



**BATCH : B 64/65/66/67**  
**LESSON : SDLC DAY 01**  
**DATE : 30.01.2022**  
**SUBJECT : INTRODUCTION  
TO SDLC**



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# What to do today?

- Introduction
  - What is SDLC
  - SDLC Team
  - Glossary
  - Mini-test
  - Funny-test Kahoot
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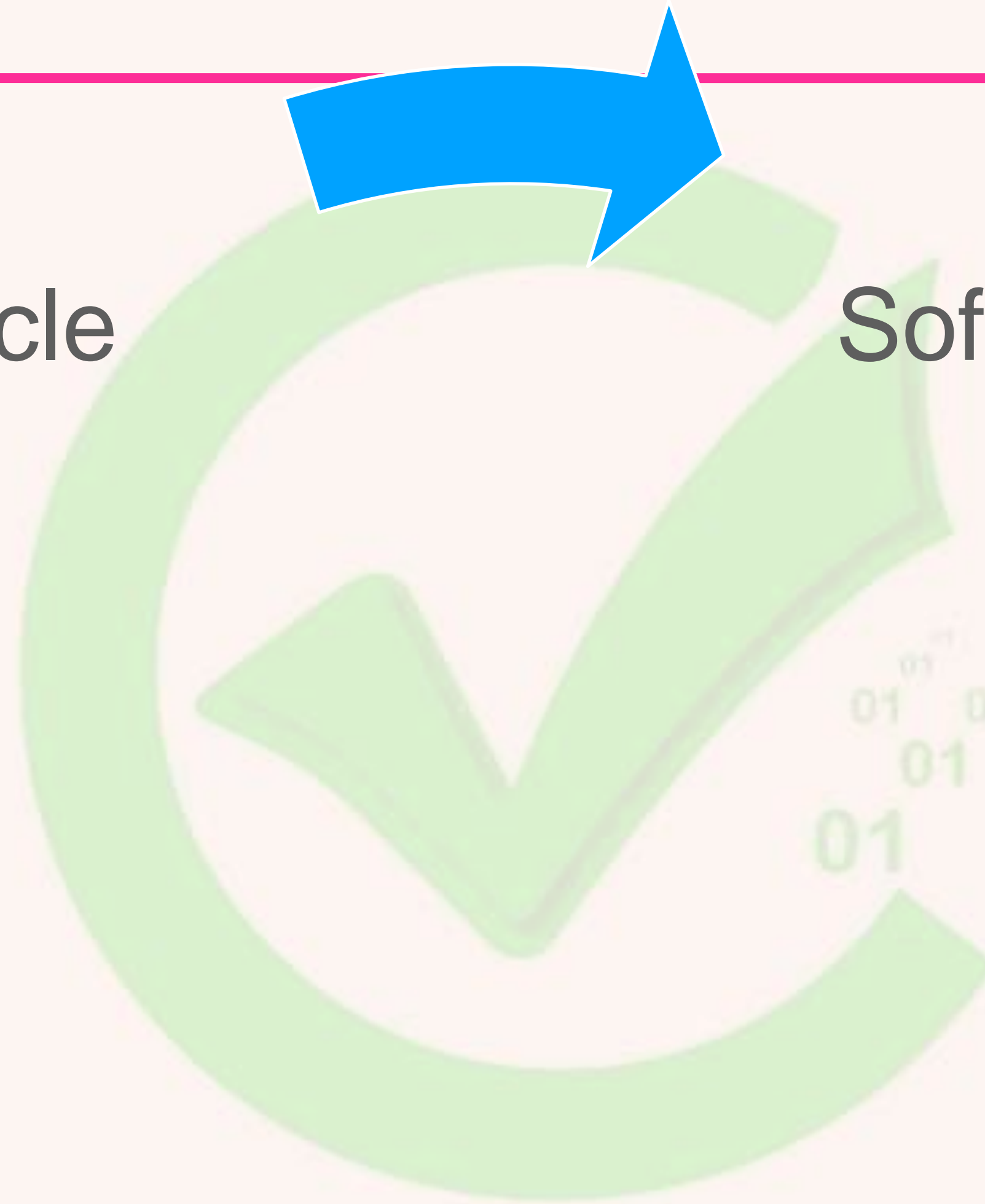
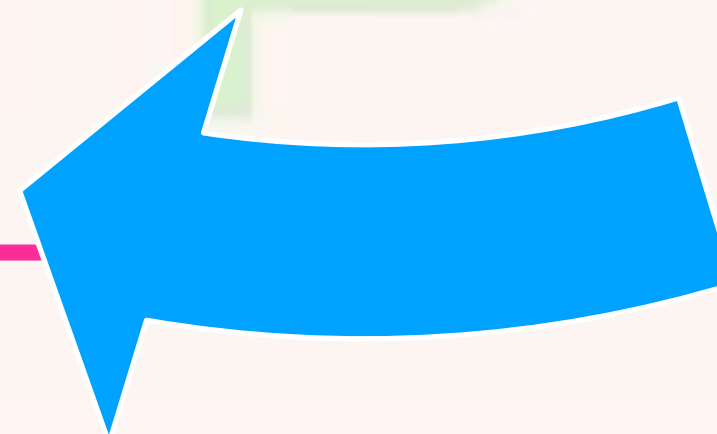
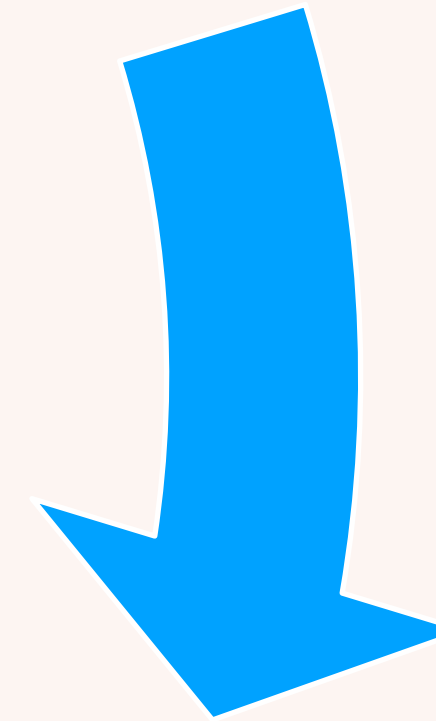
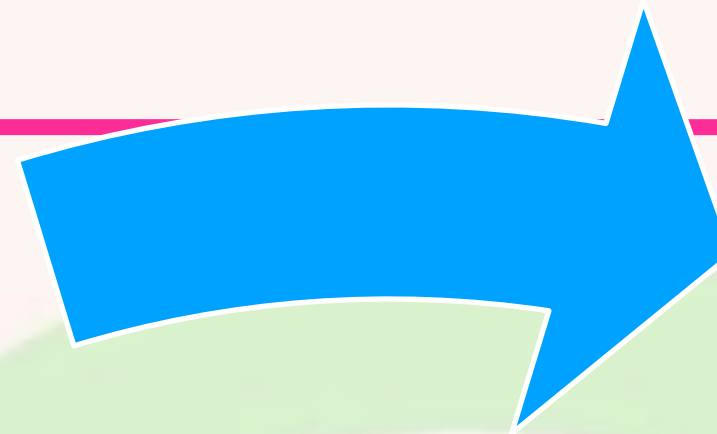
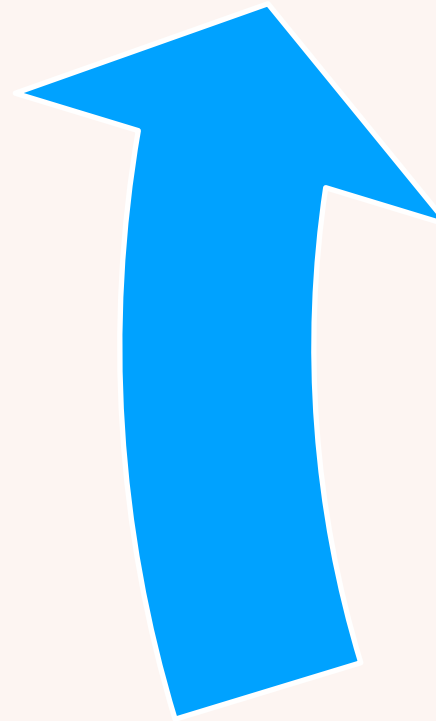
SDLC

Cycle

Software

Life

Development



THE CHAPTER PROVIDED

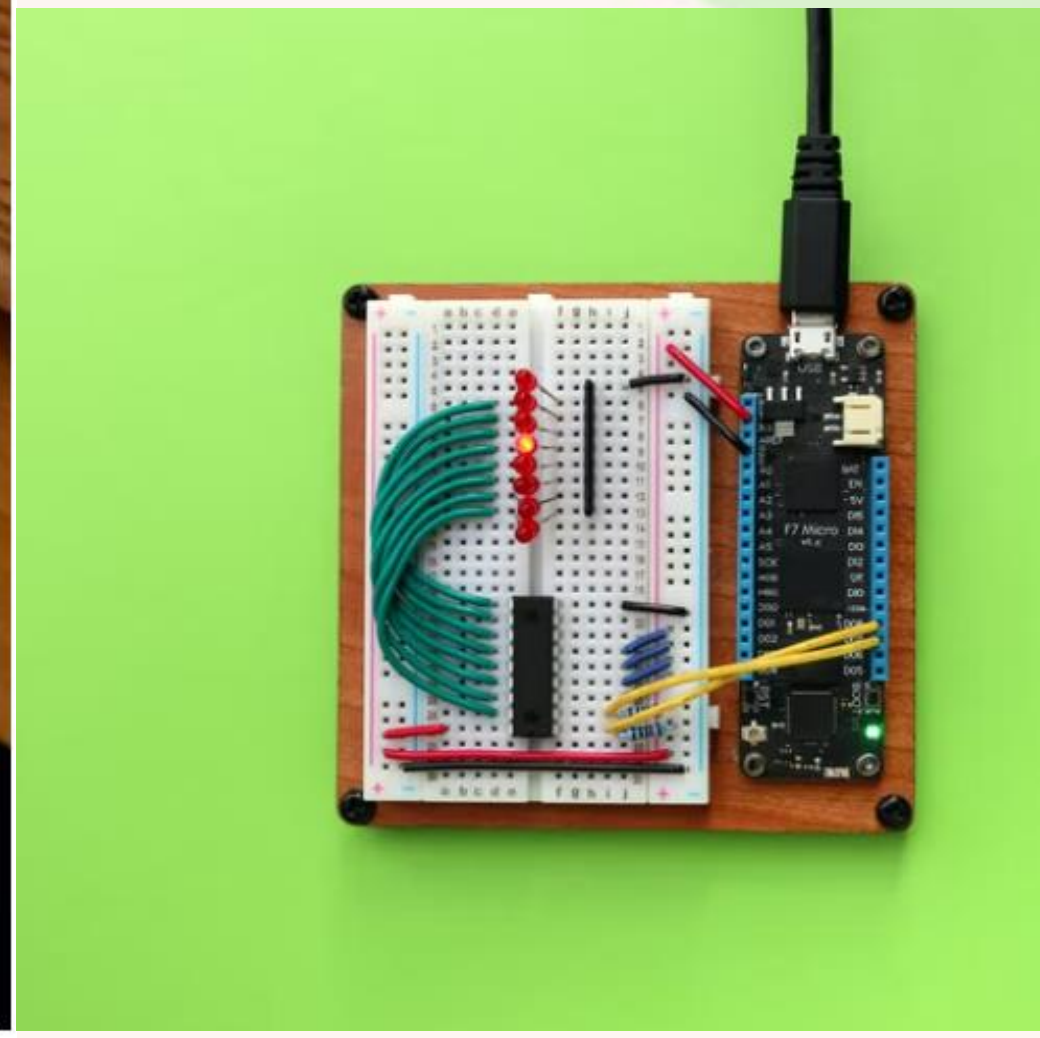




# Hardware



One of the first Apple computers





# Software

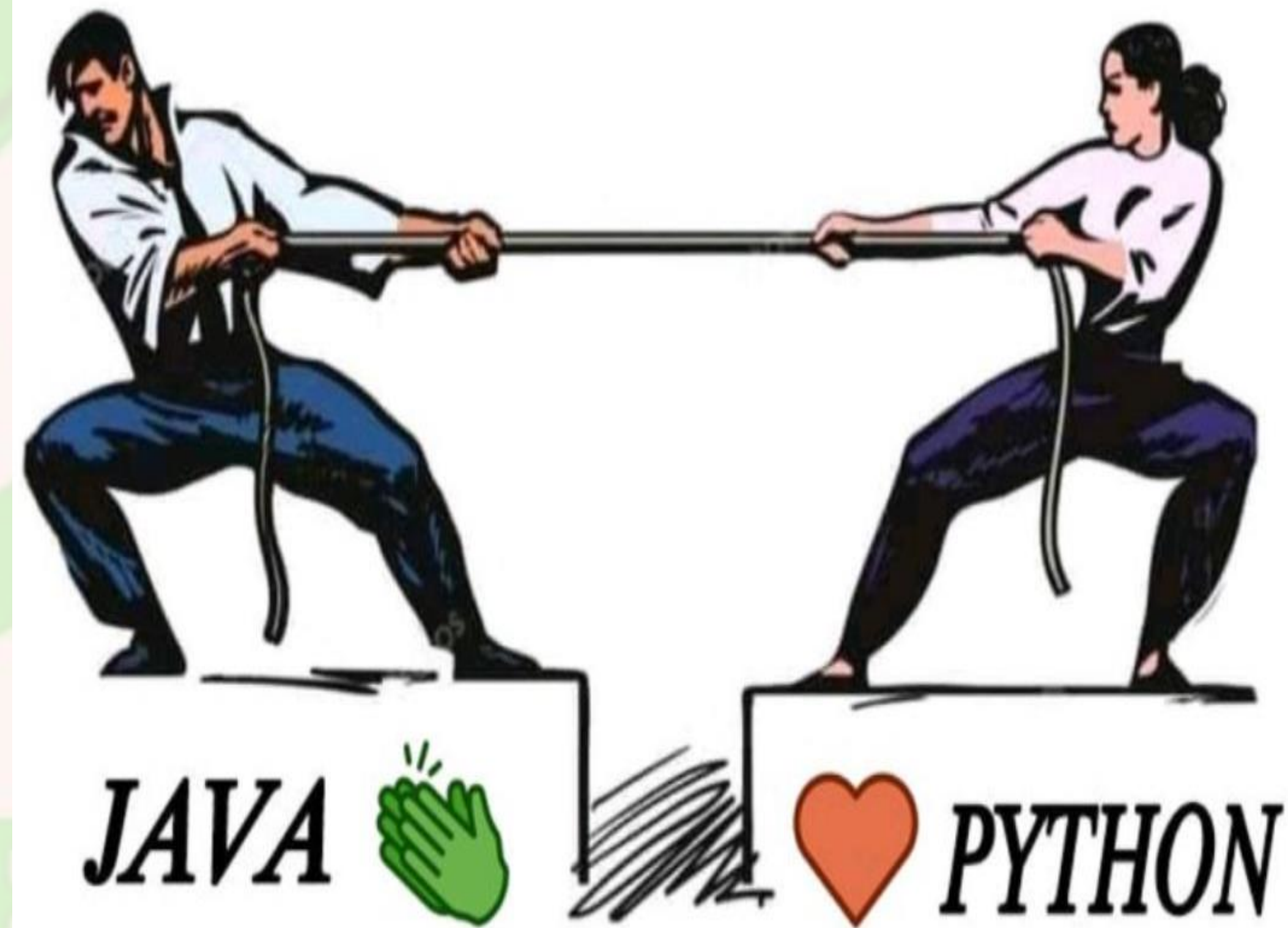




# Software Development Life Cycle

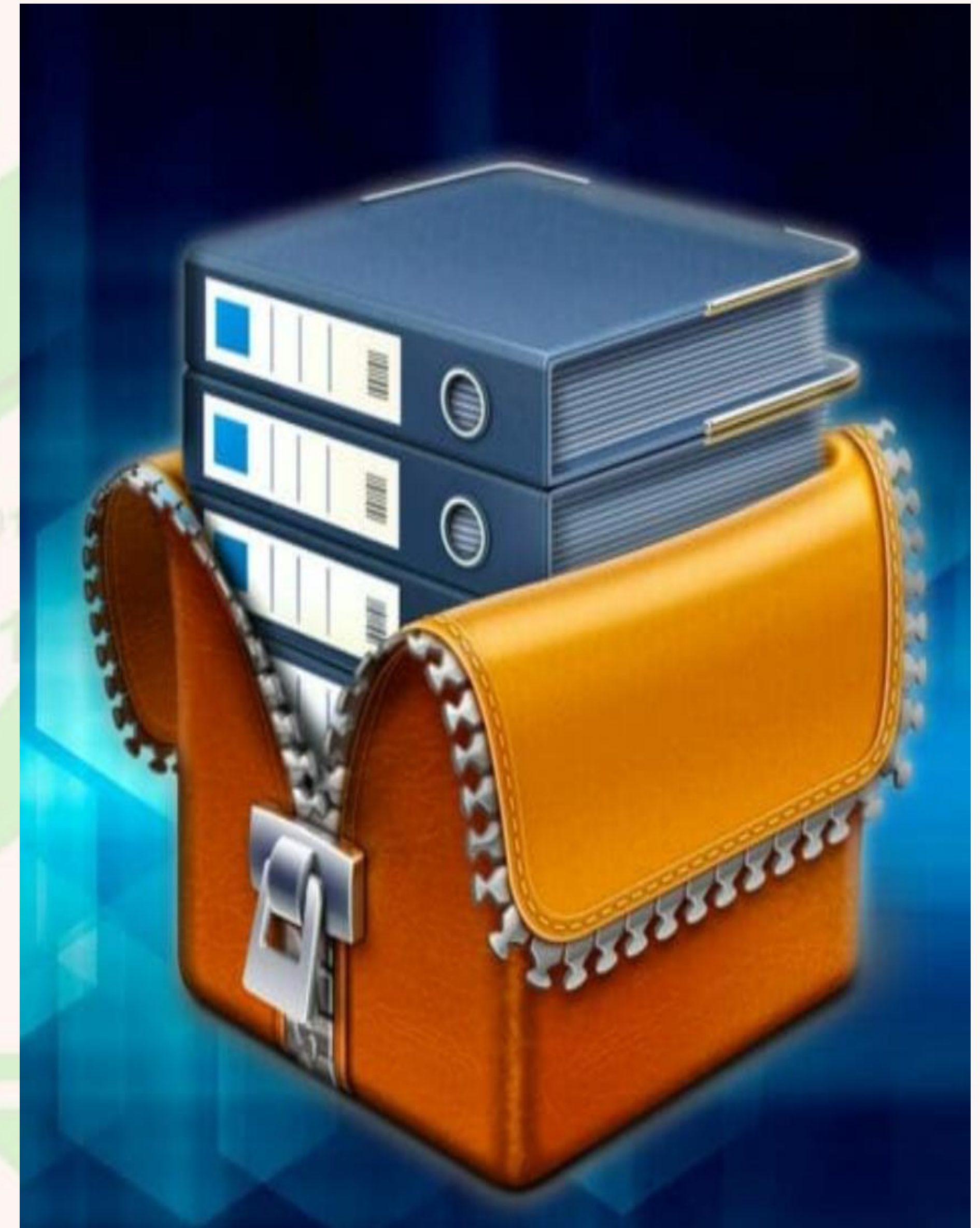
- SDLC is a process used by software industry to design, develop and test **high quality software**.
- The SDLC aims to produce a high quality software **that meets or exceeds customer expectations**, reaches completion within times and cost estimates.

**Let's End this Battle...**





- WinRar never ends, why?
- WinRar is a widely used tool for compressing large files and for transferring data.
- Luckily, the tool has a **trial period that does not expire**
- Even though the capabilities of the WinRar software are not fully-fledged as a trial version, it still offers some basic archiving options, and this makes most of the users satisfied with using it.
- Because the market is over-saturated with a variety of software options, most people tend to stick with the one they have been using for a while.
- Could we leave without WinRar?



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**...that meets or exceeds customer expectations**



amazon

The Amazon logo is displayed in white lowercase letters on a black background. A dark blue shopping cart icon is overlaid on the logo, with its handle at the top and wheels at the bottom. An orange curved arrow, representing the Amazon smile, is positioned below the text.

ebay

The eBay logo is displayed in a multi-colored lowercase font on a white background. The letters are colored as follows: 'e' is red, 'b' is blue, 'a' is yellow, and 'y' is green.



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# Importance of SDLC

- The software development life cycle adds value to software development in the following ways:
    - It provides an effective framework and method to develop software applications.
    - It helps in effectively planning before starting the actual development. SDLC allows developers to analyze the requirements.
    - It helps in reducing unnecessary costs during development. During the initial phases, developers can estimate the costs and predict costly mistakes.
    - It enables developers to design and build high-quality software products. This is because they follow a systematic process that allows them to test the software before it is rolled out.
    - It provides a basis when evaluating the effectiveness of the software. This further enhances the software product.
    - It ensures the protection of thousands of lives, billions of bucks, millions of accounts info, security of private life....
-



# Importance of SDLC

- It ensures the protection of thousands of lives, billions of bucks, millions of accounts info, security of private life....

Sure?

R u kidding?

Nonsense





# Software quality is not so important, innit?

- **Yahoo Confirmation on Massive Data Breach**
- It is one of the recent software failures confirmed by Yahoo itself on September 22, 2016. Yahoo claimed that a copy of specific user account information was stolen from the organization's network. The account information may have involved email addresses, names, dates of birth, telephone numbers, hashed passwords, and in most cases, unencrypted and encrypted security questions and answers. The investigation proposed that stolen information didn't contain payment card data, unprotected passwords, and bank account information. Yahoo believes that information associated with about 500 million user accounts was stolen.
- Yahoo encouraged its users to change the security questions and answers and passwords from any other accounts if they used similar information. The company gave a reminder to its users to avoid clicking on links or downloading attachments from suspicious emails. Reviewing your accounts for suspicious activity and don't sharing your personal information when asking to a web page were other concerns of the company.





# Super Buggy Spacecraft Launch

- Software failure types are different for sure, but Boeing's glitchy software errors are hard to ignore. Boeing's disastrous software not only killed 346 people but also destroyed the 737 max aircraft.





# Ariane 5

On June 4 1996, the European Space Agency test-launched the Ariane 5 rocket. A bug in the control software, written in the programming language Ada, caused the rocket to self-destruct 37 seconds after blast-off.





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# X-rays

- In the 1980s, five patients died after receiving a massive dose of X-rays, the result of a programming bug in a Therac-25 radiation therapy machine. The disaster is thought to have been caused by a glitch that made separate code threads try to do the same thing at the same time.

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A diagram showing the seven stages of the Software Development Life Cycle (SDLC) arranged vertically in a blue triangle. The stages are: 1: Planning and Requirement Analysis, 2: Defining Requirements, 3: Designing the product architecture, 4: Building or Developing the Product, 5: Testing the Product, 6: Deployment in the Market, and 7: Maintenance. A green box with the text 'SDLC stages' is positioned to the right of the list. The background features a faint, stylized graphic of a globe and binary code.

1: Planning and Requirement Analysis

2: Defining Requirements

3: Designing the product architecture

4: Building or Developing the Product

5: Testing the Product

6: Deployment in the Market

7: Maintenance

**SDLC stages**







# SDLC TEAM



Together

T

E

Everyone

Achieves

A

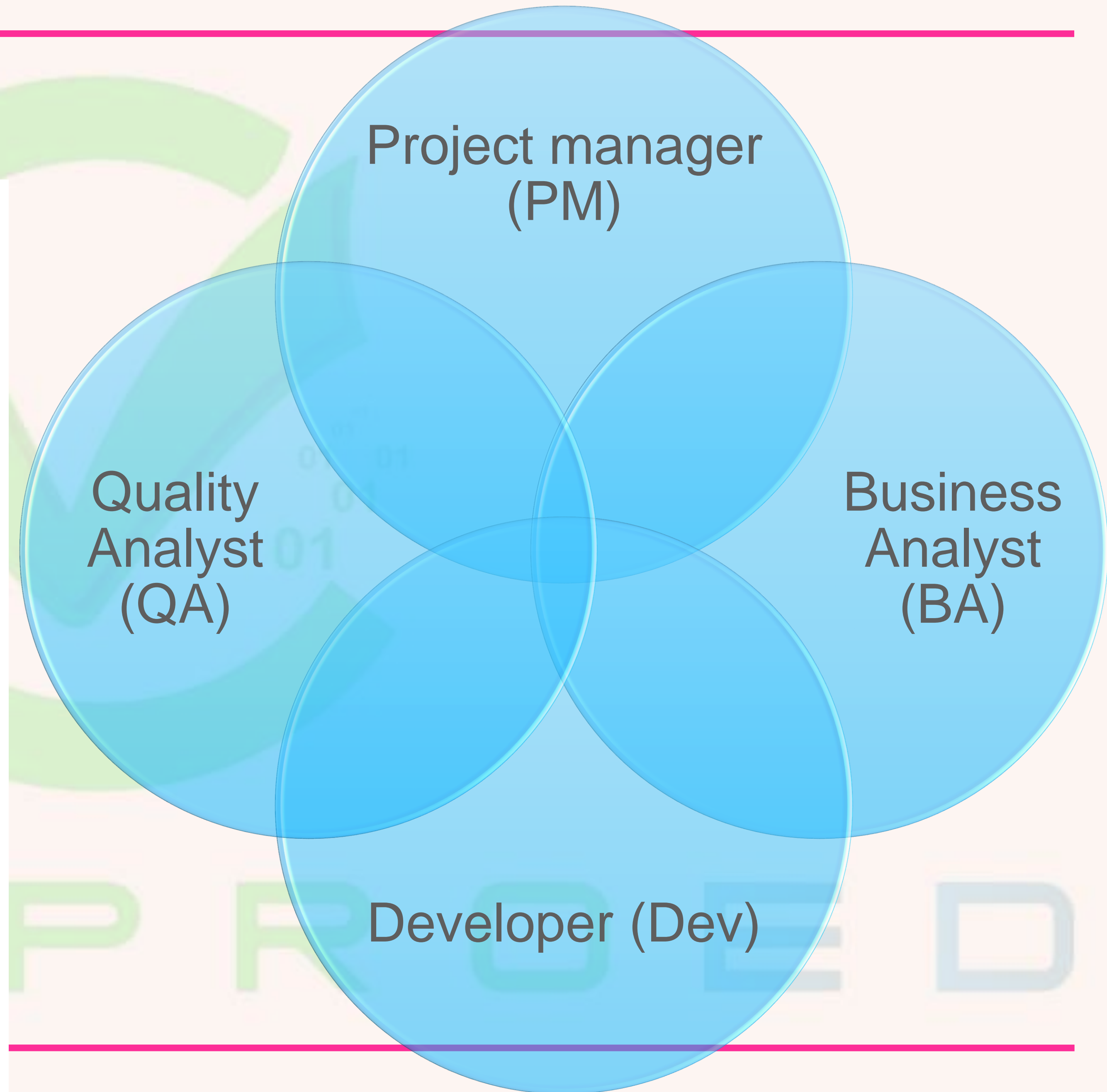
M

More





# SDLC TEAM





# PROJECT MANAGER (PM)

- The project manager is accountable for ensuring that everyone on the team knows and executes his or her role, feels empowered and supported in the role, knows the roles of the other team members and acts upon the belief that those roles will be performed.
- His responsibilities:



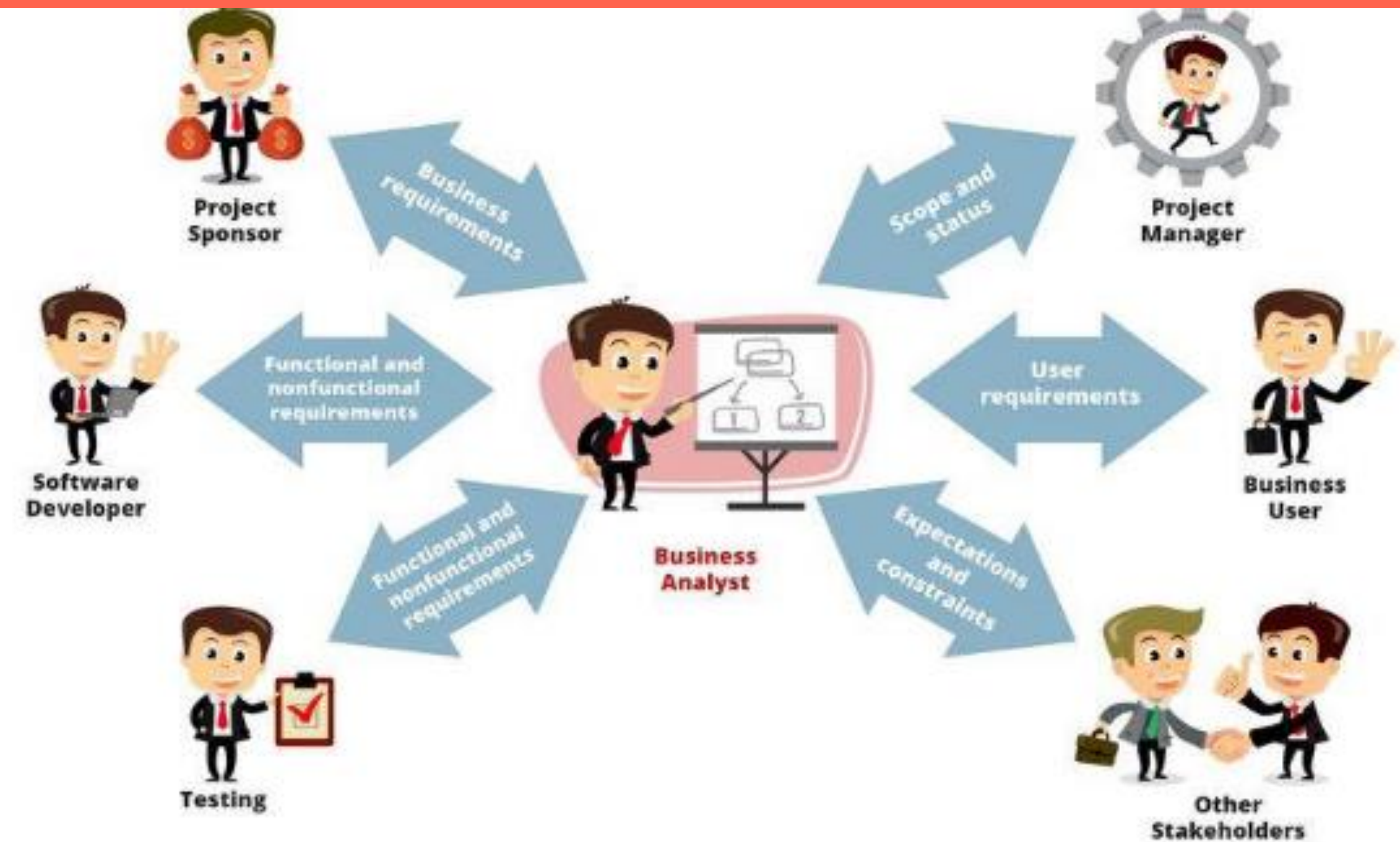
- Developing the project plan
- Managing the project stakeholders
- Managing communication
- Managing the project team
- Managing the project risk
- Managing the project schedule
- Managing the project budget
- Managing the project conflicts
- Managing the project delivery



# BUSINESS ANALYST (BA)

- A bridge between the business problems and the technology solutions.
- Requirements management and communication.
- Translating and simplifying requirements.
- Creates Business Requirement Document (BRD) - what must be delivered to provide value.
- Create Functional Requirement Document (FRD) - defines a function of a system or its component.
- Creates use cases after gathering and validating a set of functional requirements.
- Creates flow chart of the processes.

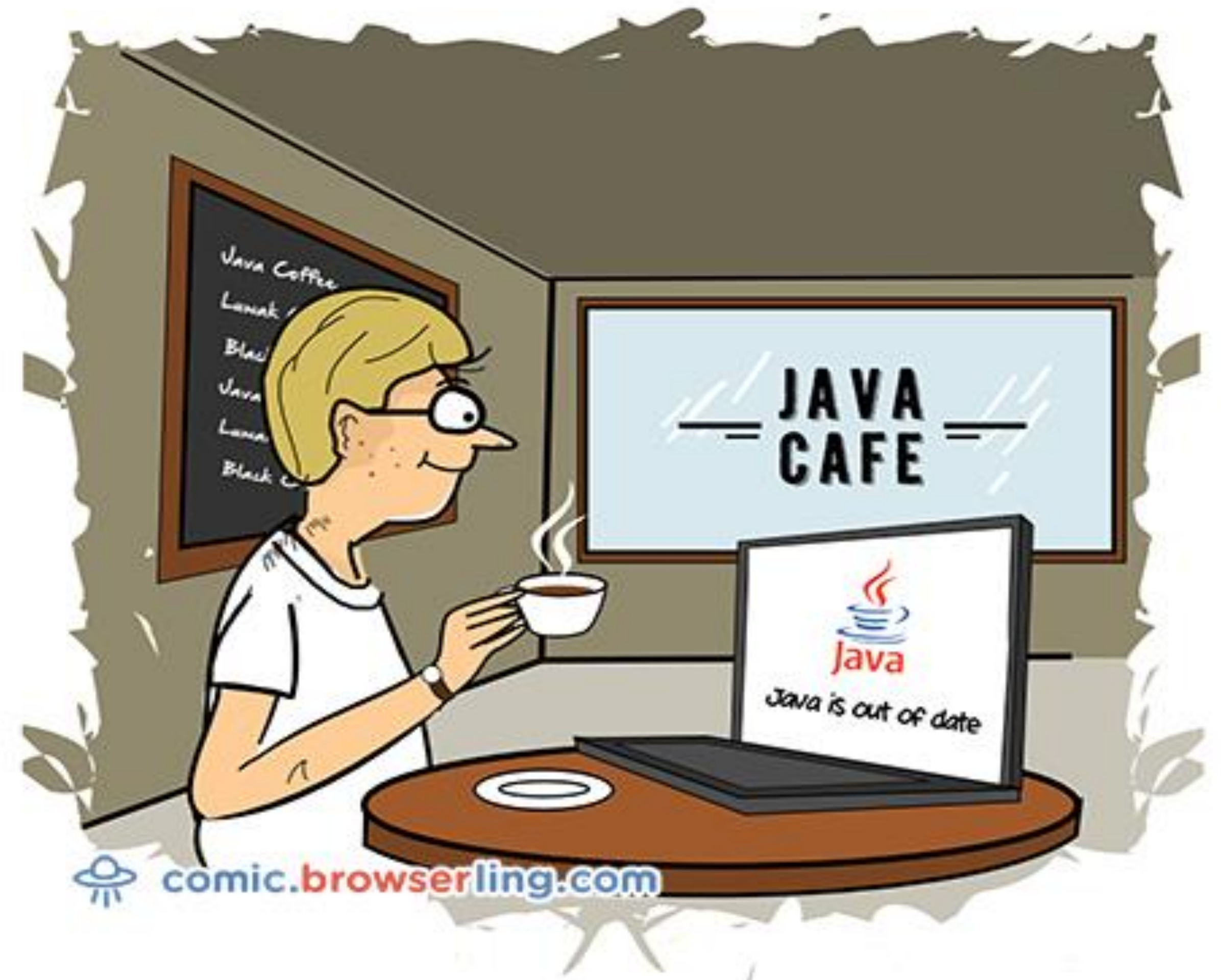
- A Business Analyst is someone who analyzes an organization (real or hypothetical) and designs its processes and systems, assessing the business model and its integration with technology. BA' responsibilities:





# DEVELOPER (DEV)

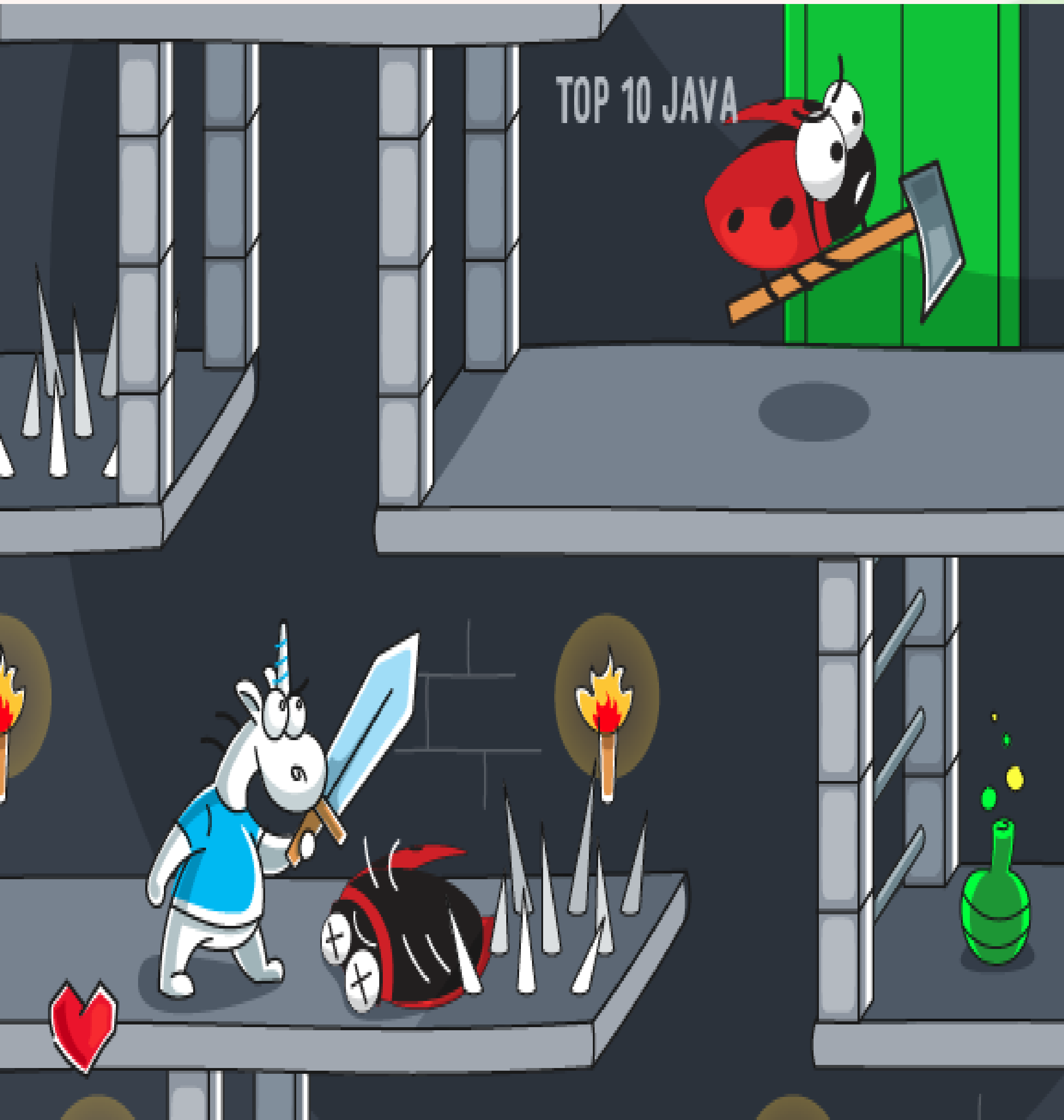
- Developer is a person who writes computer software. As we understand they develop the codes.
- Responsibilities:
- Gather customer software requirements and develop related software applications and programs.
- Develop and write high quality coding that meets customer requirements.
- Create software documentation and update existing documentation.



The programmer forgot to update Java  
so he went to the coffee shop to get a fresh one.



# QUALITY ANALYST (QA)



- A software quality analyst is responsible for applying the principles and practices of software quality assurance throughout the software development life cycle.
- A quality analyst helps ensure that an organization's products or services meet its quality standards.
- The quality analyst (QA) is in charge of ensuring that the application is built according to the plan.
- The analyst is in charge of testing the applications to ensure that the application will work according to the expectation of users and businesses.
- The errors in the application should be found by the analyst so that software developers could work on the errors until the application works without any difficulty.
- Aside from testing if the application is actually working, the quality analyst should also ensure that stages in developing the application are followed.
- Testing is used to detect errors in a product.



# QUALITY ANALYST (QA)



**BUGGY APP**



## Roles and Responsibilities

- Analyzing client requirements
- Understand the software application being tested
- Prepare test plan and test strategy
- Preparing test scenarios / test cases
- Preparing test data (used for test cases)
- Executing the test cases
- Defect tracking
- Perform necessary retesting
- Providing defect information (for developers)
- Preparing report summaries
- Conducting review meetings within the team





How the customer explained it



How the Project Leader understood it



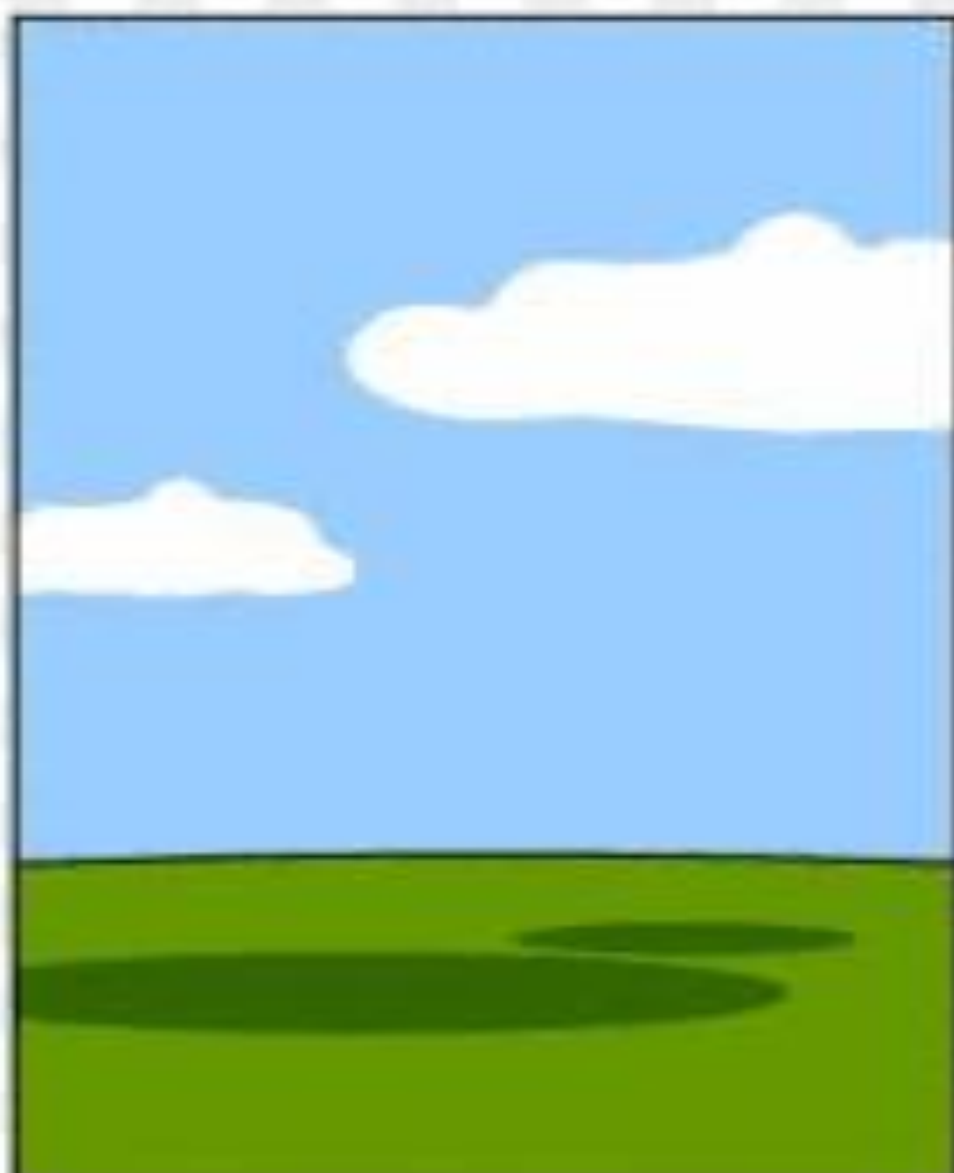
How the Analyst designed it



How the Programmer wrote it



How the Business Consultant described it



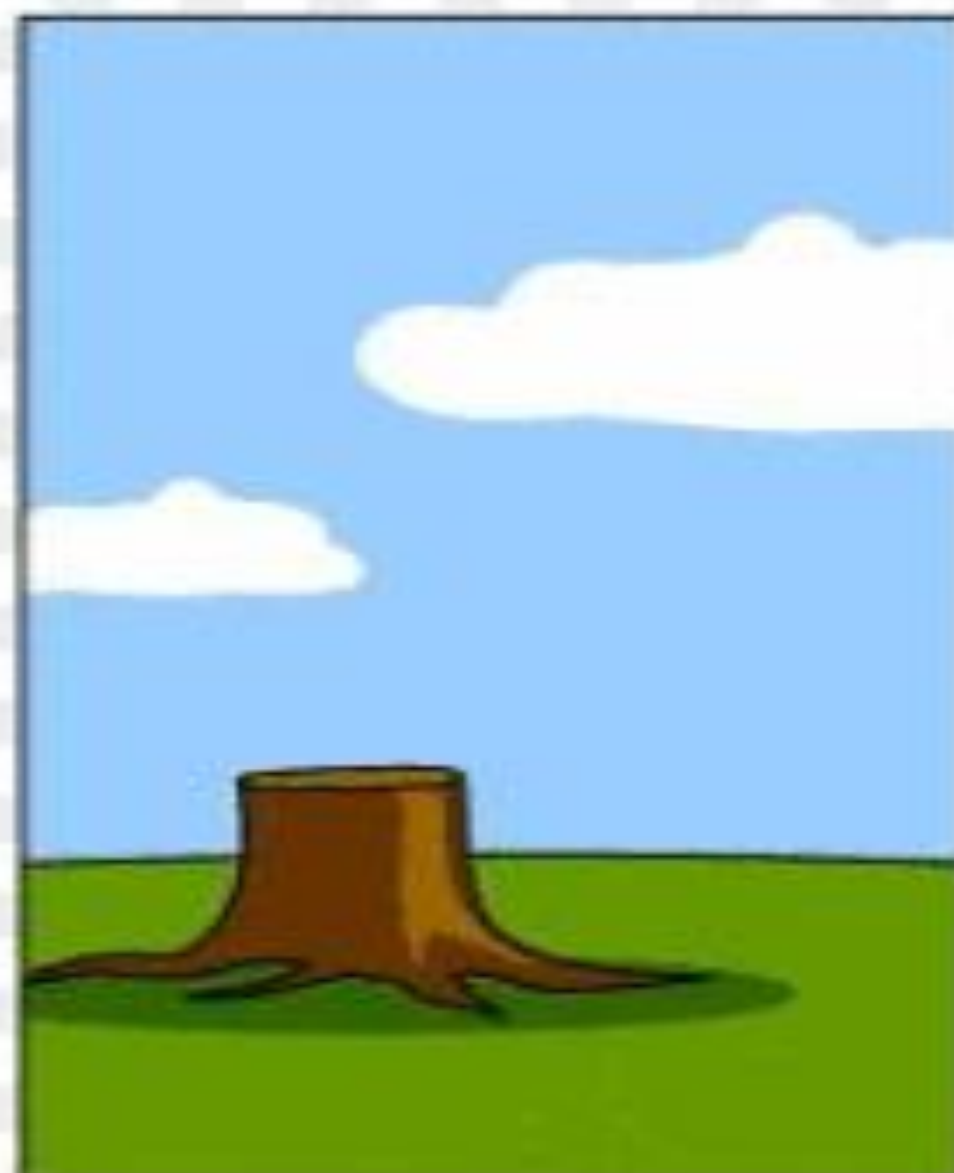
How the project was documented



What operations installed



How the customer was billed



How it was supported



What the customer really needed



# GLOSSARY

- **SDLC** Software Development Life Cycle
- **PM** Project Manager
- **BA** Business Analyst
- **DEV** Developer
- **QA** Quality Analyst
- **BRD** Business Requirement Document
- **FRD** Functional Requirement Document



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# QA:

- › Tester
- › SDET => Software Development Engineer in Test
- › QA Engineer
- › Automation Tester
- › Quality Analyst
- › Cross-Functional Tester
- › Tester: Manual Tester / Functional Tester

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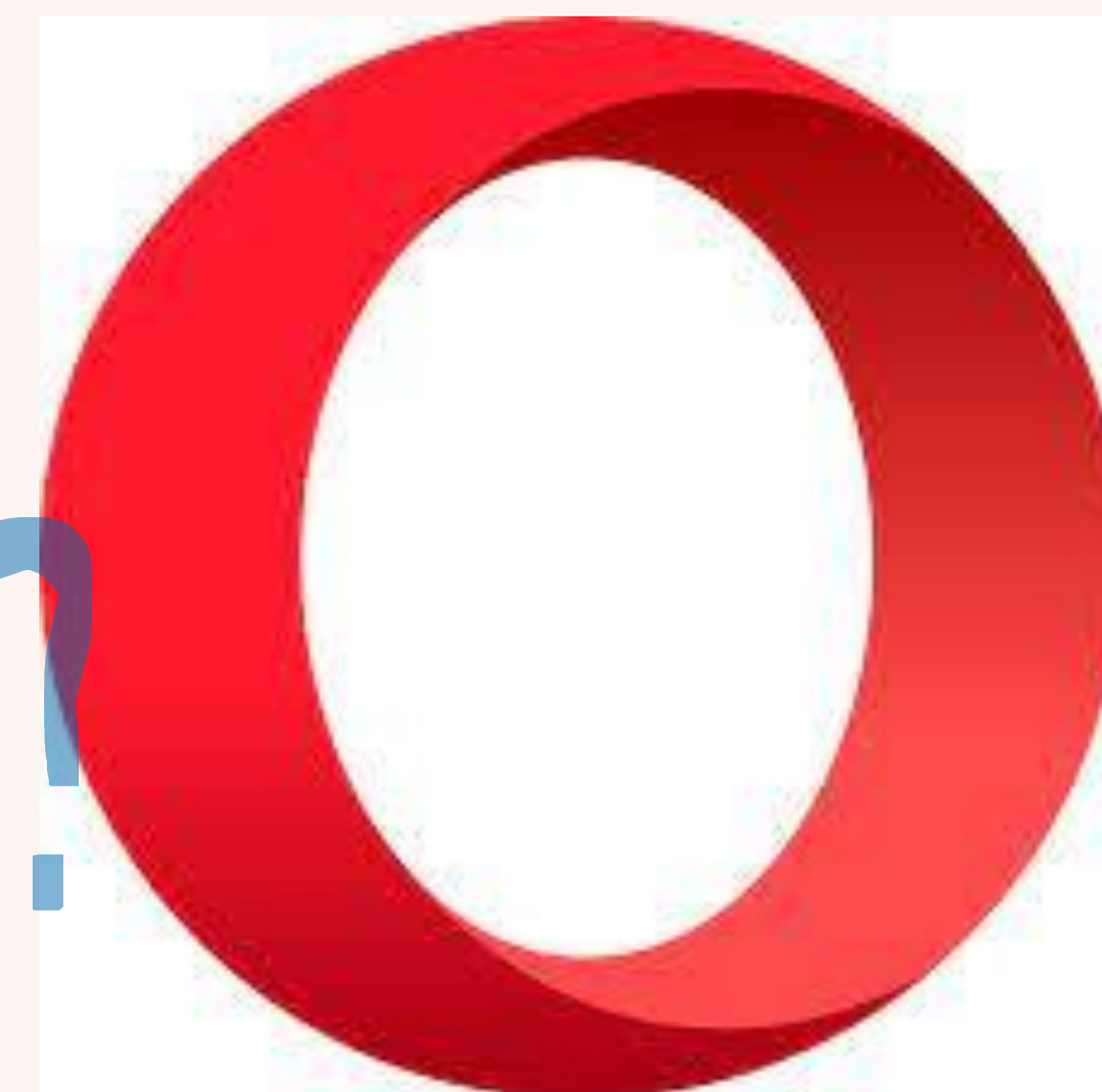
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# More exercises



Which one?  
Why?  
Expectations?



TECHNOLOGY



# CHAPTER 1



Elsie could just barely hear the toll of Big Ben in the distance. Four o'clock. A decent enough time for breaking the law.

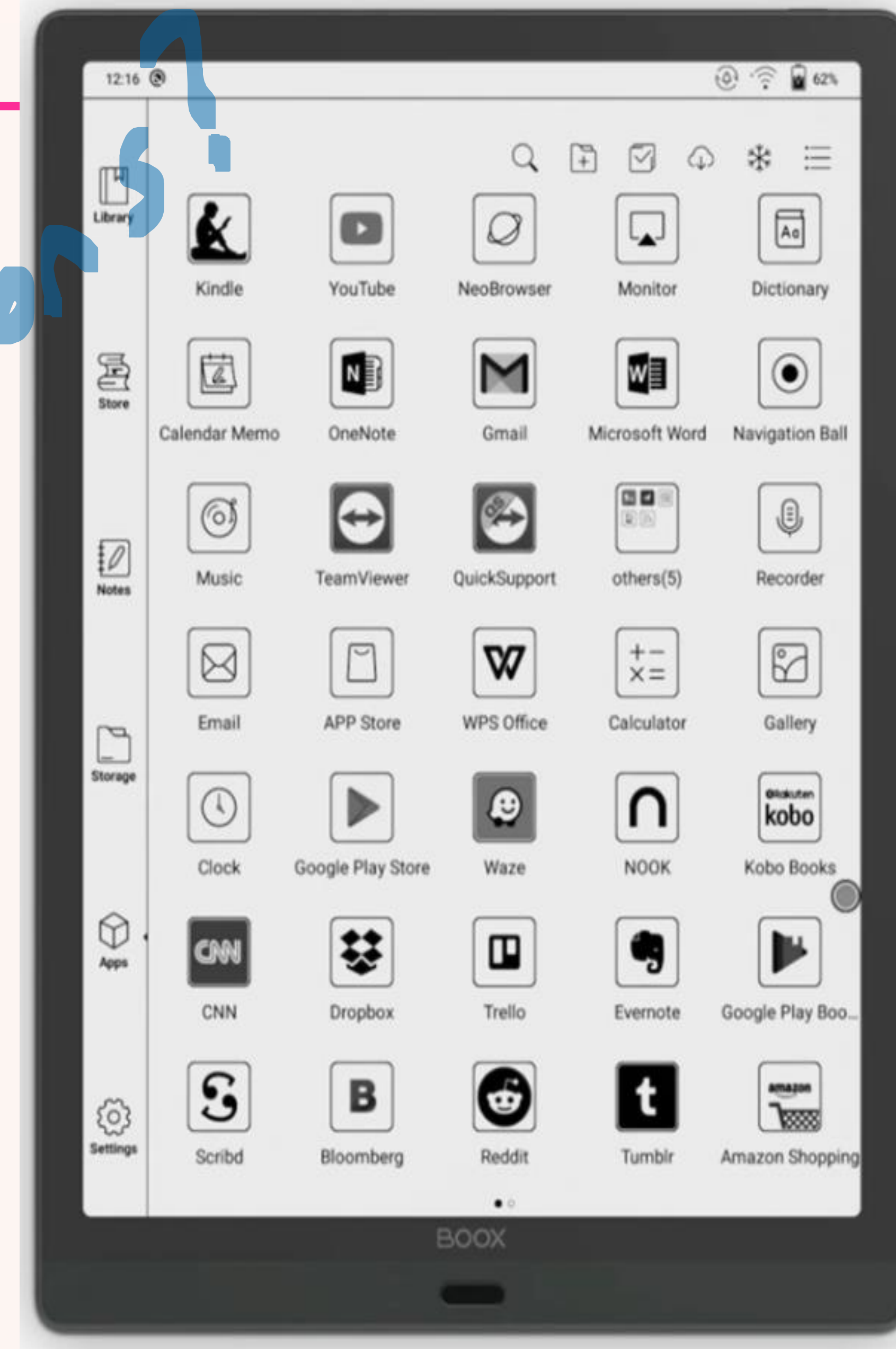
But when the law wasn't fit, was it really a bad thing to break it?

Slipping around a corner, Elsie pulled the letter from her pocket. Although London was only an hour's ride by omnibus or carriage from her home in Brookley, she was not familiar with this particular neighborhood.

kindle

سازمان اسناد و کتابخانه ملی  
جمهوری اسلامی ایران

HP R







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