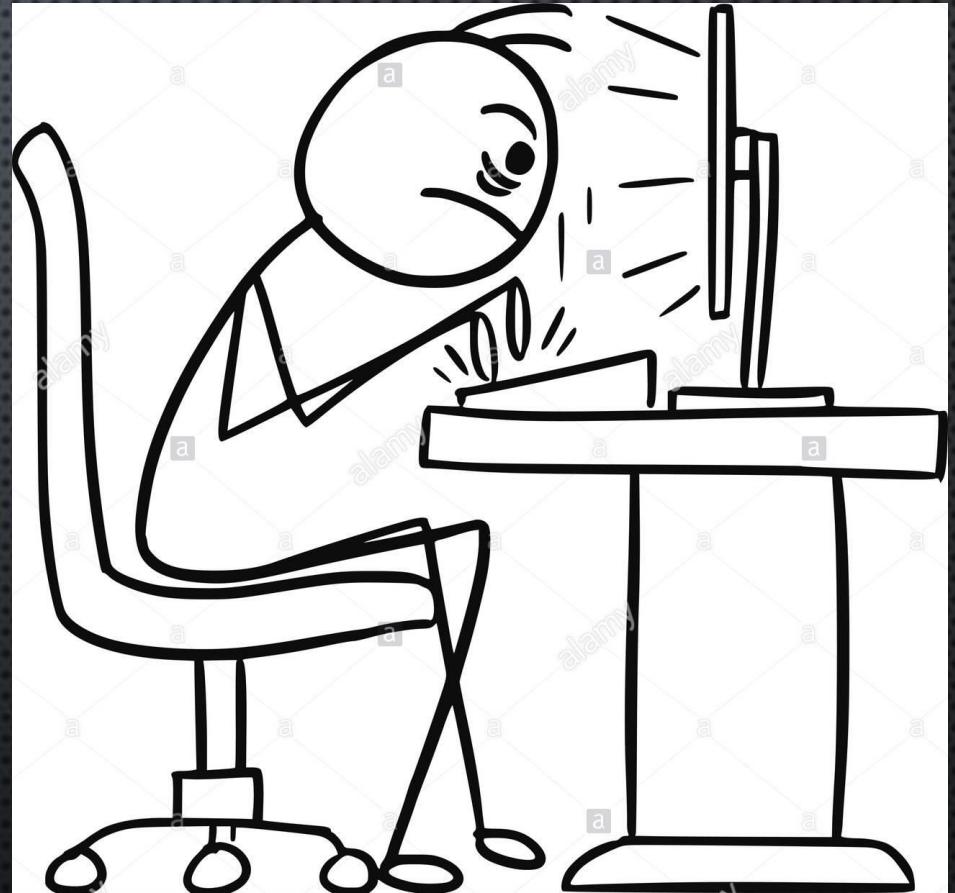


TEST AUTOMATION

What is Automation Testing?

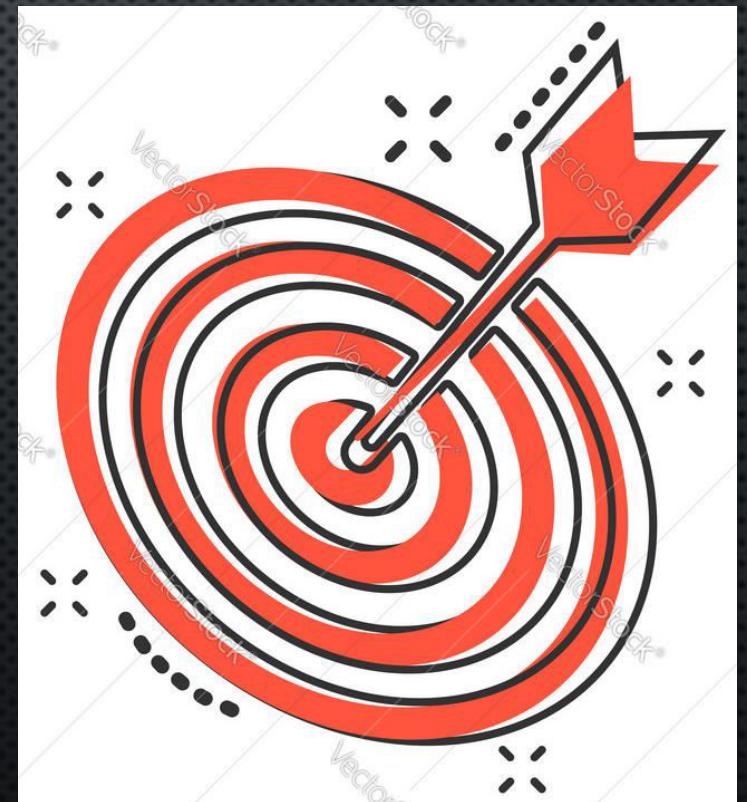
- MANUAL TESTING IS PERFORMED BY A HUMAN SITTING IN FRONT OF A COMPUTER CAREFULLY EXECUTING THE TEST STEPS.



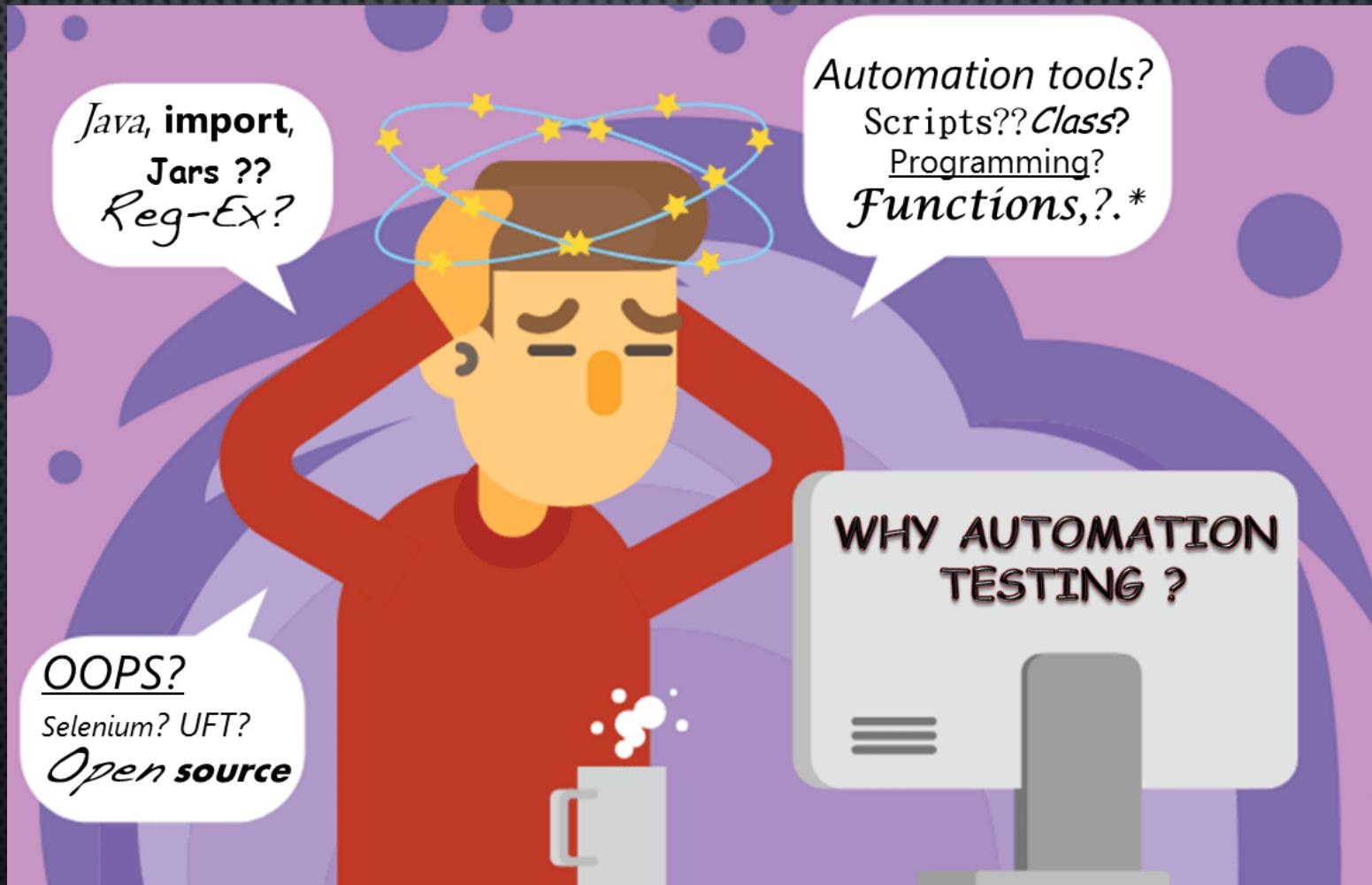


- AUTOMATION TESTING MEANS USING AN AUTOMATION TOOL TO EXECUTE YOUR TEST CASE SUITE.
 - THE AUTOMATION SOFTWARE CAN ALSO ENTER TEST DATA INTO THE SYSTEM UNDER TEST, COMPARE EXPECTED AND ACTUAL RESULTS AND GENERATE DETAILED TEST REPORTS.

- USING A TEST AUTOMATION TOOL, IT'S POSSIBLE TO RECORD THIS TEST SUITE AND RE-PLAY IT AS REQUIRED.
 - ONCE THE TEST SUITE IS AUTOMATED, NO HUMAN INTERVENTION IS REQUIRED.
-
- THE GOAL OF AUTOMATION IS TO REDUCE THE NUMBER OF TEST CASES TO BE RUN MANUALLY AND NOT TO ELIMINATE MANUAL TESTING ALTOGETHER.



WHY AUTOMATED TESTING?





- MANUAL TESTING OF ALL WORKFLOWS, ALL FIELDS, ALL NEGATIVE SCENARIOS IS TIME AND MONEY CONSUMING
- AUTOMATION DOES NOT REQUIRE HUMAN INTERVENTION. YOU CAN RUN AUTOMATED TEST UNATTENDED (OVERNIGHT)
- AUTOMATION INCREASES THE SPEED OF TEST EXECUTION
- AUTOMATION HELPS INCREASE TEST COVERAGE
- MANUAL TESTING CAN BECOME BORING AND HENCE ERROR-PRONE
- IT IS DIFFICULT TO TEST FOR MULTILINGUAL SITES MANUALLY

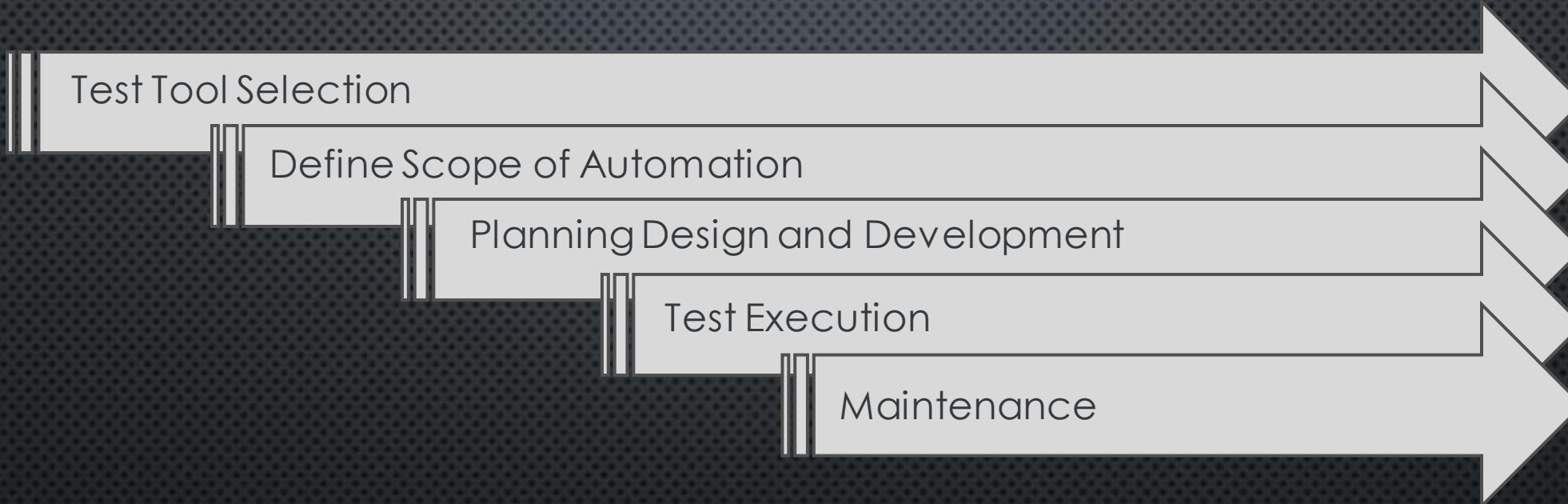
WHICH TEST CASES TO AUTOMATE?

- ✓ HIGH RISK - BUSINESS CRITICAL TEST CASES
- ✓ TEST CASES THAT ARE REPEATEDLY EXECUTED
- ✓ TEST CASES THAT ARE VERY TEDIOUS OR DIFFICULT TO PERFORM MANUALLY
- ✓ TEST CASES WHICH ARE TIME-CONSUMING

THE FOLLOWING CATEGORY OF TEST CASES ARE NOT SUITABLE FOR AUTOMATION

- ✗ TEST CASES THAT ARE NEWLY DESIGNED AND NOT EXECUTED MANUALLY AT LEAST ONCE
- ✗ TEST CASES FOR WHICH THE REQUIREMENTS ARE FREQUENTLY CHANGING
- ✗ TEST CASES WHICH ARE EXECUTED ON AN AD-HOC BASIS.

AUTOMATED TESTING PROCESS



TEST TOOL SELECTION

- TEST TOOL SELECTION LARGELY DEPENDS ON THE TECHNOLOGY THE APPLICATION UNDER TEST IS BUILT ON.

DEFINE THE SCOPE OF AUTOMATION

- THE SCOPE OF AUTOMATION IS THE AREA OF YOUR APPLICATION UNDER TEST WHICH WILL BE AUTOMATED.

PLANNING, DESIGN, AND DEVELOPMENT

- DURING THIS PHASE, YOU CREATE AN AUTOMATION STRATEGY & PLAN

TEST EXECUTION

- AUTOMATION SCRIPTS ARE EXECUTED DURING THIS PHASE. THE SCRIPTS NEED INPUT TEST DATA BEFORE THERE ARE SET TO RUN. ONCE EXECUTED THEY PROVIDE DETAILED TEST REPORTS.

MAINTENANCE

- AS NEW FUNCTIONALITIES ARE ADDED TO THE SYSTEM UNDER TEST WITH SUCCESSIVE CYCLES, AUTOMATION SCRIPTS NEED TO BE ADDED, REVIEWED AND MAINTAINED FOR EACH RELEASE CYCLE.
- **MAINTENANCE BECOMES NECESSARY TO IMPROVE THE EFFECTIVENESS OF AUTOMATION SCRIPTS.**

ADVANTAGES OF TEST AUTOMATION INCLUDE:

- MORE TESTS CAN BE RUN PER BUILD
- THE POSSIBILITY TO CREATE TESTS THAT CANNOT BE DONE MANUALLY (REAL-TIME, REMOTE, PARALLEL TESTS)
- TESTS CAN BE MORE COMPLEX
- TESTS RUN FASTER
- TESTS ARE LESS SUBJECT TO OPERATOR ERROR
- MORE EFFECTIVE AND EFFICIENT USE OF TESTING RESOURCES
- QUICKER FEEDBACK REGARDING SOFTWARE QUALITY
- IMPROVED SYSTEM RELIABILITY (E.G., REPEATABILITY, CONSISTENCY)
- IMPROVED CONSISTENCY OF TESTS

DISADVANTAGES OF TEST AUTOMATION INCLUDE:

- ADDITIONAL COSTS ARE INVOLVED
- INITIAL INVESTMENT TO SETUP TAS
- REQUIRES ADDITIONAL TECHNOLOGIES
- TEAM NEEDS TO HAVE DEVELOPMENT AND AUTOMATION SKILLS
- ON-GOING TAS MAINTENANCE REQUIREMENT
- CAN DISTRACT FROM TESTING OBJECTIVES, E.G., FOCUSING ON AUTOMATING TESTS CASES AT THE EXPENSE OF EXECUTING TESTS
- TESTS CAN BECOME MORE COMPLEX
- ADDITIONAL ERRORS MAY BE INTRODUCED BY AUTOMATION

AUTOMATION TESTING TOOLS

THERE ARE TONS OF FUNCTIONAL AND REGRESSION TESTING TOOLS AVAILABLE IN THE MARKET. HERE ARE 4 BEST TOOLS CERTIFIED BY OUR EXPERTS

TRICENTIS

- TRICENTIS IS THE INDUSTRY'S #1 AUTOMATION TESTING PLATFORM AND IS RECOGNIZED FOR REINVENTING SOFTWARE TESTING FOR DEVOPS. TRICENTIS IS THE ONLY VENDOR TO ACHIEVE "LEADER" STATUS IN ALL THREE TOP ANALYST REPORTS.

FEATURES:

- RISK-BASED TESTING
- SCRIPTLESS END-TO-END TEST AUTOMATION
- SUPPORTS API, BI, MOBILE, CROSS BROWSER, RPA AND OTHER AUTOMATION TESTING TYPES
- THE INDUSTRY'S MOST EXTENSIVE TECHNICAL SUPPORT

MABL

- MABL DELIVERS SCRIPTLESS END-TO-END TEST AUTOMATION, INTEGRATED WITH YOUR DELIVERY PIPELINE, SO YOU CAN FOCUS ON IMPROVING YOUR APP.

FEATURES:

- PROPRIETARY MACHINE LEARNING MODELS AUTOMATICALLY IDENTIFY AND SURFACE APPLICATION ISSUES
- TESTS ARE AUTOMATICALLY REPAIRED WHEN UI CHANGES
- AUTOMATED REGRESSION INSIGHTS ON EVERY BUILD

SELENIUM

IT IS A SOFTWARE TESTING TOOL USED FOR REGRESSION TESTING. IT IS AN OPEN SOURCE TESTING TOOL THAT PROVIDES PLAYBACK AND RECORDING FACILITY FOR REGRESSION TESTING. THE SELENIUM IDE ONLY SUPPORTS MOZILLA FIREFOX WEB BROWSER.

- IT PROVIDES THE PROVISION TO EXPORT RECORDED SCRIPT IN OTHER LANGUAGES LIKE JAVA, RUBY, RSPEC, PYTHON, C#, ETC
- IT CAN BE USED WITH FRAMEWORKS LIKE JUNIT AND TESTNG
- IT CAN EXECUTE MULTIPLE TESTS AT A TIME
- AUTOCOMPLETE FOR SELENIUM COMMANDS THAT ARE COMMON
- WALKTHROUGH TESTS
- IDENTIFIES THE ELEMENT USING ID, NAME, X-PATH, ETC.
- STORE TESTS AS RUBY SCRIPT, HTML, AND ANY OTHER FORMAT
- IT PROVIDES AN OPTION TO ASSERT THE TITLE FOR EVERY PAGE
- IT SUPPORTS SELENIUM USER-EXTENSIONS.JS FILE
- IT ALLOWS TO INSERT COMMENTS IN THE MIDDLE OF THE SCRIPT FOR BETTER UNDERSTANDING AND DEBUGGING

QTP

QTP IS WIDELY USED FOR FUNCTIONAL AND REGRESSION TESTING, IT ADDRESSES EVERY MAJOR SOFTWARE APPLICATION AND ENVIRONMENT. TO SIMPLIFY TEST CREATION AND MAINTENANCE, IT USES THE CONCEPT OF KEYWORD DRIVEN TESTING. IT ALLOWS THE TESTER TO BUILD TEST CASES DIRECTLY FROM THE APPLICATION.

- IT IS EASIER TO USE FOR A NON-TECHNICAL PERSON TO ADAPT TO AND CREATE WORKING TEST CASES
- IT FIX DEFECTS FASTER BY THOROUGHLY DOCUMENTING AND REPLICATING DEFECTS FOR DEVELOPER
- COLLAPSE TEST CREATION AND TEST DOCUMENTATION AT A SINGLE SITE
- PARAMETERIZATION IS EASY THAN WINRUNNER
- QTP SUPPORTS .NET DEVELOPMENT ENVIRONMENT
- IT HAS BETTER OBJECT IDENTIFICATION MECHANISM
- IT CAN ENHANCE EXISTING QTP SCRIPTS WITHOUT "APPLICATION UNDER TEST" IS AVAILABLE, BY USING THE ACTIVE SCREEN



Das Bild kann zurzeit nicht angezeigt werden.

REASONS TO STOP TESTING

THERE ARE LOTS OF REASONS WHY
YOU MAY WANT TO STOP TESTING.
HERE ARE A FEW...



THERE ARE BUGS
EVERYWHERE



YOU NEED A BREATHER.
TAKE A COFFEE BREAK



TIMES UP!
RELEASE IT!



ONE BIG MAMA
OF A BUG



IT'S HOME TIME



IT'S MILLER TIME.
TIME TO PARTY!



NO ONE IS PAYING
YOU TO TEST



EVERYTHING YOU
PLANNED IS COMPLETE



Of course, your plan might be
rubbish, but that's not my problem.



THERE'S A NEW
FAMILY MEMBER

AG

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THANKS FOR ATTENTION