

# RPA – Quality of Deliverables

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## Introduction

In RPA development often an important agenda is the quality of the deliverables. In this article, I will be sharing some check points for deliverable quality which may or may not be part of any RPA development methodology. It is just my knowledge and personal experience that I would like to share.

This whitepaper gives a quick introduction that can help you maintain a Deliverable Quality into your solutions in an easy manner. Your users and customers will thank you - Read on!

## Secrets to Maintaining Quality of deliverables

1. Folder Structure
2. Development Framework
3. Best Practices/Coding Standards
4. Loosely Coupled Code
5. Reusability
6. Orchestrator Logs
7. Exception Handling
8. Email Notifications
9. Execution Logs
10. Robot User Manual
11. UAT Scenarios

### 1. Folder Structure

It is the first impression of the project. It is the way folders are organized in the project. Proper naming conventions to the code files, subfolder and grouping of the files helps to understand the solution/process.

### 2. Development Framework

UiPath provides predefined RE-Framework that helps to divide the bot logic in the provided 4 states i.e. Init, Get, Process and End. Create or customize your development framework.

### 3. Best Practices/Coding Standards

If your project doesn't have a coding standard it is imperative that you propose your team to create one. Each standard has its own strengths and should be used one depending on your requirements. Following touch points can be considered to create your RPA coding standards.

- Variable Scope
- Default Values

- Naming Conventions
- Comments
- Annotations
- Keep it clean
- Monitoring
- Queue
- Queue Transactions
- Kibana Logs / Custom Log Fields
- UI Synchronization
- Background Automation
- Layout type - Flowchart
- Layout type -Sequence
- Shared Drive
- Context Settings
- Credentials
- Loops
- Debug Mode
- String comparison

## 4. Loosely Coupled Code

In computing and systems design, a loosely coupled system is one in which each of its components has, or makes use of, little or no knowledge of the definitions of other separate components.

Some advantages of making your code loosely coupled include:

- Better Testability
- Easy-to-understand code
- Swappable components
- Scalability
- Isolated Code/Features

## 5. Reusability

Reusability defines the methodology you can use in case of similar codes without having to re-write it everywhere. There are many techniques to make code reusable. This technique follows the general programming philosophy of 'Don't Repeat Yourself (DRY)' that states that 'Every piece of knowledge must have a single, unambiguous, authoritative representation within a system and helps developers to maintain the structure of their applications from being messed up and frustrating when debugging the applications.'

In UiPath, you can create a separate workflow of automation actions such as login, logout, search etc. or business functionalities which can be reused through Invoke activity wherever apt.

## 6. Orchestrator Logs

UiPath Orchestrator is a web application that manages, controls and monitors UiPath. All messages logged with Trace level and Workflow Tracking logs. The "Log Message" activity from UiPath helps to have your logs available in the orchestrator to view during or after the bot execution.

More information can be obtained here

<https://docs.uipath.com/orchestrator/docs/about-logs>

## 7. Exception Handling

It is built upon four keywords: try, catch, finally, and throw.

**Try** – A try block identifies a block of code for which particular exception is activated.

**Catch** – A program catches an exception with an exception handler at the place in a program where you want to handle the problem.

## 8. Email Notifications

It is about notifying the business on the action that bot has taken. It can be notification that bot has just started or completed or exceptions. It helps business to understand necessary actions from their end and align them with the bot processing.

## 9. Execution Logs

Maintaining an execution log or status report always helps the business or SME's to understand what records bot has processed and if their statuses as success or failed. This log can also be part of an email notification as an attachment.

## 10. Robot User Manual

It is intended to give assistance to people using a particular bot. All the settings, inputs and outputs that can provide business an idea and help to start the bot working for them.

## 11. UAT Scenarios

The main purpose of UAT scenarios is to validate the end to end business flow. It is a kind of black box testing where two or more end-users will be involved. UAT scenarios document is required because

- Developers code software based on requirements document which is their "own" understanding of the requirements and may not actually be what the client needs from the bot.
- Requirements changes during the course of the project may not be communicated effectively to the developers.

It helps the business to understand all scenarios the bot development has considered. It also helps developer to adhere to the scenarios during the development. This surely avoids last minute surprises and blame game about what was the requirement and what has been developed.

Following points needs to be considered to make UAT Scenarios success:

- Prepare UAT scenarios early in the project life cycle
- Set the expectation and define the scope
- Updation as the requirement changes during the development
- Think as an unknown user to the system

## **Wrap-up**

Hopefully this whitepaper gave you an idea about Deliverable Quality and how putting some checks and balances in your solutions can help improve not only your Quality, but also your own stress levels.

Thank you all for reading this whitepaper.

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