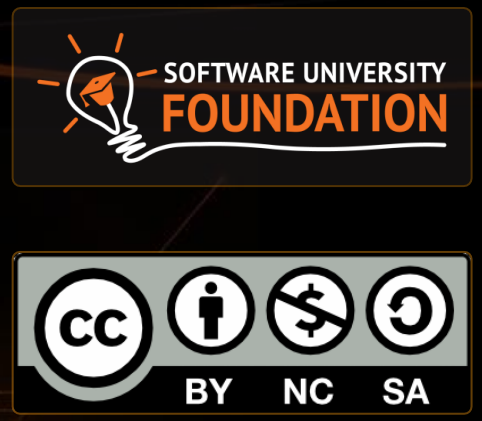
Introduction to Software Development

Software Types and Bug Fixing Importance



Yuksel Ahmedov

QA Trainer

www.qualityassuranceteam.com

Software University

http://softuni.bg

Table of Contents

1. What is Software?
2. Software Distribution Types
    1. Retail software
    2. Web applications
    3. Mobile applications
3. Why Bugs Still Occur?
4. Bug Fixing Importance

SOFTWARE UNIVERSITY FOUNDATION

Software Development

First Look at Software

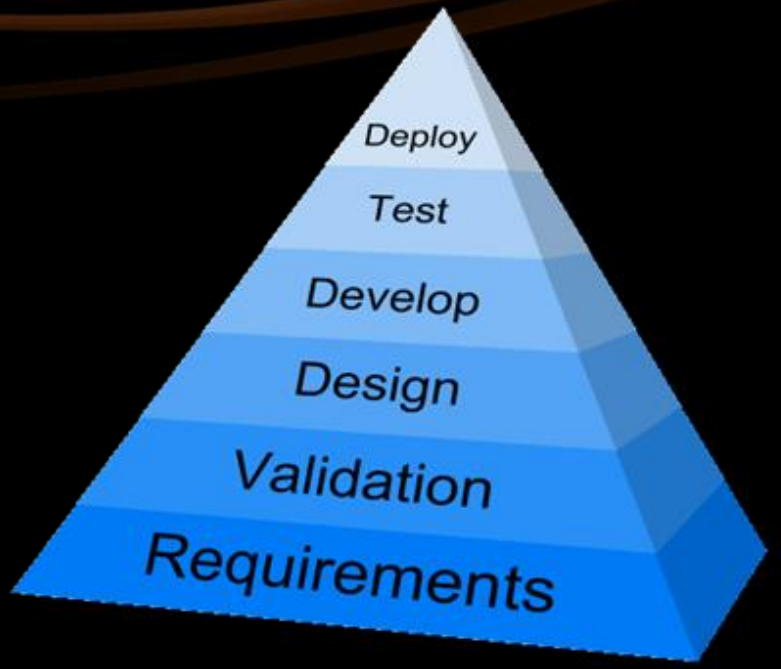
- Software definition

Software is any set of machine-readable instructions that directs a computer's processor to perform specific operations

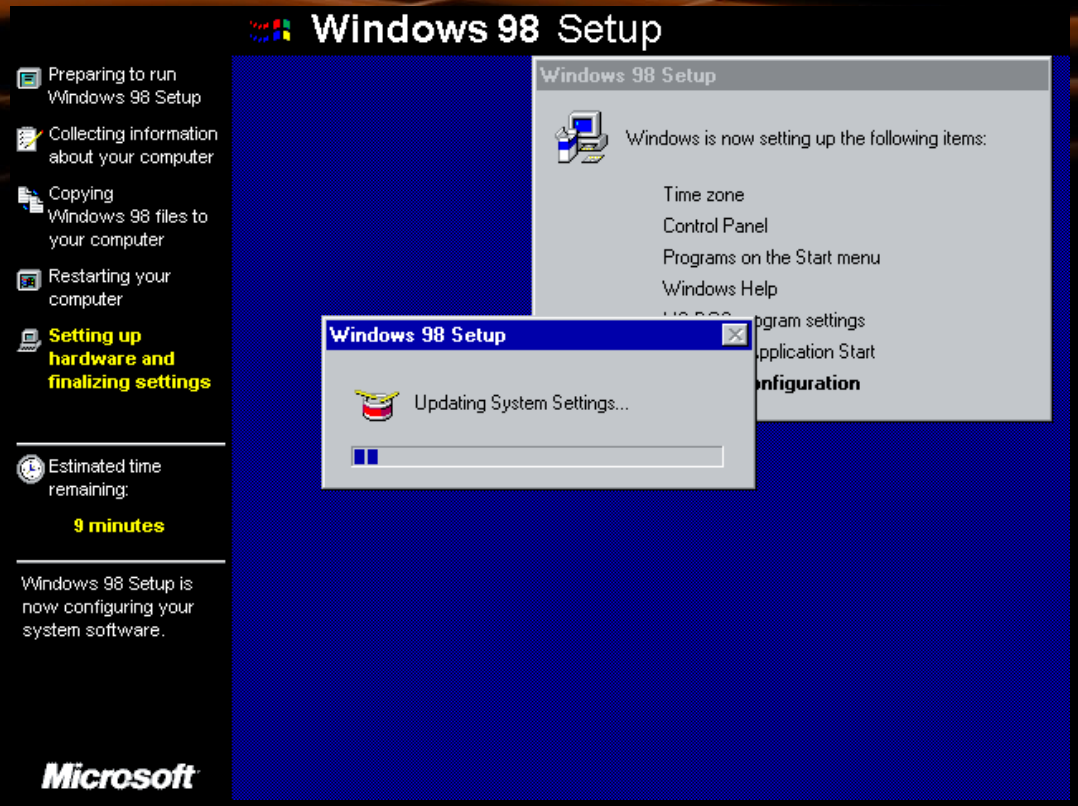
```
17
18 00000000 FF6001              jmp     [eax+0x01]
19 00000003 FF6010              jmp     [eax+0x10]
20 00000006 FF6020              jmp     [eax+0x20]
21 00000009 FF607F              jmp     [eax+0x7f]
22 0000000C FFA080000000        jmp     [eax+0x80]
23 00000012 FFA0A0000000        jmp     [eax+0xa0]
24 00000018 FFA0FF000000        jmp     [eax+0xff]
25 0000001E FFA000010000        jmp     [eax+0x100]
26 00000024 FFA001010000        jmp     [eax+0x101]
27 0000002A FFA011110100        jmp     [eax+0x11111]
28 00000030 FFA011110101        jmp     [eax+0x01011111]
```

First Look at Software (2)

- Developed for 8 decades
- Evolved into a profession
- Concerned into quality maximizing
- Software engineering
  - Best practices for writing code
  - Management issues (team size, process, etc…)
  - On-time delivery
  - Work-place culture



Software Distribution



Retail Software

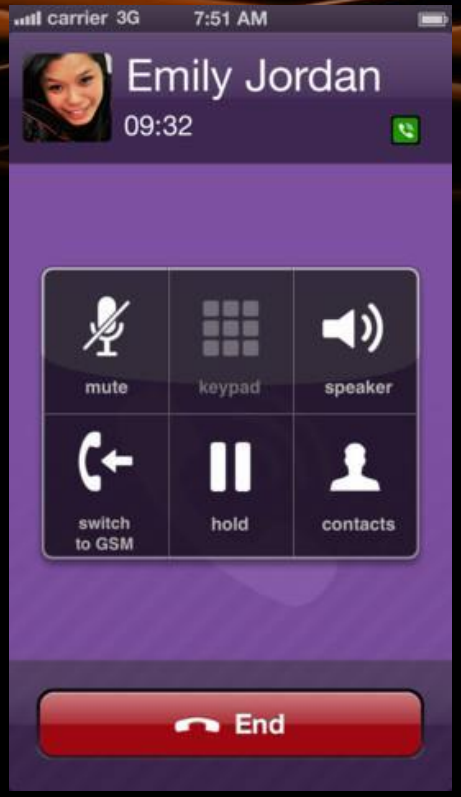
Retail Software

- The vast majority of software until the emergence of internet

Web Applications

Web Applications

- The concept has been introduced in 1999 in Java Servlets
- A major leap in the software distribution
- Browsers and technologies are developed in favor of web apps
  - 2005 – the term Ajax was coined
  - 2011 – HTML5 was finalized



Mobile Applications

Mobile Applications

- App distribution platforms began appearing in 2008
  - Apple app store
  - Google play
  - Windows phone store

- Started as productivity and information retrieval apps
- Reached bigger market share than retail software

Bugs!

Why Bugs Still Occur

- People DO make mistakes
- Software complexity
- Requirements (quality, change…)
- Deadlines
- Obsolete automation scripts
- Lack of skilled testers

Bug Fixing Importance

Bug Fixing importance (2)

Bug Fixing Importance (3)

- Unfixed bugs camouflage other bugs
- Suggest quality isn't important
- Duplicate effort
- Unreliable metrics and money loss
- Fixing a bug today costs less than tomorrow

Summary

- Software evolved through the time
  - Retail, web, mobile
- It still has bugs
- Reasons does not change
- Importance of fixing bugs
  - More customers
  - More money
  - No unsatisfied developers

Literature

- QA Book: www.istqb.org/downloads/send/2-foundation-level-documents/3-foundation-level-syllabus-2011.html4
- Tutorials: www.w3schools.com
- Selenium: leanpub.com/selenium-webdriver-book
- GitHub: github.com/QualityAssuranceTeam/source
- More Tutorials: www.codecademy.com

Introduction to Software Development

SOFTWARE UNIVERSITY FOUNDATION

xsoftware
SmartIT
Komfo
SOCIAL MEDIA MARKETING AT SCALE
NETPEAK
интернет-маркетинг для бизнеса

Questions?

LUXOFT
SUPERHOSTING®.BG
SoftwareGroup
doing it right
SUPERHOSTING®.BG
Ново поколение хостинг
LUXOFT
INDEAVR
Serving the high achievers

http://softuni.org/courses

License

- This course (slides, examples, demos, videos, homework, etc.) is licensed under the "Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International" license

- Attribution: this work may contain portions from
  - "Fundamentals of Computer Programming with C#" book by Svetlin Nakov & Co. under CC-BY-SA license
  - "C# Part I" course by Telerik Academy under CC-BY-NC-SA license

Free Trainings @ Software University

- Software University Foundation – softuni.org
- Software University – High-Quality Education, Profession and Job for Software Developers
  - softuni.bg
- Software University @ Facebook
  - facebook.com/SoftwareUniversity
- Software University @ YouTube
  - youtube.com/SoftwareUniversity
- Software University Forums – forum.softuni.bg