CSCI427/CSCI927
Service-Oriented Software Engineering

Subject Introduction
Service-Oriented Computing: Preliminaries

Consultation hours

- Dr Jack Yang
  - Office: 3.109
  - Consultation time: Tuesday 13:00 - 15:00
    Wednesday 13:00 - 15:00
  - Email: jiey@uow.edu.au
- Dr Guoxin Su
  - Office: 3.227
  - Consultation time: Wednesday 12:00 - 14:00
    Thursday 09:30 - 11:30
  - Email: guoxin@uow.edu.au

Lecture and Tutorial

- Lecture
  - Wednesday 8:30 – 9:30
- Lecture/Tutorial
  - Wednesday 9:30 – 11:30
    - First part is continuing lecture, second part is tutorial/workshop (note: sometimes this order is swapped)
    - **No tutorial/workshop in Week 1 and Week 13**

Subject objectives

- On successful completion of this subject, students will be able to:
  - Build service-oriented systems and describe their architecture.
  - Identify appropriate software engineering methodologies and tools that apply specifically to service-oriented systems and exploit them.
  - Apply a range of techniques and tools for the management and maintenance of service-oriented systems.
  - Discuss the R&D challenges and open questions in the area.

Topics

- Service-Oriented Computing: Preliminaries
- Service Modelling
- Business Process Modelling and Management
- Service Design, Composition, Interoperation
- Service-oriented architectural patterns
- Enterprise Service Architectures
- Semantic processes and services
- Service change management
- Service analytics
- Service compliance management
- Case studies + Modern industry trends

Resources

- Lectures
  - PDF files with slides from lectures
- Assignments
- Supplementary materials

One-stop shop: Moodle

Overall assessment

- Quiz (5%)
  - **Week 6 Tutorial**
- Group project (40%)
  - Progress report - **Weeks 4 & 8 Tutorial**.
  - Final deliverables and project presentations - **Week 12**.
- Examination (55%)
  - **Technical Fail**
    - To be eligible for a Pass in this subject a student must achieve a mark of at least **40% in the Final Examination**.
    - Students who fail to achieve this minimum mark & would have otherwise passed may be given a TF (Technical Fail) for this subject.

The group project

- Group size: 6 people
- ***Formation of groups is your responsibility.***

- You will have to form a group ASAP, and **submit details of group membership** by the end of Week 2.
  - Go to the Moodle site of the subject and you will see a link for group registration.
  - Only 1 registration per group.
  - Registration will be closed by the end of Week 2.

- A forum has been created on Moodle which you can use to find other students to form a group for the project

Q & A

- Q: Can we obtain a HD in this subject?
  - A: "Yes, we can!"
- Q: Great! Sounds easy but how?
  - A: Sure, you need to do exercises in the Lab, work hard on the project and do well in the exam.
- Q: Of course, but still how?
  - A: Yes, you need to attend the lectures regularly (very important in this subject), read reference texts, and read Lecture slides.
  - You should also do Lab exercises
- Q: Hmmm, it's not that easy but it's ok, I can do it in just only 1 week before the exam, huh?
  - A: No, you have to do it every week.
- Q: Oh no, it's so difficult ☹. I don't want a HD anymore, I just want a P. So less work?
  - A: Yes, but you still have to do the same things.

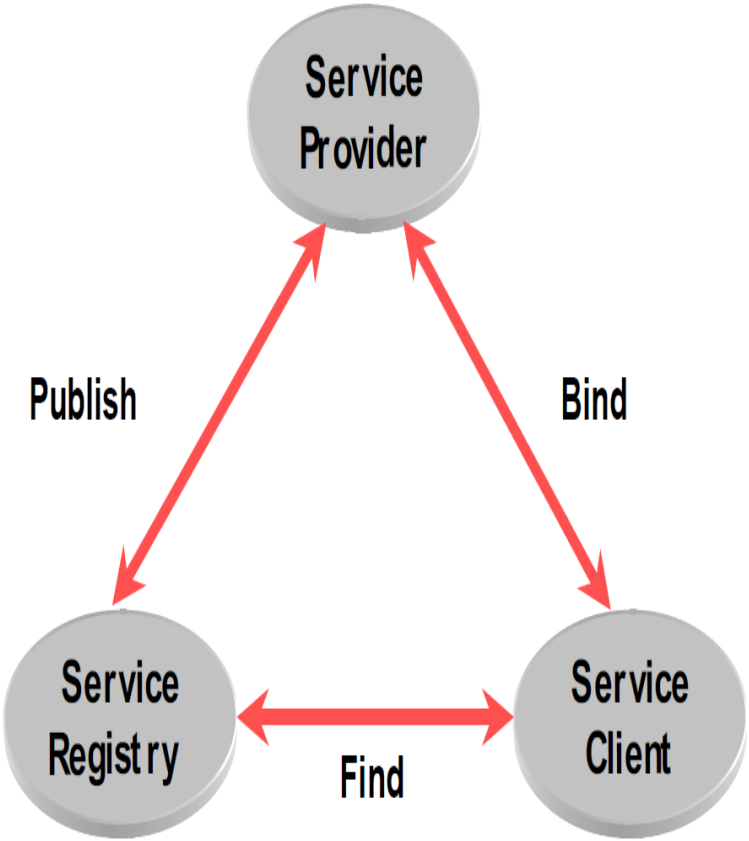
Service Oriented Computing

- Read this paper and answer the following questions and **provide an example for each answer**:
  - "Service -Oriented Computing: Concepts, Characteristics and Directions"
    by Mike P. Papazoglou

You can also find this paper under the "Additional Materials" on Moodle.

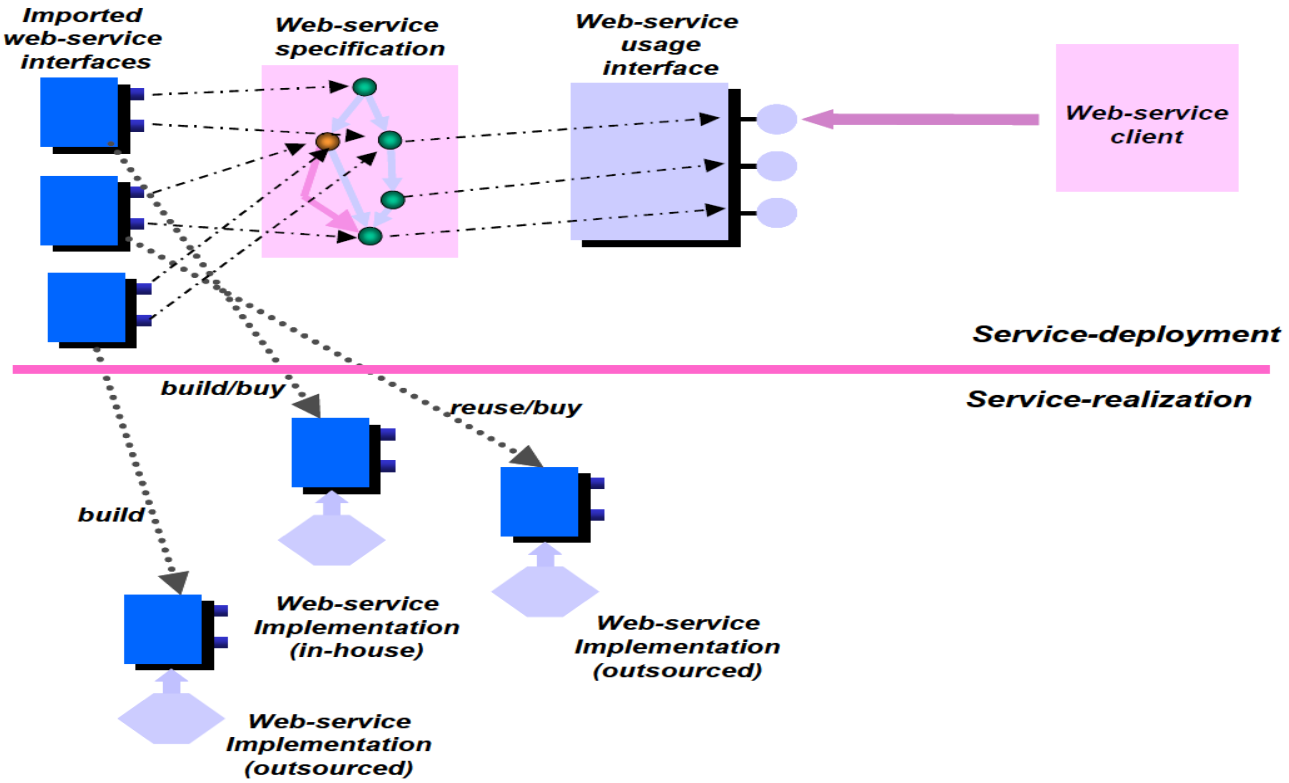
Service Oriented Computing (cont.)

- What is a service?
  - What are service characteristics?
  - What are the two main service types?
  - What are the differences between a service and a software functionality?
- What is a service provider?
- What is a service client/consumer?
- What is a service registry?



Service Oriented Computing (cont.)

- What is a service interface?
- What is a service specification?
- What is the differences between service deployment and service realization?



Service Oriented Computing (cont.)

- What is a service aggregator?
- What is service composition?
- Provide a real-life example of this model. The example should be different from the ones in the paper.