Manual Testing + Internship

Course Program

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You deserve the best education

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English
(separate optional course)
16 classes
24 hours

Manual Testing
4 months
45-50 classes depending on the group level
90-100 hours + 90-100 hours homework

Internship
2 months part-time job

MANUAL TESTING COURSE

Classes: online, 2-3 times a week
Duration: 4 months
Knowledge: IT + QA
Lecturers: 4 (15+ years experience each)
Modules: 13+1
Consultations: unlimited

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CLASSES

Class: online, 4 times a week
Duration: 1.5-2 hours
Language: English (B1 is a minimal level)
Questions in class: unlimited
Questions between classes: unlimited
Group: 15 students
Homework (expected): 2-3 hours after each class

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All the classes include
theory + practice!

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Module 1. INTRODUCTION TO THE PROFESSION

Mission Possible

Who are testers
What is the main mission of testers
How testers ranks in a team

What is the Testing Structure

Challenges of testing: requirements analysis, proper coverage, application validation and verification on frontend, backend and DB level.

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Module 2. GET READY FOR TESTING - WHAT IS LINUX

Linux in a Tester's Life

Why testers need Linux?
Linux History
Using Terminal and SSH

Linux Basics

UNIX filesystem concepts
cd, pwd, ls
cat, less, man
cp, mv, rm, mkdir, ln

File reading

head, tail
sort , uniq, wc
Basic pipe usage and regular expressions

File creation

touch, echo, nano
Output redirections, stdout / stderr concepts
Command sequence execution: &&, ";", ||

Users and Groups

Main concepts
Privilege escalation: su, sudo
File access permissions: chown, chmod

Processes and Services

Process listing: ps, pgrep, top
Process management: kill, pkill, killall
Main systemd concepts
Service management: systemctl

Environment exploration

Search files: find
Collect environment info: uname, df, mount, free, cpuinfo
Archives and compression: tar, gzip, bzip2
FIle transfer: scp

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Module 3. GET READY FOR TESTING - HOW NETWORKS WORK

Looking for Errors in a Network Environment

Why testers need to know it

Networks Basics

IP address
Netmasks
Packet transmission

Network Layer

IP protocol
Routing basics
ip, ifconfig
route, netstat
ping, traceroute

Transport-layer Protocols

TCP/IP stack and OSI model
ICMP, UDP, TCP concepts
Packet encapsulation
Network ports and sockets
Their relations to processes
netstat, ss

Application-layer Protocols

DNS, DHCP, HTTP in a nutshell
Remote port checking: nc, nmap
Packet sniffing by tcpdump

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Module 4. GET READY FOR TESTING - HOW DATABASE LEVEL WORKS

Relational Theory Basics

Tables and relations
Keys
Constraints
ER-diagrams

SQL Basics

SELECT
UPDATE
INSERT
DELETE

SQL Joins

LEFT Join
RIGHT Join
FULL Join
SELF Join
Join several tables

SQL Subqueries

SELECT * from table_name where value in (SELECT …)

Database Connection

DBeaver
Connection settings
Metadata
Credentials

Database Tools Usage

SQL Editor
Log
Output
Diagrams

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Module 5. GET READY FOR TESTING - HOW SERVICES LEVEL WORKS

REST Requests

GET
POST
PUT
DELETE
HEAD
OPTIONS
CONNECT
TRACE

Services

HTTP
URI
Protocol
Host
Port
Path
Status codes
JSON
XML

Postman

Collections
Query params
Usage

Development Tools

Console
Network
Memory
Application

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Module 6. GET READY FOR TESTING - HOW UI LEVEL WORKS

UI Objects Basics

DOM Tree

Development Tools

Elements
Cookies
Cache

UI Scripts Basic

JavaScript
Script elements

UI Object Properties

XPath
Inspect Element
Properties

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http://10.65.154.74

Module 7. GET READY FOR TESTING: TROUBLESHOOTING

3-tier application architecture

Main purpose and usage
Components: frontend, backend, DBMS
Educational application sample

Common localization methods

Typical points of failure in 3-tier applications
Common ways to localize defects
Collecting info from clients, frontend, backend, DB components

Refreshing of Linux skills and tools

ps, ss/netstat, systemctl, journalctl, egrep, nc, tcpdump

Troubleshooting practice

Invalid user credentials
DB records are inconsistent
Service is not running
Backend can’t login to DB
Firewall gets crazy

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Module 8. REQUIREMENT TESTING

Requirement Levels

UI level
API level
DB level

Requirement Assessment

IBM Classification
INVEST
Other classifications

UML

Structural Diagrams
Use Case Diagram
Activity Diagram
State-Machine Diagram
Sequence Diagram

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Module 9. TESTING LEVELS AND TYPES

Testing Classification: The Pyramide

Unit testing
Integration testing
Mocks
Stubs
System testing
Acceptance testing

Testing classification: Types, boxes, regression

Blackbox
Gray box
Whitebox
Functional testing
Non-functional testing
Smoke testing
Sanity testing
Full regression
Connection between all the types and classes

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Module 10. TEST DESIGN

Introduction

Application types
Project phases
When to use test design methods

Equivalence Classes and Boundaries

Usage for simple objects
Usage for complex objects

Decision Tables

Parameters
Simple tables
Complex tables

Pairwise Testing

Ways to use
Simple cases
Complex cases

State-Transitions Testing

Objects and diagrams
Simple cases
Complex cases

Scenario Testing

Usage with other methods
Simple cases
Complex cases

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Module 11. TESTING DOCUMENTATION

Check-Lists

Rules of usage
Combination with test cases

Test Cases

Fields
TMS
Good test case principles

Test Suites and Test Runs

Rules of test suite creation
Test run rules

Test Plans

Master test plan
Child test plan
Rules of usage
Sections

Defect Tracking System (DTS)

Defect workflow
Defect fields
Severity and priority

Defect Description

Defect description rules

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Module 12. INTRO TO THE AUTOMATION FOR MANUAL TESTERS

Git

git clone
git init
git add
git checkout
git commit
git push
Branching strategy

Automation and CI/CD

Who are automated tester
Communication with AT team
Automation principles
CI/CD strategies

Tools basics

Docker
Kubernetes
RabbitMQ

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Module 13. DEVELOPMENT METHODOLOGIES AND TEAM

Development Methodologies

Waterfall
Agile family: SCRUM
Agile family: Kanban
Spiral
V-model

Agile: Business Game

Jira
Tasks
Standups
Grooming
Planning
Retrospective
Business demo

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A BONUS FOR A FAST GROUP

Exploratory Testing

Monkey
Gorilla
Ad hoc
Error guessing
Testing tours
Exploratory testing sessions
Exploratory testing reports

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WHAT WILL YOU BE ABLE TO WORK WITH

Internship

Duration: 2 months
Real project: Yes
International company: Yes
Practice in your CV: Yes
Training of all the skills: Yes
Possibility to be a team lead: Yes
Lecturers consultations: unlimited

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Internship Stages

Stage 1
(1-2 weeks)

Mentor controls your team, advices and checks daily

Stage 2
(8 weeks)

One or two leads chosen, they daily report to a mentor

Stage 3
(2 weeks)

Common advises, CV preparation

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JOB INTERVIEW GAME AS AN EXAM

Duration: 1 hour for each student completed the internship
Lecturers: 1-2
Language: English
Feedback: Yes
Help in CV preparation: Yes
Help in hiring: Yes

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CONTACT US

Details: https://Mentorpiece.education/qa-course/
Course Telegram Channel: https://t.me/be_tester
Course Telegram Bot: https://t.me/be_tester_chat

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