



The Fundamental Practice of Software Engineering Innovation

2018-09-18



上海交通大学
SHANGHAI JIAO TONG UNIVERSITY



Evolution of The Name

- “Before Developing”
 - What else should be done before **developing**
- “Before Building An Application”
 - Developing is not accurate
 - Requirement, Architecture, Design
- “Before Coding”
 - Coding is everything now
- “Beyond Coding”
 - Coding is not the killing factor
 - Technology is the same



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Beyond Coding

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Background

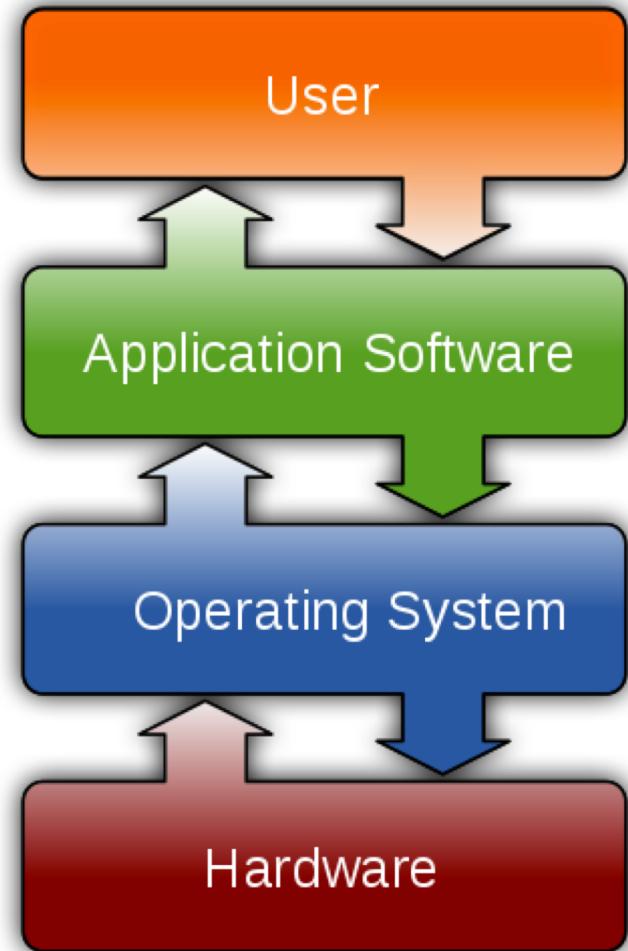


- Software
 - Computer software, or simply software, is a part of a computer system that consists of ***data*** or ***computer instructions***, in contrast to the physical hardware from which the system is built.
 - In computer science and software engineering, computer software is all information processed by computer systems, programs and data.
 - Computer software includes ***computer programs, libraries*** and related non-executable data, such as online ***documentation*** or ***digital media***.



Background

- Customer(User) VS. Developer
 - Specific > General, Few domains > Every where
 - CS & SE
 - ***Idea belongs to customer***





Background

- In the era of Internet
 - Web 1.0
 - User consuming content
 - Web 2.0, 2004
 - User generating content
 - Interoperability
 - Web 3.0
 - *Internet knowing well customer*
 - Internet providing service & customer consuming service



Problem

- How to know well your customers
 - Who are your customers?
 - What are their needs?
 - **Pain Point**

Pain Point



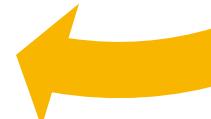
Service
Provider



Customer



Service





Best Practice

1. Great idea
2. Hypothesis: some people experience a certain problem when doing something
3. If they are not found than go to 2
4. Interview them
5. If the hypothesis is not validated then go to 2
6. If there are existing customers than go to 9
7. Get the customers
8. Continuous learning
9. Build the product