	MYEDU Training Center, owned by Myedu OÜ Approved 05/22/2023
Name of the study program	Automated Software Testing Engineer (QA automation engineer)
Education program group	153135 Development and analysis of software and applications / Tarkvara ja rakenduste arendus ning analüüs
Learning objectives	By the end of the course, the student knows the basics of Java programming and will be able to develop automated tests for APIs and web applications.
Knowledge and skills acquired upon successful completion of the study program Achievable learning outcomes	At the end of the course the student: knows the principles and techniques of test design in the context of test automation uses various tools for autotesting; knows how to plan the process of test automation; automates API and web application testing scenarios.
Target group	Professionals planning to work in IT (or already working) who want to gain the basic knowledge and skills necessary to work as an automation QA engineer in Estonia and beyond.
The conditions for the trainee to start training, if they are a prerequisite for achieving learning outcomes	Participation in the training requires basic knowledge of manual testing, understanding of the principles of operation of client-server applications and APIs. The student must have a computer connected to the Internet.
Language of the program	English
The number of training hours, including the share of classroom, practical and independent work	168 academic hours
Homework assignments	112 academic hours
Classwork (during the lessons)	56 academic hours (28 online lessons by 2 academic hours)
Duration of the study	4 months
Content of training: - Structure and scope of training - Learning content	The training program was created on the basis of the professional standard Tarkvaraarendaja, tase 6, competence B.3.5, taking into account the requirements for certification for the basic level of the International Software Testing Qualifications Board (ISTQB) and modern trends in the field of information technology. **Block 1.** Introduction to automation and java basics Introduction to test automation, structure of autotests. The Java programming language, the basics of object-oriented programming. Conditional statements. 5 webinars. 10 ac. hours of classroom work and 20 ac. hours of independent work. Theoretical material and practical work under the guidance of a teacher. **Block 2.** Unit tests. API testing JUnit framework, test lifecycle management and parameterization capabilities. Assured REST Library. Mappers, serialization and deserialization of requests. Development of automated tests API for training simulator. 10 webinars. 20 ac. hours of classroom work and 40 ac. hours of independent work. Theoretical material and practical work under the guidance of a teacher. **Block 3.** Web Application Testing and Testing Framework Principles of web application testing. Locator search strategies. Selenium and Selenide libraries. Integration tests and interaction with the database. Testing infrastructure. Docker, Selenoid, Allure report. Creating a CI pipeline in GitHub Actions 9 webinars. 18 ac. hours of classroom work and 36 ac. hours of independent work. Theoretical material and practical work under the guidance of a teacher. **Block 4. Employment program** Preparing a resume (CV) and designing a LinkedIn page Preparation in terms of Soft skills for interviews Test interview on soft skils Motivation letter and offer discussion 4 webinars. 8 ac. hours of classroom work and 16 ac. hours of independent work. Theoretical material and practical work under the guidance of a teacher. **Final test** At the end of the course, an online test will be held to consolidate the material covered and advice will be given on additional literature, video clips and articles to read.
Teaching methods:	**Classroom (online) work:** theoretical material (lectures and discussion of examples). **Practical work (online and independently):** completing assignments, conducting software testing, preparing test documentation. All practical tasks are performed in the IntelliJ IDEA environment, github and checked by the teacher. Detailed feedback on each work will be provided. **Practical exercises will include:** tasks on the principles and techniques of test design mastering various tools for testing automation; tasks for testing web applications and API Independent work includes reading additional materials on the topic and watching training videos. During the breaks between classes, a discussion is held in a closed group in Telegram
Description of the learning environment; Description of the training facilities, furnishings and equipment necessary to achieve the objectives set out in the curriculum, as well as the acquisition of skills and their compliance with legal health protection requirements, if any	Classes are held in the form of online video conferences on the Zoom platform and Google Documents. In the learning environment, theoretical and practical classes are held, homework is sent out. The student asks questions and receives feedback from the teacher. The number of students in one group is up to 15 people. One academic hour lasts 45 minutes. Each meeting lasts 2 academic hours. Classes are held twice a week on weekday evenings.
List of training materials	Educational material is provided to students in electronic form. - Lecture notes; - Test documentation templates; - Training simulators for testing web applications and APIs.
Completion requirements, including assessment methods and assessment criteria	Doing homework, staying in online classes. Final testing is used to evaluate learning outcomes.
Conditions for graduation and issued documents (Certificate or Certificate)	Successful completion of the course requires participation in at least 80% of academic and practical classes and completion of all homework assignments. The achievement of learning outcomes is assessed through practical work and final testing. A certificate is issued to a student who has attended at least 80% of the lessons, completed all practical tasks and successfully passed the final test. A certificate of participation in training or completion of training is issued to the student if the learning outcomes were not achieved, but the student took part in the training. The certificate is issued in accordance with the number of hours of instruction attended, if the student participated in at least half of the classes

Description of the qualifications, study or work experience of the person providing the training that are necessary for the completion of the training	Vladimir Ovodenko - QA engineer with 10 years of experience. - 5 years adult education experience.