Java programming for testers. Program content

1. Introduction to Programming (Java - classes and objects, variables and functions, debugging usage)
2. Setting up the development environment (IntelliJ IDEA)
3. Using GitHub for storing the project's source code
4. Recording tests for a web application with Katalon, transferring tests to the development environment, and connecting necessary auxiliary libraries
5. Code refactoring
6. The two-level architecture of the test suite (separating test code from code, Page Object)
7. Introduction to basic capabilities of the test framework TestNG
8. Writing tests without using a recorder
9. Managing code flow with “if-then” constructs
10. Collections and loops (building and modifying collections, comparison and sorting, implementing complex assertions involving collections of objects)
11. Working with String and other Data Types (string comparison, checking strings against regular expressions, converting String to Integer or Double and vice versa, generation of strings)
12. Test parameterization
13. Linking tests with Data Generators, Data Driven Testing (DDT).
14. Working with CSV, XML, and JSON files (reading data from files, writing generated data to files)
15. Working with Databases (Java Database Connectivity (JDBC) - database access technology that allows executing SQL queries and analyzing the retrieved result as a table, mastering more modern Object Relational Mapping (ORM) technology with Hibernate)
16. Network programming: Application Layer Protocols (mechanisms for working with network protocols for sending and receiving emails (POP3 and SMTP), a protocol for sending and receiving files (FTP), a protocol for remote command execution Telnet, a protocol used for interacting with web applications - HTTP)
17. Network programming: SOAP and REST APIs
18. Testing frameworks and infrastructure.