

The seven most important steps to becoming a test automation engineer.

1. Don't Ignore Manual Testing

While I understand that companies are moving towards codeless automated testing tools, to reach an expert level and to keep up with the competition of automation test engineers in the industry, it is highly important to focus on manual testing concepts initially.

First, I would really like to emphasize the facts of using manual and automated testing. An article on [when to use manual testing and when to use automated testing](#) can really help you to understand the difference between them.

Once you are through with these differences, you will understand that automation testing is definitely a replacement for manual testing, but only to a certain extent. So, there is no way you can avoid coding.

This makes a point very clear that automation testing is for experienced manual testers.

2. Possess Excellent Technical Programming Skills

Most newcomers to testing question me:

“Can I learn automated testing with no programming skills?”

“Do you need coding skills to learn automated testing?”

Most of the people who come up with the idea of shifting to automated testing wish to skip the coding part. Either they don't have programming knowledge or they hate coding.

However, as I said in my earlier point, that one needs to be very proficient with manual testing skills to become a great automation testing engineer for a long-lasting career in the software testing industry.

If you are new to the testing industry, one needs to have knowledge of the following programming languages:

- C/C++
- Java
- SQL
- Python
- Perl
- XML
- HTML
- CSS

Following are the technical skills a manual tester should master to become a brilliant automation testing engineer:

- Test architecture.
- Test design.
- Performance testing.
- Configuration management.
- Manual testing agility & interaction.
- Communication between teams.
- Troubleshooting.
- Agile, DevOps, and continuous delivery.

The combination of all the above-mentioned skills can help you transit to automated testing easily and smoothly.

3. Understand the Application Well

When you go to a doctor, the doctor needs to have the complete information about your past and existing health issues, old medical prescriptions, etc. Only then will the doctor be able to understand your new health issues and symptoms. Same is the case with the automation testing engineer. Automated testing engineers need to comprehend the software application under testing inside and out.

The common application details that every automation tester needs to take care of are:

- Which programming languages have been used while developing the application?
- On what platform is the application built?
- Which databases are involved?
- Are there any web services/APIs connected to different parts of the system? How?
- What is the objective of the owner developing this application?
- What are the functions and features expected from the application under development?
- Has manual testing been executed in this application?
- How many manual hours have been spent on this application testing?
- Are there any existing serious issues or unresolved bugs?
- What is the expected delivery date of the application?

These are just a few points and it may vary based on the complexity of the applications. So, make sure you are completely through with the application that you are going to test via automation testing.

4. Experience the Automation Testing Tools

When learning to become a smart automation testing engineer, if we don't talk about the test automation tools, then we are doing an injustice to the industry.

A major part of the companies has already started using automation testing tools. The main reason behind using them is their benefits to the enterprises.

So, to get better exposure in your career, you would need to experiment with the [leading test automation tools](#) available in the market.

Experimenting with those tools will help you in gaining much knowledge about their architecture, environment, feasibility for your applications under tests, and much more.

Also, having good experience with these tools will help you to [decide on which tool fulfills most of your automation testing needs](#). This can help you further in your career when it comes to executing in your testing projects.

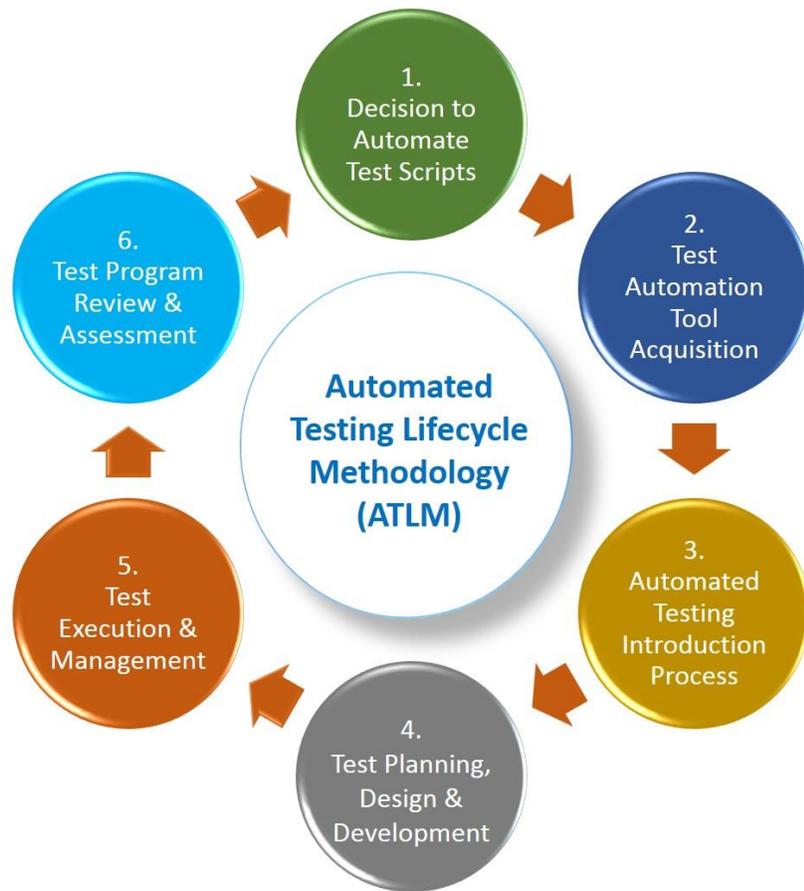
5. Determine ATLC Methodology

ATLC stands for Automation Testing Life Cycle.

The way we follow the life cycle of software development and testing, same is the way for automation testing as well. To understand and follow the ATLM, one needs to have experience of the following:

- Decision making in automated testing.
- Test automation tools.
- Automation testing process.
- Test planning, design, and development.
- Test script execution and management.
- Review and assessment of test programs.

For each test automation requirements, a test automation engineer follows this life cycle:



To be a successful automation test engineer, you need to understand the ATLC methodology and execute it in your each test automation project.

6. Create Test Automation Strategy

Once you are through with the ATLC methodology and the automated testing tools, you are well prepared to create your test automation strategy for your clients or employer.

To become a great automation test engineer, you would be the right person to initiate with preparing the test automation strategy, finalizing the tools, overall cost and [ROI calculation](#).

Automation strategy creation is considered to be a very crucial part as you would need to define and develop the path that will help you to reduce the manual testing hours and offer justice on the ROI of the clients.

7. Stay Updated with the Testing Trends

Last but not the least, keeping up with the [latest software testing and test automation trends](#) is the most important part of this industry.

The most trending best practices, tools, techniques, tips, and tricks will help you and your team to achieve the success in optimizing your test automation strategies and methodology.

This generation is moving towards automation everywhere. However, there has been a lot of debate around test automation tools replacing the manual testers. But remember, the creators of test automation tools are the testers like you. So, to become a smart automation testing engineer and to be successful in this industry, you would need to really work hard with passion and dedication.