

QA Basics: Exam Preparation



SoftUni Team
Technical Trainers



SoftUni

Software University

<http://softuni.bg>

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2. QA Engineer Profession Explained
 - What Does a **QA Engineer Do?**
 - Job Description
 - Roles and Duties
3. The **QA Curriculum @ SoftUni**
4. Q&A Session



You Have Questions?

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#QA-Basics



Sample Exam Questions

Question 1

- A **test scenario** contains **multiple**:
 - A. Test drivers
 - B. Test cycles
 - ☒ C. Test cases
 - D. Test controls

Hint: Quality Assurance Intro lecture

Question 2

- The following **statement** can be applied to which test level:
"Testing must confirm that **components collaborate** correctly"?
- ☒ A. Integration testing
- ☐ B. Acceptance testing
- ☐ C. Non-functional testing
- ☐ D. Functional testing

Hint: Components collaborate

Question 3

- Software testing is **NOT** a way:
 - A. To **evaluate** the **features** of the software item
 - ☒ B. To **find all** the **bugs**
 - C. To **verify** specified **requirements**
 - D. To **reduce the risk** of software **failure**

Hint: Seven testing principles

Question 4

- Software testing process **includes**:

1. Test **design**
2. Test **planning**
3. Test **reporting**
4. Test **execution**

Choose the correct order, that these are performed.

- A. 2, 3, 1, 4
- ☒ B. 2, 1, 4, 3
- C. 1, 3, 4, 2
- D. 2, 3, 4, 1

Hint: Quality Assurance Intro lecture

Question 5

- Which of the following list contains only **non-functional** tests:
 - A. Security testing, reliability testing, performance testing
 - B. Testing various configurations, beta testing, unit testing
 - C. Stress testing, component testing, portability testing
 - D. System testing, performance testing, alpha testing

Hint: Test Levels and Test Types lecture

Question 6

- One of the fields on a form contains a text box which accepts numeric values in the range of **18 to 25**. Which test will be **negative**?
- A. 19
 - B. 21
 - C. 25
 - ☒ D. 17

Hint: Unit testing

Question 7

- Which of the following **requirements** is **testable**:
 - A. The safety-critical parts of the system shall contain **0 faults**
 - B. The system shall be built to be **very fast**
 - C. The system shall be **user friendly**
 - ☒ D. The response time shall be less than **one second** for the **specified load**

Hint: What could cause defects?

Question 8

- Software **testing activities** should **start**:
 - A. When the requirements have been officially signed
 - B. As soon as the code is written
 - C. Before the debugging stage
 - ☒ D. As soon as possible in the development life cycle

Hint: Software Testing Process

Question 9

- A bug tracking system:
 - A. is of limited value
 - B. should be used only by the test team
 - ☒ C. is a valuable source of project information during testing
 - D. only records defects

Hint: Bugs and Bug Tracking lecture

Question 10

- Why should **expected results** be defined **before execution**?
 - ☒ A. To reduce the possibility of incorrect results
 - B. To assist in automation
 - C. To improve system efficiency
 - D. To improve design of the software

Hint: Bugs and Bug Tracking lecture



QA Engineer Profession Explained

What Does a QA Engineer Do?

- A QA engineer **monitors every phase** of the software development process, including:
 - design
 - development
 - testing
 - debugging
 - delivery
- **Maintains the quality standards** of the software at every stage and ensure the **final product** meets the **requirements**.
- **Defines the tests to verify** that the software does not have any **technical shortcomings**.

- Here is a list of **typical tasks** of a QA specialist:
 - **Checking** if the **product** complies with the requirements
 - **Assessing risks**
 - **Planning ideas** to **improve** product quality
 - **Designing** tests
 - **Executing** manual an automation tests
 - **Analyzing** the test results

- There are **four main QA roles**:
 - **Test Analyst** - engaged in static testing of requirements and checks them for completeness and consistency.
 - **Test Designer** - creates a set of tests based on requirements and plans configurations that are necessary for testing.
 - **Test Executor** performs pre-planned tests, describes and documents the found errors, and steps for reproducing (or fixing) them.
 - **Test Manager** - plans and monitors work related to testing such as deadlines, schedule, controlling requirements to tests, setting tasks, communicating with stakeholders.

A workday of a QA Engineer

- A typical **workday** of a QA specialist consists of several duties. Here are some of them:
 - Writing **test cases**, **running tests**, **documenting errors** (depending on the phase of the project)
 - Checking the **bug tracking system** for the fixed errors
 - Conducting **meetups**
 - Learning the **requirements** and their **clarification** with the **customer**
 - **Communicating** with **developers**
 - Writing test **documentation**

- QAs should:
 - Have a **broad IT knowledge** and be **eager to learn** new things
 - Be **able to communicate** (the quality of communication in the development team directly affects the quality of the software)
 - Be **attentive to details**, be **diligent**, **responsible**, and **persistent**
 - Possess **analytical skills**, be able to **model** and **work** with **abstractions**
 - Have a **critical mindset** aimed to find errors

The career prospects of QA specialists

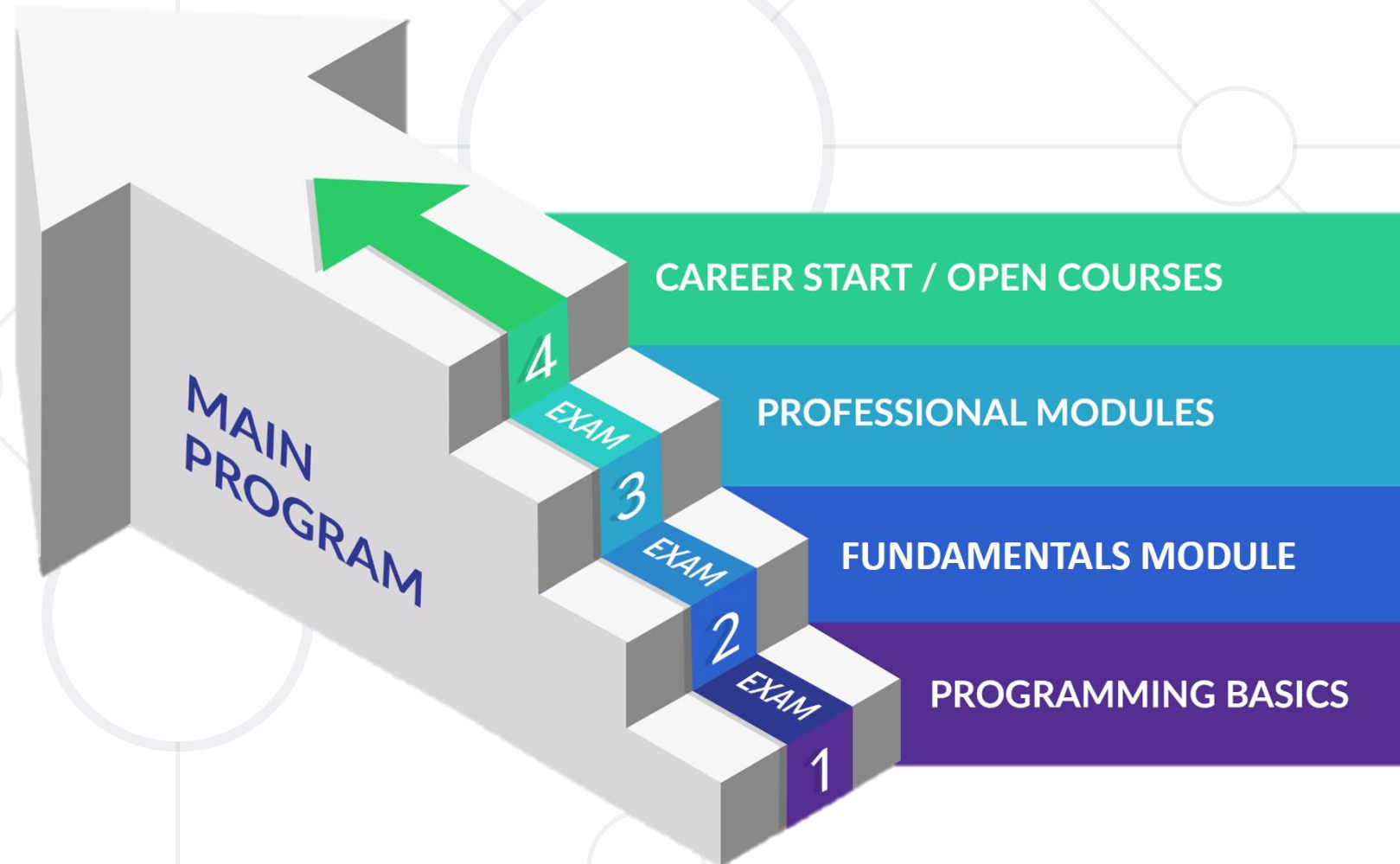
- The main areas for **professional development** in the QA career:
- Explore new areas and **grow as a QA**: junior QA -> middle QA -> senior QA -> QA team lead -> QA-manager -> Head of QA department.
- If you are interested in automation and want to know what a QA **automation engineer** does, there's an option to master automated testing and move along this direction. It requires **deeper technical knowledge**.
- Upgrade your qualification to a **Business Analyst** or a **developer**.
- Having gained **enough experience**, you can grow into a **Project Manager**, then into a **Senior Project Manager**



The QA Curriculum and Opportunities

Become a QA Automation Engineer and Start a Job

QA Engineering: Educational Program



**Entry
Module**

QA Basics

1 month

**Fundamentals
Module**

QA Fundamentals

4 months

**Professional
Modules**

**Programming
for QA**

**Back-End Test
Automation**

**Front-End Test
Automation**

12 months

<https://softuni.bg/qa/curriculum>



SoftUni Partners

Tech Companies, Who Support SoftUni

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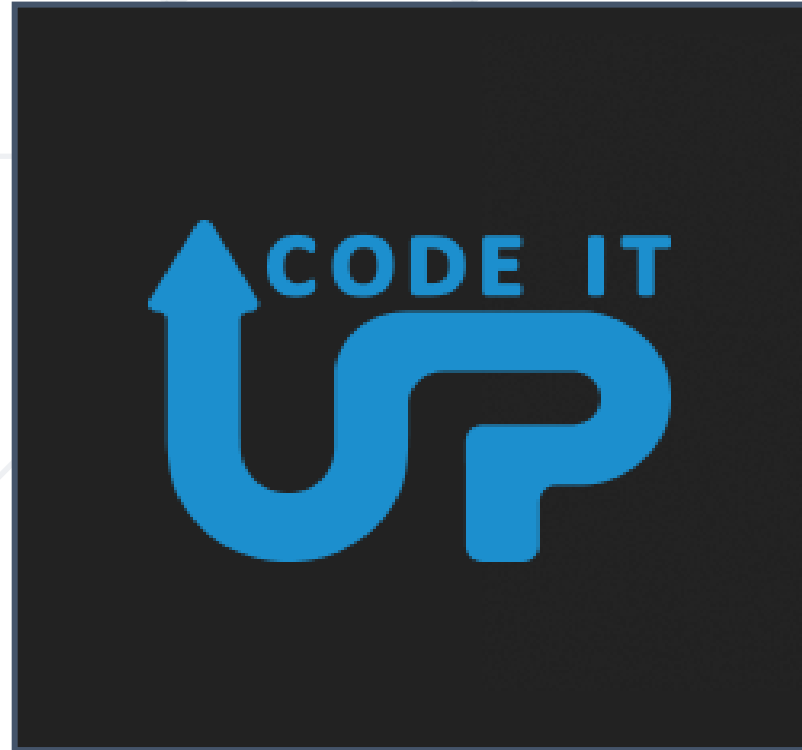
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- US-based award-winning tech company
- Has a team of over 3900 talented engineers across the globe
- Works with innovative technologies to deliver high-quality sports entertainment products to their clients
- Offices in Sofia and Plovdiv
- <https://careers.draftkings.com/jobs/>



- One of the top **banking institutions** in Bulgaria
- Employer of the year for 2017
- Member of the Eurobank Group with € 58 billion of assets
- Serious investments in digitization
- The first bank credit botchat – EVA
- <https://www.facebook.com/evapostbank>
- <https://www.postbank.bg/Za-nas/Careers>



- The largest hosting company in Bulgaria

- Hosting & Domains
- WordPress Hosting
- VPS Servers
- SSL Certificates
- E-Commerce
- Top-quality support
- Top-qualified team

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- Offering a complete solution
- Leading technical equipment
- <https://www.superhosting.bg/>

- Founded in **2020** in **Chicago**
- Provide superior uncorrelated investments returns using statistics and AI/ML methods
- Sources un/structured datasets, sound economic and financial principles, and advanced ML techniques to capture in the equity markets
- <https://www.pharvision.ai/>



- Product company home of **PokerStars**, **PokerStars Casino** and **PokerStars Sport**
- Global engineering team
- Industry-leading products
- Java, JS, React, Kubernetes, AWS and many more
- <https://pokerstarscareers.com/>



POKERSTARS



CAREERS

- Established in 2005
- Developing their own Fintech software tools
- Technological hub of MFG with a focus to establish a new generation platform Smart Check
- Using C#, .Net Core, Web API, Microservices, Kubernetes, React, JS, JQuery, MS SQL
- Looking for Devs & QAs
- <https://www.smartit.bg>



- Integration solutions for **financial institutions**
- Provide digital transformation



Discovering
Potential



Driving
Innovation



Unlocking
Opportunities

- <https://www.softwaregroup.com/>

- Site design
- Website optimization – SEO
- Online advertising – PPC
- Social media marketing
- Copywriting
- Creative concept and design
- <https://createx.bg/>



- Coca-Cola HBC is one of the world's largest bottlers of brands from the Coca-Cola company
- CCHBC started operations in Bulgaria in 1992 and since then is one of the biggest contributors to the local economy
- Global company with over 30 thousand engaged people
- <https://bg.coca-colahellenic.com>



Coca-Cola HBC
Bulgaria

- Business and technology **services company**
- Business application development
- Infrastructure services
- Collaboration services
- Looking for trainee and junior .NET Developers
- <https://www.indeavr.com/en/careers>



- Global **FinTech** platform
- Microservices, CI/CD, Autonomous teams
- Java-based stack, open to developers with any tech background
- <https://taulia.com/company/careers/>



- IT service providers for the divisions of the **Schwarz Group**
- Responsible for the provision of IT infrastructure platforms and business applications
- Support education and invest in development of business and IT professionals
- <https://it.schwarz/en/it-hubs/bulgaria>

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- Bosch.IO drives the digital and AIoT business of Bosch Group
- Around 900 associates, more than 200 of whom are working in the Bulgarian office
- Languages and frameworks: Java, Spring Boot, Go, TypeScript; Mobile: iOS & Android; Cloud Platforms: Azure & Azure DevOps, AWS
- <https://bosch.io/>

Bosch.**io**

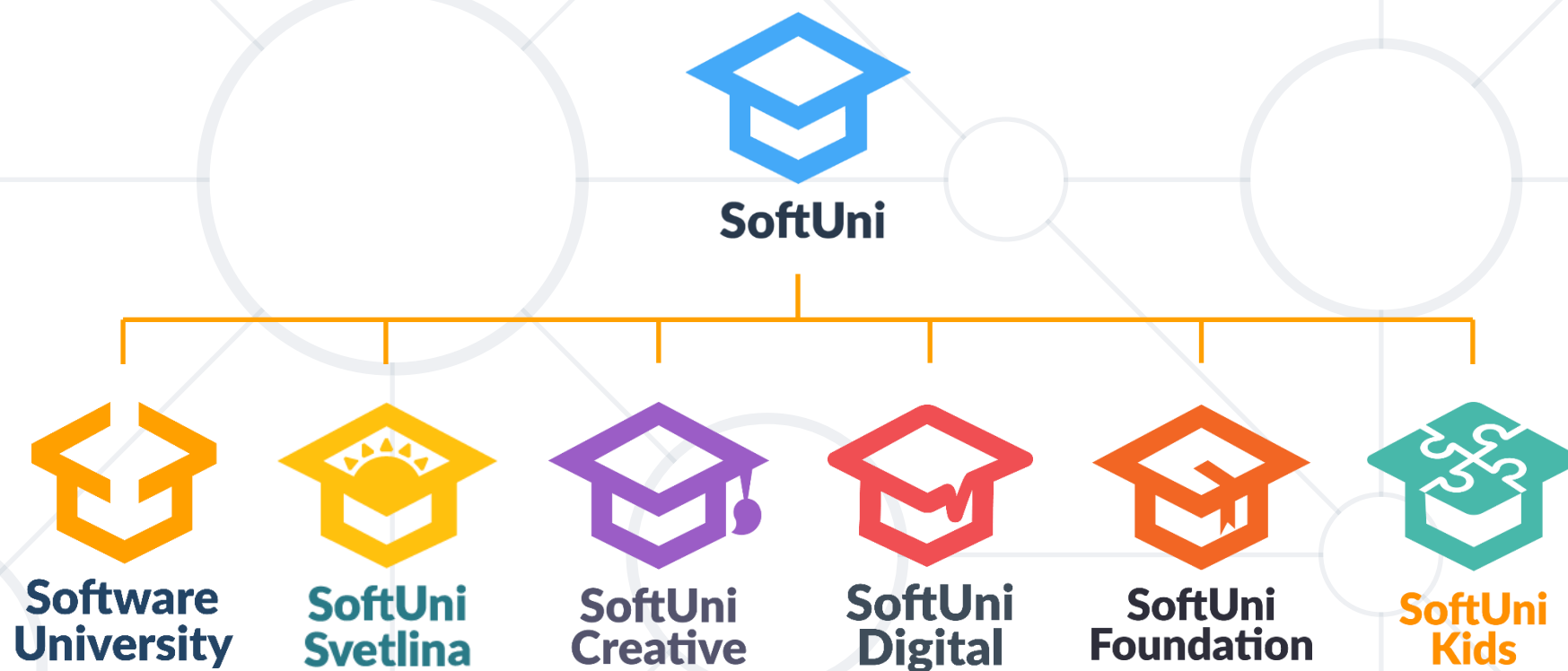


Q & A Session

- **Exam preparation:** Solving sample questions
- **QA profession:** What does a QA engineer do?
- **QA curriculum:** Your QA path
- **Our partners:** Opportunities
- **Q & A Session:** Your questions answered



Questions?



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Решения за твоето утре



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