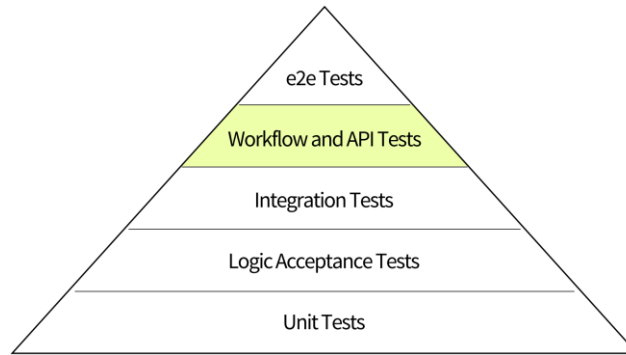


# Automated Testing of RESTful API



## Introduction

This document describes an exercise to be solved. It includes high level overview, requirements for an expected solution and way how a solution shall be delivered.

## Overview

There is set of an abstract RESTful APIs provided by <https://jsonplaceholder.typicode.com> service for testing and prototyping purposes. For example, GET /albums would return 100 albums and GET /users would return 10 users. The exercise is to create automated test toolkit for /albums and /users route to be triggered by:

- steps during continuous integration,
- steps during continuous delivery,
- regular integrity checks of a running system.

## Exercise description

Choose a framework of your choice for testing two routes from <https://jsonplaceholder.typicode.com> service:

- /albums
- /users

The time box for fulfilling the minimum requirements is **two hours** focusing on reliability of APIs, data structure amount of data entities, etc. Please try to get as far as you can in these two hours following the instructions on coding practices below. If you need additional time for setting up your development environment in advance, please do so. The preferred language for this task is Python (however TypeScript or JavaScript would be also fine).

### Minimum requirements:

- The test could be triggered from a command line.
- It is clearly reported the outcome of different steps and overall progress to the console.
- Definition of Done rules are followed (from this document below).

### Optional requirements:

- Every execution of tests leaves artifacts with summary of performed test.
- Test to perform are configurable for scenarios from overview section.
- Time statistic is collected.
- There is a possibility to make a performance stress test to get info about homogeneity of time spent per operation.
- Implement small features or steps one by one towards the final solution and reflect them as incremental steps in local git repository which you would be able to archive and send to us as an outcome.

## Definition of Done

The definition of done for any feature/the task is:

- Implemented tests are matching functionality of <https://jsonplaceholder.typicode.com> service, all of them are passing.
- The code adheres to high quality standards (as few lines of code as possible), best practices and a clear structure. The code is easy to read without requiring comments and code is easy to maintain.
- The resulting software is functional and can be tested by us.

**Important note:** please proceed in a strictly incremental way. Ensure at any point in time, that your solution can be executed and add small features or steps towards the final solution one by one. In this way, the noted above time limit will not hinder you to deliver at least a partial solution.

## Expected delivery

It is expected to receive from you a single archive containing:

- Description of how to trigger tests,
- Software itself, in form you would prefer (to allow to follow the description), most preferable together with a local git repository nearby (reflecting steps of implementation).