courses, Regn)
Level 2 (6 courses, Food)

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VINDA SAMSUNG DEVELOPERS
IS 2104 - Software Team Dynamics

47 students in 9 teams

This course is about team behavior in organizations, with a specific focus on the IT/software industry. The main objective is to introduce students to the essential concepts about how teams operate, and how individuals think and behave within teams. A secondary goal is to provide students with the skills and tools needed to succeed at working with and managing other team members in the real world, and to be able to deal with contemporary team challenges. While many of the examples used in the class may be specific to software or IT teams, the team concepts taught in the class would be applicable and adaptable to other team contexts to help them work and manage future team projects more effectively.

Project Descriptions

The social innovation project is designed to provide students with the opportunity to experience and apply the software team concepts, tools and knowledge learnt in class. For this project, students work in groups of 4-5 students to design and market a software application that provides innovative solutions to society's most pressing social problems. The software solution should be in the form of a computer application and/or mobile app and should help enrich lives and effect positive change for a better world and society. Students are not expected to develop the full-scale application but a working prototype will be required on the presentation day. The solution should be original (i.e. not available currently in the market); and not from a previous or current course that they or others have taken. Grading will be based on 1) importance and significance of the problem, 2) effectiveness, viability and sustainability of the solution, 3) presentation, 4) team work (the team process, how they work together, identify, address and solve team issues and challenges) and 5) individual contributions to the project.

Project Listings

1. 2104-01: The Silversapp
2. 2104-02: Planz: the procrastination killer
3. 2104-03: E-Fit: Fitness E-Learning for Polytechnic Students
4. 2104-04: MyChildren Mobile Application
5. 2104-05: CareToGivers: A caregiving mobile application for an aging population
6. 2104-06: taPills
7. 2104-07: Mobile Application for the interacting teaching and studying the lecture hall between teachers and students
8. 2104-08: V.CONNECT
9. 2104-09: Affiliation

Course Assignment for Voting

<table>
<thead>
<tr>
<th>First letter of your last name</th>
<th>Courses to vote</th>
</tr>
</thead>
<tbody>
<tr>
<td>A-E</td>
<td>IS5126 &amp; CP3101A</td>
</tr>
<tr>
<td>F-J</td>
<td>IS3260 &amp; CS4222</td>
</tr>
<tr>
<td>K-O</td>
<td>CS3217 &amp; IS2104</td>
</tr>
<tr>
<td>P-T</td>
<td>CS3247 &amp; CS4244</td>
</tr>
<tr>
<td>U-Z</td>
<td>CS3218 &amp; CS3430</td>
</tr>
</tbody>
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CS 3217 - Software Engineering On Modern Application Platforms

37 students in 10 teams

Students will learn about the essential Software Engineering (SE) principles and develop their SE skills by writing mobile apps for the iOS platform. During the second half of the semester, students will work in teams of not more than 4 students to develop cool and innovative iOS apps. Students can pretty much develop whatever apps that they desire as long as it is not immoral and does not compromise learning values. Visit our FaceBook page on https://www.facebook.com/cs3217 to find out more about the apps that were created by the students of CS3217.

Project Listings

1. 3217-01: Pomoc
2. 3217-02: Ninja Jump
3. 3217-03: Bit By Beat
4. 3217-04: Run To Fly
5. 3217-05: Space Walk
6. 3217-06: Revision Game
7. 3217-07: Webcast Fun
8. 3217-08: Retail Parrot
9. 3217-09: NUS BusFeed
10. 3217-10: Aerhythm
CS 4340 - Digital Special Effects

39 students in 12 teams

This module covers multimedia techniques for creating digital special effects video. It allows students to explore their creativity while extending their skills in multimedia technologies. Topics covered include elements of special effects, camera work, storyline and storyboard, digital compositing, matchmoving, video effects, CG effects, 2D/3D morphing, realistic rendering and case studies. Students are required to analyse and critique the special effects in movies. The module culminates in a short video project that demonstrates students’ creativity and innovation in using various techniques to create a captivating and stunning digital special effects video.

Project Listings

1. 4340-01: Lab Girl uses a CG ice mallet to smash the frozen volcano into pieces
2. 4340-02: Gary, the Lab guy gets frozen up from fingertip, arm and extending to his whole body by an enchanted character casting a magical Froze Spell
3. 4340-03: Lab guys generates flames on his arm and throws a flamethrower at his soul (the clone), setting him on fire
4. 4340-04: Cloning additional two lab guys to cast a huge ball of blizzard onto the volcano, shattering it into pieces
5. 4340-05: Collection of fire energy from the volcanic eruption and molding into a fire dragon
6. 4340-06: Internal Combustion
7. 4340-07: Transformation into a volcano
8. 4340-08: A frigid breath encases the volcano in ice
9. 4340-09: Jump into a live volcano and battle with a Dragon
10. 4340-10: Freezing a live volcano
11. 4340-11: Shattering of a Frozen Human
12. 4340-12: Lab Guy tries to suck the lava from the volcano but get sucked in by the volcano instead

CS 4244 - Knowledge-Based Systems

29 students in 8 teams

This is a module that contains both the theory and practice of building knowledge-based systems. The aim of this module is to prepare students so that they can design and build knowledge-based systems to solve real-world problems. The module starts with motivations, background and history of knowledge-based system development. The main content has five parts: rule-based programming language, uncertainty management, knowledge-based systems design, development and life cycle, efficiency in rule-based language and knowledge-based systems design examples.

Vote online for the top three projects in each course @ http://bit.ly/1jZqRWJ or go to SR1 to key in your votes!

CS 3247 - Game Development

37 students in 11 teams

The objective of this module is to introduce techniques for electronic game design and programming. This module covers a range of important topics including 3D maths, game physics, game AI, sound, as well as user interface for computer games. Furthermore, it will give an overview of computer game design, publishing and marketing to the students. Through laboratory projects, the students will have hands-on programming experience with popular game engines and will develop basic games using those engines.

Project Descriptions

In the game development project students will form teams to design and develop games of their own interest. The main objective of the project is to let the students explore and experience major phases of game development from generating game idea, designing prototype, play-testing and validating to developing game assets with heavy emphasis on programming components of game engine. Each team will complete developing at least one level of the game and present a detailed game design document with all levels, design of business model and plans for pitching, fund rising and marketing.

Project Listings

1. 3247-01: Hostage
2. 3247-02: Stoic Gasa
3. 3247-03: Humpty’s Mess!
4. 3247-04: ZED
5. 3247-05: Botmines
6. 3247-06: Dino Reloaded
7. 3247-07: Last Piece
8. 3247-08: Eternia Saga
9. 3247-09: Pen Is Magic
10. 3247-10: The JOB (a.k.a. Joint Orbital Blaster)
11. 3247-11: Gathering of The Rings
12. 3284-12: Ashram (excluded from competition)
IS 5126 Hands-On With Business Analytics

77 students in 20 teams

Business Analytics is the growing, inter-disciplinary field of bringing data to build business insights and support decisions. The goal of the course is to bridge the divide between technical skills and business know-how. Through learning-by-doing, students will engage in a series of business case study discussions, guided group projects, and a final semester project of their own design. Lectures will cover practical skills using the latest tools and techniques, as well as discuss business cases and applications. The module will give students practice in the “data funnel” from gathering and collecting data, extraction-transformation-loading, analysis, and interpretation. Applications will cover areas such as retailing, customer relationship management (CRM), social media, and marketing.

Project Listings

1. 5126-01: Analysing the Effects of Dividends on Stock Prices
2. 5126-02: “FindMyDoctor”: Helping Patients find the right healthcare
3. 5126-03: Whisky Recommendation Engine
4. 5126-04: Visual Insights On Relationships Between Amenity Proximity and Property Values In Singapore
5. 5126-05: Kiva Oracle: Predicting MFI loan performance
6. 5126-06: Discover new business opportunity for Singapore movie market based on movie plot analysis
7. 5126-07: Multivariate Analysis on Property Price Fluctuations in Singapore
8. 5126-08: Impact of Foreign Currency Exchange on Singapore Tourism
9. 5126-09: Who do you fly with next?
10. 5126-10: Assessment of Childcare Need in Singapore
11. 5126-11: Can Social Media Predict the value BitCoin
12. 5126-12: SINGCITY
13. 5126-13: Hotel Selection Enabler
14. 5126-14: Factors influencing the chances of becoming a CEO of a S&P 500 company
15. 5126-15: The Oscars Effect
16. 5126-16: How public transportation facilities affect private car ownership in Singapore
17. 5126-17: ALICAMENT - Bringing Healthy and Diverse Food Ingredient Choice for Ailing People
18. 5126-18: Visualizing Singapore’s Dengue Season 2013/14
19. 5126-19: Train delay prediction
20. 5126-20: CareerPath

CP 3101A - Global Open Source Project

6 students in 3 teams

This module is a part of an experimental global software engineering education initiative spearheaded by Stanford/Facebook, that involves 25 schools globally called Facebook Open Academy. Student teams will be associated with a select group of open source software projects. These projects are characterized by being active in both development and utilization as well as being open to new and relatively inexperienced committers. They are also projects that are deemed to be relevant in today’s software ecosystem. We also believe there is value in seeding awareness of how to contribute to open source projects like these among future technology

Project Listings

1. 4244-01: Trip Advisor (TA)
2. 4244-02: Movie Recommendation System
3. 4244-03: Responsive Elective Predictor
5. 4244-05: NUS Undergraduate Curriculum Planner
6. 4244-06: Application of CLIPS Expert System for Diagnosis of Childhood Diseases
7. 4244-07: Adaptive Medical Diagnosis Expert System (AMDES) for the Early Diagnosis of
are MAC, routing and transport protocols. In this module, there is a strong emphasis on exposing students to practical network system issues by encouraging them to build software prototypes as part of their assessments.

Project Descriptions

The project is an important component of the class. Projects are proposed by the students and each project group is made up of 2 to 3 students. The platform can be either lower power sensor motes (telosB/TinyOS) or smartphones (Android OS) or both. Projects involve both sensing and communication. Past projects includes surveillance, event monitoring, localization, action based games and musical instruments.

Project Listings

1. 4222-01: Tune Pulze
2. 4222-02: Gamifying your daily walking life
3. 4222-03: Bluetooth LE indoor positioning
4. 4222-04: Wireless Sensor for Green Buildng
5. 4222-05: Volley
6. 4222-06: NUS Shuttle Bus Travelling Time App
7. 4222-07: MaxTix
8. 4222-08: Disabled Personnel Transport Notification
9. 4222-09: Lift Me Up
10. 4222-10: AudioSelfie
11. 4222-11: DeleCab
12. 4222-12: ChallengeMe - The Extreme Sports Social App

IS 3260 - Gamification For Organisations And Individuals

22 students in 4 teams

Gamification is the use of game play thinking and mechanics to engage audiences. For the younger generation, gaming has become part of their lives, and thus it is desirable to use games to engage them at work and as part of marketing strategies. The goal of this module is to provide students with an introduction to gamification. Lectures will cover the various game elements, their psychological impact on people and ways to deploy them. Students will also work on group projects to learn to deploy gamification.

Project Listings

1. 3260-01: Building Political Awareness
2. 3260-02: King of Pirates
3. 3260-03: Work Those Fats
4. 3260-04: An apple a day with gamification's the way!

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