

1.



# Intro of QA1 course

- You can check course overview on the page <https://javaguru.lv/qa1/>
- Practice lessons:
  - Testing types and levels practice lesson
  - Test plan creation team practice, including scrum process
  - Test case creation team practice with real requirement of the product
  - Bug creation practice, using Jira tool (bug-tracking system)
  - Bug hunting practice using Jira, Scrum board, checklists creation in Jira
  - Testing tools overview (developer tools, postman, charles)
  - SQL practice lesson
  - Interview questions overview

# Online course advantage

- Online communication, you just need laptop or smartphone for participation of the lecture/practice
- 1 hour Q&A session per week for home work discussions and others questions/interesting
- Quick and detailed Response for the Home work
- Using most popular tools like Jira, Trello for the practice of the testing activities in the Agile
- The recording of the lectures and practice lessons will be available for our students
- All Materials are available in telegram channel and Moodle



**Oleh Ivashchenko ·**  
QA Team Lead at DECTA

**Let me introduce myself:**

- More than 12 years experience in QA/QC/Testing in different projects/companies/countries.
- About 6 years of Leading experience
- Experience in training/mentoring of testing groups
- ISTQB Certified Tester Foundation Level
- ISTQB Certified Tester Advanced Level – Test Manager
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# Agenda

- What is IT?
- What is Software Development?
- Software Quality
- What is Software Testing?
- Tester's Profession Overview
- Certification
- Kahoot tests to revise material

A close-up of a bronze statue of a man's head and shoulders. The man has a full, curly beard and hair, and a wide-eyed, questioning expression. The text "WELL, WHAT IS IT?" is overlaid in a white, serif font on the right side of the image.

WELL,  
WHAT IS IT?



# What is IT?

- **Information technology (IT)** is a term that encompasses all forms of technology used to create, store, exchange, and use information in its various forms (business data, voice conversations, still images, motion pictures, photos, multimedia presentations, and other forms, including those not yet conceived).



**Entertainment:**  
films, music, books,  
video games...



**Trainings:**  
manuals, interactive lessons,  
webinars, reference books

## Where is IT used?



**Communications:**  
social networks,  
e-mails, chats...



**Information processing:**  
software of mathematical  
calculation, editors of  
graphics, sound and video



**Providing access  
to information:**  
news, weather  
forecast...



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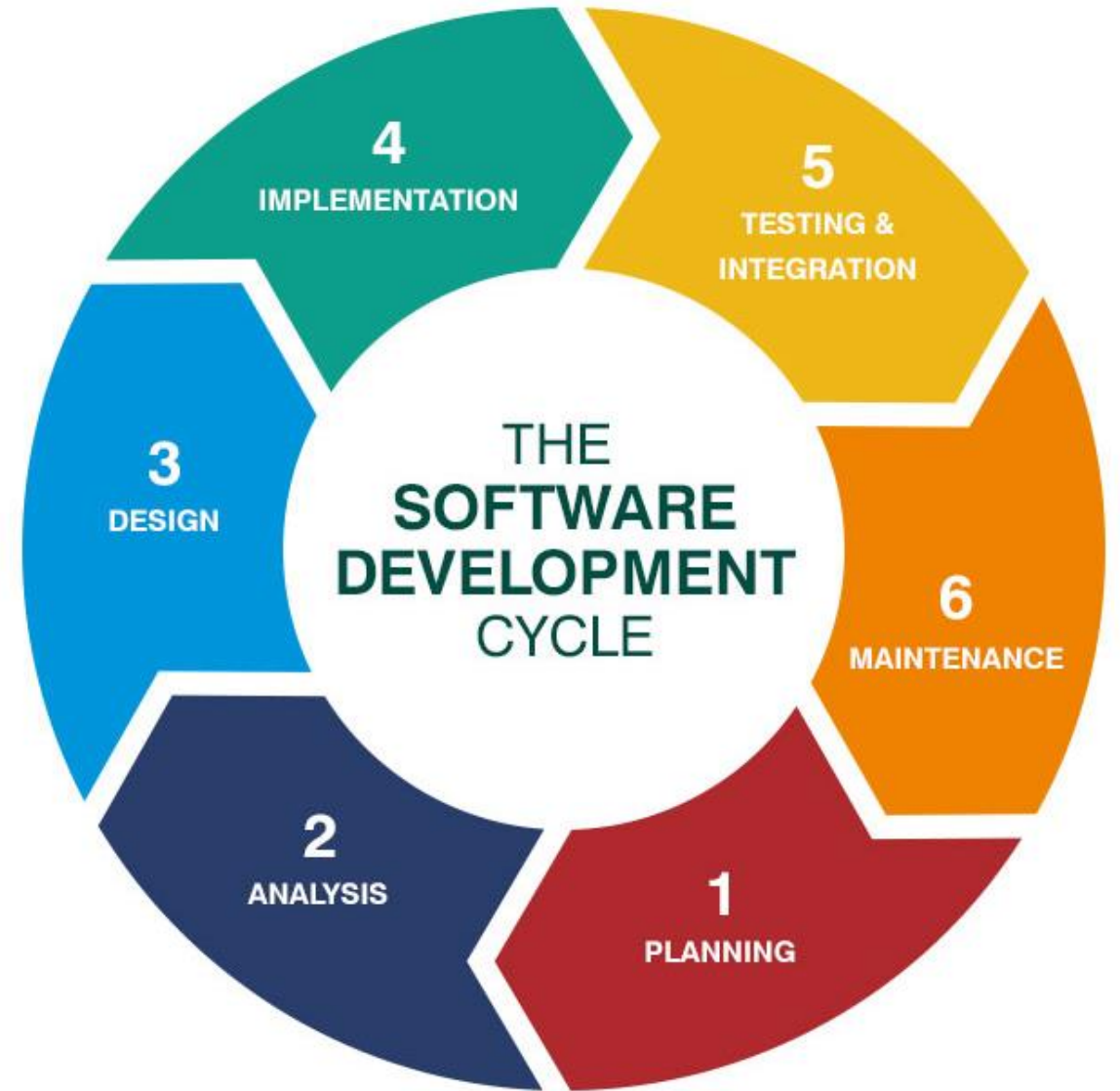
# What is Software Development?



**Software (application) development** is the process of creating a computer software using a specific programming language to address a unique business or personal objective, goal or process.

The **final goal** is software release of a product that serves the wishes of users.

# Software Development Lifecycle (SDLC)





The customer's initial vision.



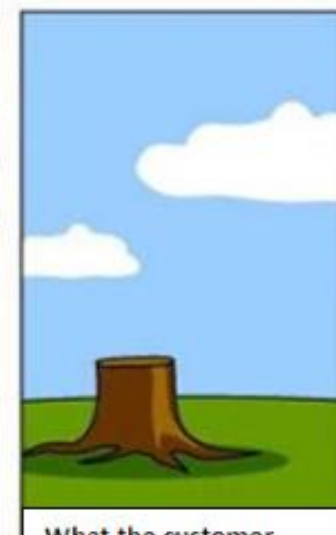
The team generates energy around the vision.



How the team started.



How the first build in the iteration looked.



What the customer reviewed after the 1<sup>st</sup> iteration.



How the next build in the next iteration looked.



How another build in the next iteration looked.



What the customer reviewed after the 2<sup>nd</sup> iteration.



How another build in the next iteration looked.



What the customer really needed ... and accepted in the final iteration.

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# Software Quality

**Software Quality** – the degree of conformance to requirements and expectations

**Quality Assurance (QA)** – the continuous and consistent improvement and maintenance of process that enables the Quality Control job

**Quality Control (QC)** – verification of the product's compliance with the functional requirements

**Testing** – basic activity aimed at detecting and solving technical issues in the software source code and assessing the overall product usability, performance, security, and compatibility.





# Software Quality: QA, QC, Testing



	QA	QC	Testing
<b>Purpose</b>	Setting up adequate processes, introducing the standards of quality to prevent the errors and flaws in the product	Making sure that the product corresponds to the requirements and specs before it is released	Detecting and solving software errors and flaws
<b>Focus</b>	Processes	Product as a whole	Source code and design
<b>What</b>	Prevention	Verification	Detection
<b>Who</b>	The team including the stakeholders	The team	Test Engineers, Developers
<b>When</b>	Throughout the process	Before the release	At the testing stage or along with the development process

# Software Quality: Verification & Validation

Criteria	Verification	Validation
<i>Definition</i>	The process of evaluating work-products (not the actual final product) of a development phase to determine whether they meet the specified requirements for that phase.	The process of evaluating software during or at the end of the development process to determine whether it satisfies specified business requirements.
<i>Objective</i>	To ensure that the product is being built according to the requirements and design specifications. In other words, to ensure that work products meet their specified requirements.	To ensure that the product actually meets the user's needs and that the specifications were correct in the first place. In other words, to demonstrate that the product fulfills its intended use when placed in its intended environment.
<i>Question</i>	Are we building the product <i>right</i> ?	Are we building the <i>right</i> product?
<i>Evaluation Items</i>	Plans, Requirement Specs, Design Specs, Code, Test Cases	The actual product/software.
<i>Activities</i>	<ul style="list-style-type: none"><li>• Reviews</li><li>• Walkthroughs</li><li>• Inspections</li></ul>	<ul style="list-style-type: none"><li>• Testing</li></ul>

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# What is Software Testing?

## Software testing is:

- a process of executing a program or application with the intent of finding the software bugs.
- a process of validating and verifying that a software program or application or product meets the business and technical requirements that guided it's design and development.



## 3 Examples from history - 1





## 3 Examples from history - 2







EVERYBODY  
~~LIES~~  
MAKES MISTAKES





Why can't  
a programmer  
test his own code?

# Several levels of independence

Low  
independence

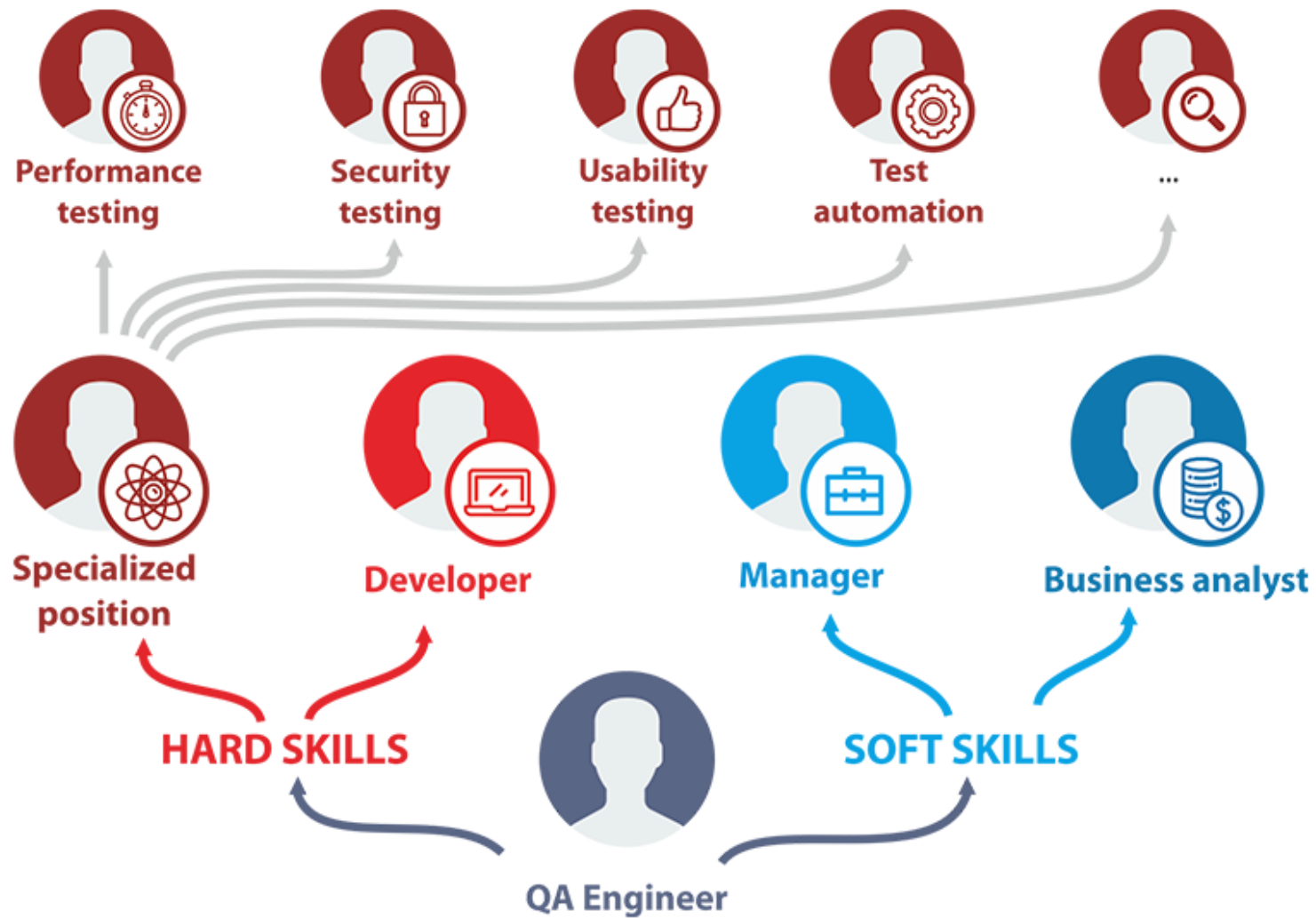


High  
independence

- Tests by the person who wrote the item under test
- Tests by another person within the same team, such as another programmer
- Tests by a person from a different organizational group, such as an independent test team
- Test designed by a person from a different organization or company, such as outsourced testing or certification by an external body

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How  
tester's  
career looks  
like?

# Junior TE: Essential Functions

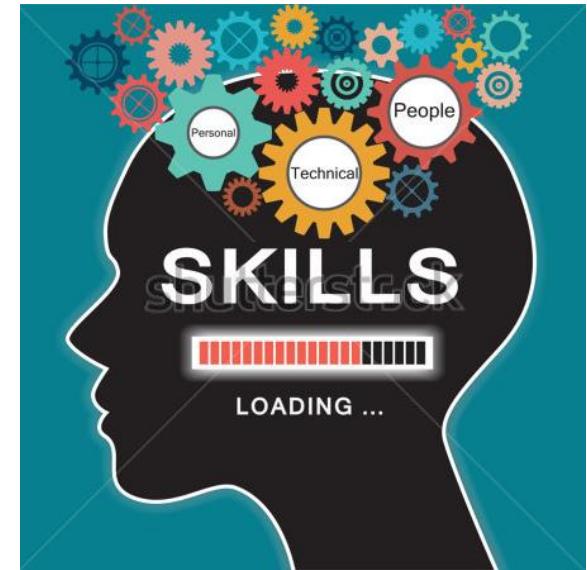
- Review technical documentation and functional requirements
- Create, maintain, execute Test Cases and report test results
- Use testing related tools as required for test management and issue reporting
- Solve testing related issues in collaboration with project members, other departments and related stakeholders
- Follow instructions of direct manager
- Provide regular status updates and timely escalate issues to direct manager





# Junior TE: Technical Skills

- **Testing methodologies:**
  - theoretical knowledge of functional testing types and categories of test design techniques
  - experience in acceptance, regression testing
- Knowledge of **SDLC** acronym meaning and its methodologies



# Junior TE: Soft Skills

- Good documentation skills
- Good communication skills
- Some presentation skills
- Some analytical and problem solving skills
- Accuracy
- English
- Teamwork



# Agenda

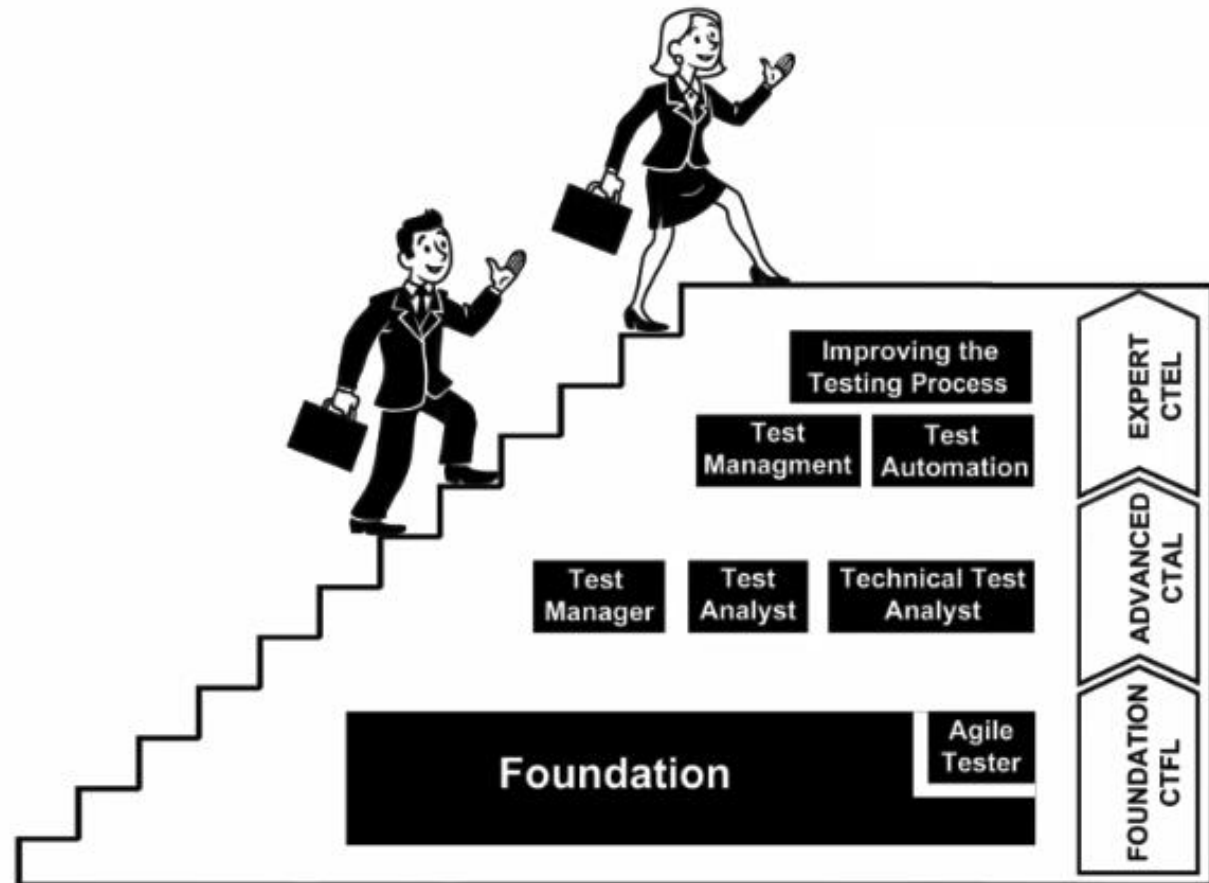
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# Certification of International Software Testing Qualifications Board



ISTQB is the only widely  
accepted certification  
for testers in the world

# What credentials do they have?



# Questions?

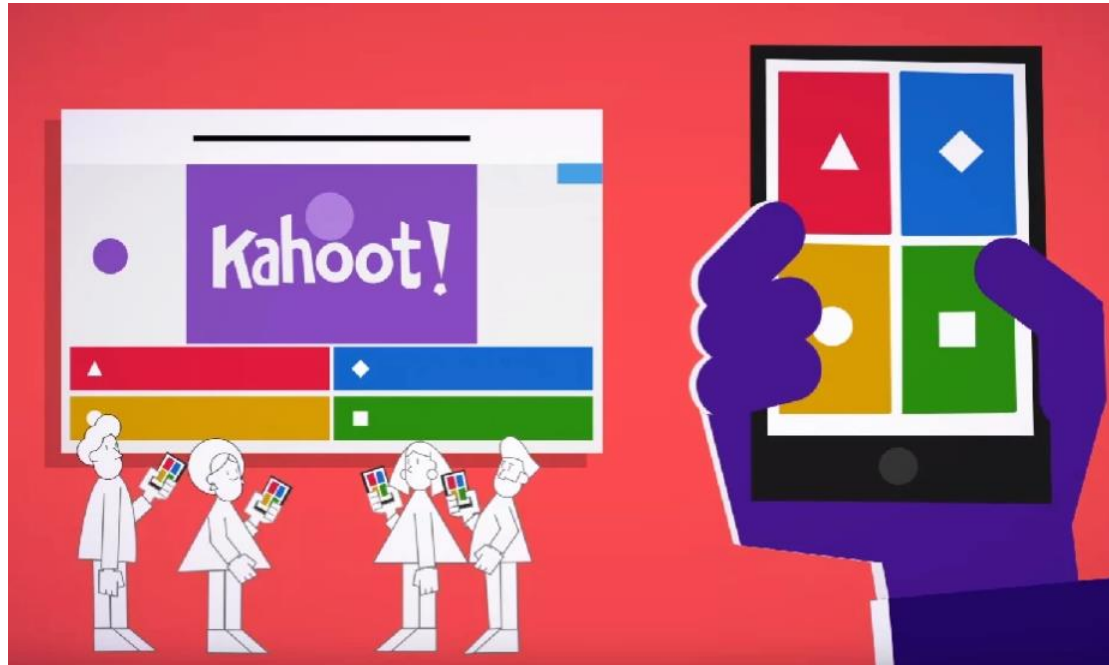




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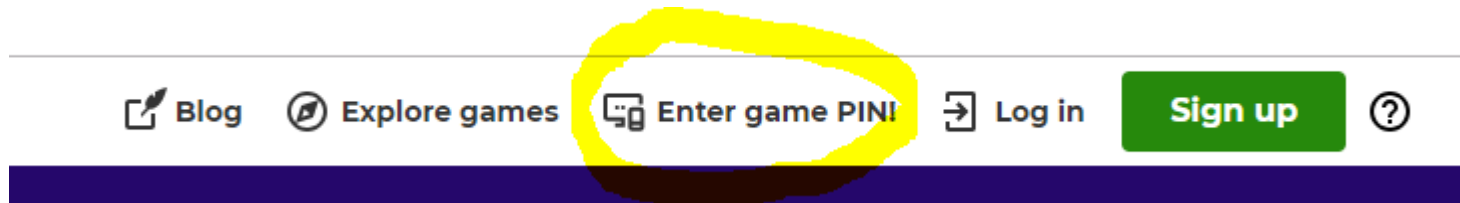
# Kahoot!



1. Open <https://kahoot.com> on your computer OR
2. Download *Kahoot!* application from *AppStore* or *Google Play* to your mobile

# Let's have some fun with the demo test!

**COMPUTER:** Click on **Enter game PIN!**



**MOBILE:** Tap **Enter PIN**

