Techniques Used in Software Test Automation Estimation

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Expert Judgement

Description:
Leverage the experience and expertise of senior testers or domain experts to make an informed estimate.

Pros:
Quick and based on practical knowledge.

Cons: Subjective and can vary between experts.

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Work Breakdown Structure (WBS)

MOST COMMONLY USED IN NON_AGILE PROJECTS

Description: Break down the entire testing process into smaller, manageable tasks and estimate the effort for each task.

Pros: Detailed and structured approach.

Cons: Time-consuming and may be complex for large projects.

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Analogous Estimation

Description:
Use historical data from similar projects to estimate the current project's effort.

Pros:
Based on real data and past experience.

Cons:
Requires access to historical data and may not be accurate for significantly different projects.

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Test Point Analysis (TPA)

Description:
A technique specifically designed for estimating testing effort, considering factors like the number of test cases, test case complexity, and the testing environment.

Pros:
Tailored for testing activities.

Cons:
Requires detailed test case information and complexity analysis.

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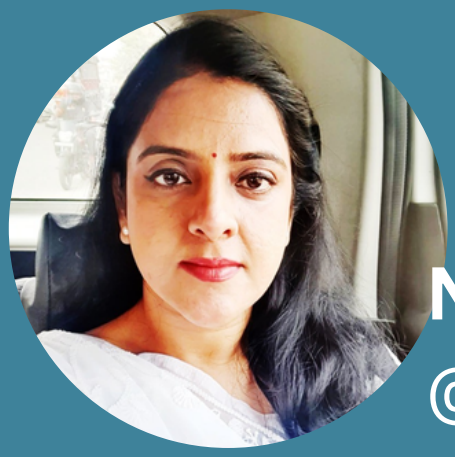
Three-Point Estimation

Description:
Use three estimates for each task – optimistic (O), pessimistic (P), and most likely (M). The formula is (O + 4M + P) / 6 to calculate the weighted average.

Pros:
Provides a more balanced and realistic estimate.

Cons:
Requires effort in determining three separate estimates.



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Function Point Analysis (FPA)

Description:
Measure the functionality provided by the system and use these measurements to estimate the effort. Typically involves counting inputs, outputs, user interactions, files, and external interfaces.

Pros:
Quantitative and can be used for both manual and automated testing.

Cons:
Requires detailed functional specifications and can be complex.

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Use-Case Point Method

Description:
Estimate effort based on use cases, considering actors, use case complexity, and various technical and environmental factors.

Pros:
Useful for projects with well-defined use cases.

Cons:
Relies heavily on the availability and accuracy of use case documentation.

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Delphi Technique

Description:
A group of experts provides estimates anonymously, and a facilitator consolidates the estimates and shares the results with the group. This process is repeated until a consensus is reached.

Pros:
Reduces bias and leverages collective intelligence.

Cons:
Time-consuming and requires coordination among experts.

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Do you think, you can add anymore to this list? Comment below with your answers!

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