

industrial skills test ist preparation guide

Updated Version

Industrial Skills Test IST Preparation Guide

Preparing effectively for the Industrial Skills Test (IST) is crucial for securing a position in various industrial and manufacturing roles. The IST assesses a candidate's practical skills, technical knowledge, and problem-solving abilities essential for success in industrial environments. This comprehensive guide aims to help you understand the test structure, tips for preparation, and strategies to excel in the IST, ensuring you make a strong impression and increase your chances of success.

Understanding the Industrial Skills Test (IST)

What is the IST?

The Industrial Skills Test (IST) is a standardized assessment designed to evaluate candidates' technical competencies relevant to industrial roles such as manufacturing, mechanical, electrical, and maintenance positions. It is often a mandatory step in the selection process for many industrial companies, especially in large-scale projects or government initiatives.

Key Components of the IST

The test typically covers a range of areas, including:

- Mechanical Skills
- Electrical Skills
- Numerical and Reasoning Skills
- Technical Knowledge and Concepts
- Practical Problem-solving Exercises

The exact structure may vary depending on the specific role or organization, but a solid understanding of these components is essential for effective preparation.

Preparation Strategies for the IST

Familiarize Yourself with the Test Format

Understanding the test structure is the first step. Obtain sample papers, practice tests, or previous exam questions if available. Knowing the types of questions, time limits, and scoring criteria will help you tailor your preparation efforts.

Review Relevant Technical Subjects

Based on the role you are applying for, review core technical subjects:

- **Mechanical Skills:** Gear systems, turbines, engines, welding, and material handling.
- **Electrical Skills:** Circuit theory, wiring diagrams, motors, transformers, switches, and safety protocols.
- **Numerical Skills:** Basic arithmetic, algebra, units conversion, and data interpretation.
- **Technical Concepts:** Safety standards, maintenance procedures, and industry regulations.

Use textbooks, online courses, or tutorials to reinforce your knowledge.

Create a Study Schedule

Consistency is key. Develop a timetable that allocates time for each subject area, balancing theory review and practical exercises. Prioritize weaker areas but ensure comprehensive coverage.

Practice with Sample Questions and Mock Tests

Regular practice helps build confidence and improves time management. Use online practice tests, sample questions, or mock exams that simulate real test conditions. Focus on:

- Speed and accuracy
- Understanding question patterns
- Managing time effectively during the exam

Improve Your Practical Skills

For roles requiring hands-on skills, practical experience is invaluable:

- Engage in workshops or training programs
- Practice operating machinery or electrical components safely
- Learn troubleshooting techniques

The more familiar you are with real-world applications, the better you'll perform in relevant test sections.

Tips for Excelling in the IST

Time Management

During the test:

- Read questions carefully before answering
- Allocate specific time limits per question
- Move on from difficult questions to ensure completing easier ones first

Practicing under timed conditions will help you develop better pacing.

Focus on Accuracy

While time management is crucial, accuracy is equally important. Avoid rushing through questions to prevent mistakes, especially in technical sections where precision matters.

Stay Calm and Confident

Nerves can impact performance. Practice relaxation techniques, maintain a positive attitude, and approach each question methodically.

Use Process of Elimination

For multiple-choice questions, eliminate clearly incorrect options to improve your chances of selecting the correct answer.

Additional Tips for Effective IST Preparation

Gather Reliable Resources

Use trusted sources such as:

- Official practice materials
- Industry-specific textbooks
- Online tutorials and courses

- Study groups or forums for peer support

Stay Updated on Industry Standards

Familiarize yourself with current safety standards, industry regulations, and technological advancements relevant to your field.

Maintain a Healthy Routine

A balanced diet, regular exercise, and adequate sleep enhance concentration and cognitive function, which are vital during preparation and the actual test.

Post-Test Strategies

Review Your Performance

After the test, analyze your strengths and weaknesses. This reflection will help in preparing better for future assessments or interviews.

Prepare for Follow-up Interviews

Be ready to discuss technical questions or practical scenarios related to your test performance.

Conclusion

The industrial skills test IST is a critical step in securing industrial employment, and thorough preparation can significantly boost your chances of success. By understanding the test structure, reviewing core technical subjects, practicing regularly, and maintaining a confident mindset, you can approach the IST with assurance and competence. Remember, consistent effort and strategic planning are the keys to excelling in this assessment and advancing your career in the industrial sector.

Good luck with your IST preparation!

Industrial Skills Test IST Preparation Guide: A Comprehensive Review and Strategy

In an increasingly competitive job market, securing a position in the industrial sector often hinges on more than just educational qualifications. Many employers now incorporate Industrial Skills Tests (IST) into their recruitment process to objectively assess candidates' practical abilities, technical knowledge, and problem-solving skills. For prospective candidates, understanding how to prepare effectively for the IST is crucial to stand out and increase their chances of success. This article

provides a detailed investigation into the nature of the IST, key components, preparation strategies, and practical tips to excel.

Understanding the Industrial Skills Test (IST)

The Industrial Skills Test is a standardized assessment designed to evaluate an individual's core competencies relevant to various industrial roles. These tests are often tailored to specific industries such as manufacturing, electrical work, mechanical engineering, construction, and more. The primary goal is to ensure candidates possess the practical skills necessary for safe, efficient, and high-quality work.

Purpose and Significance

- Objective Evaluation: Provides a fair and consistent measure of candidates' skills.
- Reducing Hiring Risks: Helps employers identify candidates who are not only theoretically knowledgeable but also practically capable.
- Skill Validation: Confirms that the candidate can perform essential tasks required for the job.

Common Industries Using IST

- Manufacturing and Production
- Electrical and Mechanical Engineering
- Construction and Civil Works
- Maintenance and Facilities Management
- Welding and Fabrication

Key Components of the IST

The structure of the IST varies depending on the industry and employer, but it generally encompasses several core areas:

Technical Knowledge

Candidates are tested on their understanding of industry-specific standards, safety protocols, and technical concepts, such as electrical wiring, mechanical systems, or material properties.

Practical Skills and Hands-On Tasks

These are performance-based exercises often conducted in simulated environments or as practical

demonstrations, for example:

- Operating machinery
- Assembling components
- Electrical wiring tests
- Welding exercises

Problem-Solving and Critical Thinking

Candidates may encounter scenario-based questions or tasks requiring troubleshooting, diagnostics, and decision-making under time constraints.

Mathematical and Measurement Skills

Assessment of abilities in calculations related to dimensions, tolerances, load calculations, or electrical measurements.

Safety and Compliance Knowledge

Understanding of safety regulations, hazard identification, and proper use of personal protective equipment (PPE).

Effective Strategies for IST Preparation

Preparation is a multi-faceted process that involves understanding the test format, practicing relevant skills, and building confidence. Here is a structured approach to maximize your chances of success:

1. Understand the Test Format and Requirements

- Obtain official or sample test materials from the employer or testing authority.
- Familiarize yourself with the types of questions, tasks, and time limits.
- Clarify any specific industry standards or protocols relevant to the test.

2. Review Core Technical Concepts

- Study industry-specific manuals, codes, and standards.
- Brush up on fundamental principles such as electrical circuits, mechanical systems, welding

techniques, or safety procedures.

- Use online tutorials, videos, and technical guides to reinforce understanding.

3. Practice Practical Skills

- Engage in hands-on exercises, either through vocational training, workshops, or simulated practice kits.

- If possible, work under supervision to improve techniques and safety awareness.
- Practice assembling, wiring, or operating equipment similar to what the test may require.

4. Develop Problem-Solving Skills

- Solve scenario-based questions that mimic real workplace problems.
- Practice troubleshooting electrical faults, mechanical issues, or process inefficiencies.
- Use past test questions or online simulators to simulate time-constrained problem-solving.

5. Enhance Measurement and Calculation Skills

- Regularly practice calculations related to your field.
- Use sample problems to improve speed and accuracy.
- Familiarize yourself with conversion units, tolerances, and measurement tools.

6. Focus on Safety and Compliance

- Review safety standards such as OSHA or industry-specific regulations.
- Learn proper PPE usage and hazard identification.
- Understand emergency procedures and safety signage.

7. Prepare Logistically and Mentally

- Ensure you have all necessary documentation and materials before the test day.
- Get adequate rest and maintain a healthy diet.
- Practice stress management techniques to stay calm and focused.

Practical Tips for Test Day

- Arrive early to avoid unnecessary stress.
- Carefully read all instructions before starting each section.
- Manage your time wisely; allocate more time to tasks requiring detailed work.
- Double-check your work if time permits.
- Stay calm and confident; remember that preparation has built your competence.

Resources and Tools for IST Preparation

Candidates can leverage various resources to enhance their preparation:

- Official Practice Tests: Many industries or companies offer sample questions or practice modules.
- Technical Manuals and Standards: Reference guides, safety codes, and technical handbooks.
- Online Courses and Tutorials: Platforms like YouTube, Udemy, or industry-specific training sites.
- Practice Kits and Simulators: For hands-on skills and scenario-based exercises.
- Study Groups and Forums: Engage with peers preparing for similar assessments.

Common Challenges and How to Overcome Them

- Time Management: Practice timed tests to improve speed.
- Technical Gaps: Identify weak areas through mock tests and focus on targeted learning.
- Anxiety and Stress: Develop a pre-test routine, practice relaxation techniques.
- Equipment Familiarity: Use practice tools and simulators to build confidence.

Conclusion: The Path to Success in the IST

Preparing for the Industrial Skills Test (IST) requires a strategic combination of technical knowledge, practical proficiency, problem-solving ability, and mental readiness. Candidates who dedicate time to understanding the test format, engage in consistent practice, and stay informed about industry standards significantly enhance their prospects of passing with flying colors.

While the assessment can seem challenging, approaching it systematically transforms it into an opportunity to demonstrate your competence and commitment to your chosen industrial field. Remember, success in the IST not only opens doors to immediate employment but also lays a strong foundation for a successful career in the industrial sector.

Invest in thorough preparation, stay disciplined, and approach the test with confidence ? your future industrial career may depend on it.

Question What are the key topics covered in the industrial skills test IST preparation guide? The guide covers topics such as basic mathematics, mechanical reasoning, electrical understanding, technical comprehension, and safety procedures relevant to industrial roles. **Answer** How can I effectively prepare for the mechanical reasoning section of the IST? Practice mechanical puzzles, review basic principles of mechanics, and use sample questions to improve your understanding and speed. Are there recommended study materials or resources for IST preparation? Yes, official practice tests, industrial skills test prep books, online practice platforms, and tutorials on technical topics are highly recommended. What is the best way to improve my mathematical skills for the IST? Focus on practicing arithmetic, algebra, and basic geometry through sample questions, and consider using online math practice tools for regular practice. How long should I dedicate to studying for the industrial skills test? It depends on your current skill level, but a consistent study schedule of 4-6 weeks with regular practice sessions is generally effective. Are there any tips for managing time during the IST exam? Practice timed mock tests to improve speed, read questions carefully, and allocate time wisely to ensure you can attempt all sections. How important is understanding safety procedures for the IST? Very important, as safety procedures are a core component of industrial work; understanding them is crucial for both the test and real-world applications. Can I use practice tests to gauge my readiness for the IST? Absolutely, practice tests help identify weak areas, improve time management, and boost confidence before the actual exam. What strategies can help me stay calm and focused during the test? Practice relaxation techniques, ensure adequate rest before the exam, stay positive, and approach each question methodically to maintain focus.

Related keywords: industrial skills test, IST practice questions, industrial skills assessment, IST study guide, industrial skills test tips, IST exam prep, industrial skills test sample, IST online practice, industrial skills test syllabus, IST scoring criteria

Microsoft test manager tutorial

Microsoft Test Manager Tutorial: A Comprehensive Guide to Efficient Test Management

In the world of software development, ensuring the quality and reliability of your applications is paramount. Microsoft Test Manager (MTM) is a powerful tool designed to streamline the testing process, enabling teams to plan, execute, and track testing efforts with ease. Whether you're a beginner or looking to enhance your testing workflows, this **Microsoft Test Manager tutorial** will provide you with a step-by-step guide to harnessing MTM's full potential for your projects.

Understanding Microsoft Test Manager

Before diving into the tutorial, it's essential to grasp what Microsoft Test Manager is and how it integrates into the broader Visual Studio ecosystem.

What is Microsoft Test Manager?

Microsoft Test Manager is a test management tool integrated with Visual Studio Team Services (VSTS) and Azure DevOps. It provides an intuitive interface for managing test plans, creating and executing test cases, and tracking testing progress. MTM supports both manual and exploratory testing, making it versatile for various testing scenarios.

Key Features of Microsoft Test Manager

- Test Planning: Create and organize test plans, test suites, and test cases.
- Test Execution: Execute manual tests and record results efficiently.
- Test Tracking: Monitor testing progress and generate detailed reports.
- Exploratory Testing: Conduct ad-hoc testing sessions with session-based testing capabilities.
- Integration: Seamlessly connects with Azure DevOps for continuous testing workflows.

Setting Up Microsoft Test Manager

Getting started with MTM involves installing and configuring the tool for your environment.

Prerequisites

- Visual Studio Enterprise or Professional edition (with test management features).
- Azure DevOps account or TFS (Team Foundation Server) setup.
- Appropriate permissions to access test management features.

Installing Microsoft Test Manager

- Download the Visual Studio Installer from the official Microsoft website.
- Choose the edition that includes testing tools (e.g., Visual Studio Enterprise).
- During installation, select the "Testing Tools" workload to install MTM.
- Complete the installation and launch Visual Studio.
- Connect to your Azure DevOps project or TFS server within Visual Studio.

Creating and Managing Test Plans

A well-structured test plan is the foundation of successful testing. MTM simplifies organizing your testing efforts through test plans and suites.

Creating a Test Plan

- Open Microsoft Test Manager from Visual Studio or the Azure DevOps portal.
- Navigate to the "Test Plans" section.
- Click "New Test Plan" and provide a descriptive name, description, and start/end dates.
- Associate the test plan with a specific build or release if needed.
- Save the test plan to begin adding test cases.

Organizing Test Suites

Test suites help categorize test cases based on features, modules, or testing strategies.

- **Static Test Suites:** Manually organize test cases into logical groups.
- **Requirement-Based Test Suites:** Link test cases to specific requirements or user stories.
- **Query-Based Test Suites:** Dynamically generate test cases based on queries.

Adding Test Cases

- Within your test suite, click "New Test Case" or import existing cases.
- Define the test case steps, expected results, and associated requirements.
- Assign priority, owner, and other metadata to facilitate management.
- Save the test case to include it in your suite.

Executing Tests with Microsoft Test Manager

Once your test cases are organized, the next step is executing tests and recording results.

Manual Test Execution

- Open the test plan and select the test suite to execute.
- Click "Run" on the test case you wish to execute.
- Follow the test steps as documented, marking each step as "Passed" or "Failed."
- If a test fails, record detailed bug information directly from the test runner.
- Complete the test run, and the results will be saved automatically.

Using Action Recording and Data Collection

MTM allows capturing detailed logs and screenshots during test execution, aiding in defect analysis and reproducibility.

Exploratory Testing

For ad-hoc testing, MTM offers session-based testing:

- Schedule a testing session with session details.
- Conduct testing while documenting observations and findings.
- Record bugs and issues discovered during the session.

Tracking and Reporting Testing Progress

Effective test management requires insight into testing status and quality metrics.

Monitoring Test Results

- Navigate to the "Test Results" section in MTM or Azure DevOps.
- Review individual test case outcomes and overall progress.
- Filter results by tester, status, or test plan for detailed analysis.

Generating Reports

MTM provides various built-in reports to visualize testing status:

- Test Results Summary
- Test Case Progress and Trends
- Bugs and Defects Reports

Integrating with Bug Tracking

During testing, bugs can be logged directly from MTM, linked to specific failed test cases, ensuring traceability and quick resolution.

Advanced Tips and Best Practices

Maximize your testing efficiency with these expert tips:

Automate Repetitive Tests

Integrate MTM with automated testing frameworks like MSTest, NUnit, or Selenium to run automated tests alongside manual efforts.

Maintain Test Cases Regularly

Keep your test cases updated with application changes to ensure relevance and accuracy.

Use Tags and Filters

Leverage tags and filters to quickly locate and execute specific test cases based on criteria like priority, feature, or owner.

Collaborate Effectively

Encourage team collaboration by sharing test plans and results, and conducting regular review meetings to discuss testing progress.

Conclusion

Microsoft Test Manager is an essential tool for teams aiming to implement structured and efficient testing workflows. From creating comprehensive test plans and organizing test suites to executing tests and tracking outcomes, MTM provides a centralized platform that enhances test visibility and quality assurance. By following this **Microsoft Test Manager tutorial**, you can streamline your testing process, improve defect detection, and deliver higher-quality software products. Remember to stay updated with the latest features and best practices to maximize your testing success with MTM.

Microsoft Test Manager tutorial: A Comprehensive Guide to Streamlining Your Testing Process

Microsoft Test Manager (MTM) is a powerful tool integrated within the Azure DevOps suite, designed to facilitate efficient test planning, management, and execution. Whether you are a QA professional, a developer, or a project manager, mastering MTM can significantly enhance your testing workflows, improve defect detection rates, and ensure higher quality software releases. This tutorial aims to provide an in-depth overview of Microsoft Test Manager, guiding you through its features, setup, best practices, and real-world applications.

Introduction to Microsoft Test Manager

Microsoft Test Manager is a dedicated testing management environment that helps teams plan, execute, and track testing activities seamlessly. Originally part of Visual Studio Test Professional, MTM is now integrated within Azure DevOps, offering a unified platform for Agile testing, exploratory testing, and manual test case management.

Key Features of Microsoft Test Manager

- Test Planning: Create and organize test plans, test suites, and test cases.
- Test Execution: Run manual tests, record results, and capture screenshots.
- Test Management: Track defects, manage test configurations, and generate reports.
- Integration: Seamlessly connect with Azure DevOps for continuous integration and automated testing workflows.
- Exploratory Testing: Record exploratory sessions with detailed notes and recordings.

Setting Up Microsoft Test Manager

Before diving into testing, proper setup of MTM is essential.

Prerequisites

- A valid Azure DevOps account with appropriate permissions.
- Installed Visual Studio Test Professional or access via Azure DevOps.
- Access to a test environment or lab machines.

Installation and Configuration

- Download and Install: Download Microsoft Test Manager from the Visual Studio downloads page or via Azure DevOps.
- Connect to Azure DevOps: Launch MTM and connect it to your Azure DevOps project by signing in with your credentials.
- Configure Test Environments: Set up test machines, configurations, and network environments to align with your testing needs.

Tips for Effective Setup

- Organize your test plans hierarchically for easier management.
- Maintain a clear mapping between test environments and real-world configurations.

- Regularly update test artifacts to ensure they reflect current application versions.

Creating and Managing Test Plans

Test planning is the foundation of effective testing.

Creating a Test Plan

- In MTM, navigate to the "Test Plans" section.
- Click "New Test Plan" and provide a descriptive name, start/end dates, and any relevant details.
- Assign ownership and stakeholders.

Organizing Test Suites

- Static Test Suites: Manually added test cases grouped logically.
- Requirement-based Suites: Linked to user stories or requirements for traceability.
- Query-based Suites: Dynamic grouping based on queries.

Best Practices

- Break down large test plans into smaller, manageable suites.
- Link test cases to user stories or bugs for better traceability.
- Regularly review and update test plans to reflect current project scope.

Designing and Managing Test Cases

Creating effective test cases is critical to uncovering defects early.

Writing Test Cases

- Clear, concise steps with expected results.
- Use descriptive titles and tags for easy filtering.
- Include preconditions and postconditions.

Reusing Test Cases

- Modularize test steps for reuse across different test cases.
- Attach relevant documentation, screenshots, or scripts.

Organizing Test Cases

- Group related test cases into shared test suites.
- Use labels and tags for categorization.

Tips for Effective Test Cases

- Prioritize test cases based on risk and impact.
- Keep test cases up-to-date with application changes.
- Incorporate exploratory testing notes within test cases or as separate sessions.

Test Execution and Result Recording

Executing tests efficiently and accurately recording results is vital.

Running Manual Tests

- Select a test case from your test suite.
- Follow each step, observing the actual behavior.
- Record outcomes: Passed, Failed, Blocked, or Not Applicable.
- Capture screenshots or record videos if needed.

Recording Defects

- Link defects directly to failed test cases.
- Provide detailed descriptions, steps to reproduce, and severity.
- Attach logs or screenshots to aid debugging.

Managing Test Runs

- Use test configurations to run multiple test cases under different environments.
- Schedule and assign test runs to team members.
- Monitor real-time progress and results.

Pros and Cons of Test Execution Features

Pros:

- Streamlined process for manual testing.
- Rich media capture for detailed documentation.
- Easy defect linkage and traceability.

Cons:

- Manual process can be time-consuming for large test suites.
- Limited automation capabilities within MTM itself.

Integrating Automated Testing with Microsoft Test Manager

While MTM excels at manual testing, integration with automated testing frameworks enhances overall efficiency.

Integration with Visual Studio Test Automation

- Use Visual Studio Test tools to develop automated test scripts.
- Link automated tests to test cases in MTM.
- Run automated tests as part of continuous integration pipelines.

Benefits of Integration

- Reduces manual effort.
- Ensures consistency between manual and automated testing.
- Facilitates comprehensive test coverage.

Limitations

- Setup can be complex for beginners.
- Requires scripting knowledge for automation.

Reporting and Tracking

Effective reporting provides insights into testing progress and quality metrics.

Built-in Reports

- Test Run Summary
- Test Results Trend
- Defect Status and Age
- Requirements Traceability Matrix

Custom Reports

- Use Azure DevOps Analytics or Power BI for tailored dashboards.
- Export data for external analysis.

Best Practices

- Regularly review reports to identify bottlenecks.
- Use metrics to prioritize testing efforts.
- Maintain up-to-date dashboards for stakeholder visibility.

Best Practices for Using Microsoft Test Manager

- Plan Early: Incorporate testing early in the development lifecycle.
- Maintain Test Artifacts: Keep test cases and plans updated with application changes.
- Leverage Linkages: Connect requirements, test cases, defects, and build versions.
- Automate Where Possible: Use automation to handle repetitive and regression testing.
- Collaborate: Engage team members through shared test plans and results.
- Review Regularly: Conduct test reviews and retrospectives for continuous improvement.

Common Challenges and How to Overcome Them

Challenge: Managing Large Test Suites

Solution: Break down into smaller, manageable suites; use query-based suites for dynamic grouping.

Challenge: Keeping Test Cases Up-to-date

Solution: Establish a review cycle aligned with development sprints; assign ownership.

Challenge: Integration Complexity

Solution: Invest in automation and continuous integration pipelines; use documentation and training.

Challenge: Limited Automation within MTM

Solution: Use external automation tools integrated with Azure DevOps, such as Selenium or Coded UI.

Conclusion

Microsoft Test Manager is a robust tool that, when used effectively, can significantly boost your testing efficiency, coverage, and traceability. Its comprehensive features for test planning, execution, defect management, and reporting make it indispensable for teams adopting Agile and DevOps practices. While there are challenges, especially around automation and managing large test repositories, with proper setup, training, and best practices, MTM can become a cornerstone of your software quality assurance process.

By following this tutorial, you should now have a clear understanding of how to leverage Microsoft Test Manager to streamline your testing operations, improve collaboration, and ultimately deliver higher quality software to your users. Remember, continuous learning and adaptation are key to maximizing the benefits of MTM in your projects.

Question What are the main features of Microsoft Test Manager (MTM)? Microsoft Test Manager (MTM) provides features such as test planning, manual test execution, test case management, bug tracking integration, and collaboration tools to streamline the testing process within Visual Studio and Azure DevOps. **Answer** How do I create and organize test plans in Microsoft Test Manager? In MTM, you can create test plans by navigating to the 'Test Plans' hub, clicking 'New Test Plan,' and defining its name and details. You can then add test suites and test cases to organize tests based on requirements, features, or test types for better management. Can I automate tests using Microsoft Test Manager, and how is it integrated with other tools? While MTM primarily supports manual testing, it integrates seamlessly with Visual Studio and Azure DevOps, enabling automation through test scripts and frameworks like MSTest, Selenium, or CodedUI. Automated tests can be linked to test cases for comprehensive test management. What are the best practices for using Microsoft Test Manager effectively? Best practices include maintaining detailed and reusable test cases, organizing tests into logical suites, utilizing shared steps for common actions, integrating with bug tracking, and regularly updating test plans based on project changes to ensure thorough testing coverage. Is Microsoft Test Manager suitable for Agile development environments? Yes, MTM is well-suited for Agile teams as it supports iterative testing, easy

integration with Azure DevOps Agile tools, and flexible test planning, allowing teams to adapt testing activities to sprint cycles and continuous delivery workflows.

Related keywords: Microsoft Test Manager, TFS testing, test planning, test case management, automated testing, test execution, bug tracking, test lab management, test reporting, test automation tools

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