**Test Strategy for API Testing**

**Title: Heroukapp**

**Date Created: 24/07/2022**

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| **Product Name** | Heroukapp |
| **Environment** | UAT |
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**1. Introduction:**

This document provides an overview of the testing process for Heroukapp API.

* 1. Purpose

The purpose of this Test Strategy is to define the overall approach that will be taken by the Test team.

**2. Test Approach/ Coverage:**

The project is using an agile approach with 2 weekly sprints.

Test Environment:

1. UAT Environment

**Testing Types: In Scope**

1. Functional Testing (Ensure the implementation is working as expected- No bugs)
2. Performance Testing (Check API response time)
3. Security and Authorization (Protocol check – HTTP/HTTPS according to spec, API responds to correct authorization according to API documentation)
4. Usability Tests (User workflow, API documentation)
5. Automation (Regression testing of the application)

**Testing Types: Out of Scope**

1. Load tests (Find capacity limit points)

**3.API test actions:**

Each test is comprised of test actions. These are the individual actions a test needs to take per API test flow. For each API request, the test would need to take the following actions:

1. Verify correct HTTP status code. For example, creating a resource should return 201 created (POST) and unpermitted requests should return 403 FORBIDDEN. GET method returns 200.
2. Verify response payload. Check valid JSON body and correct field names, types and values -including in error responses
3. Verify response headers. HTTP server headers have implications on both security and performance.

**Test Scenario categories**

Our testcases fall into the following general test scenario groups:

* Basic positive tests (happy paths)
* Negative testing with invalid input
* Security authorization

**3.Entry Criteria:**

Before API testing can begin, the following entry criteria must be met:

* URL endpoint/Test Environment is ready and available to commence testing
* API documentation is complete and ready to be used
* Test data ready to commence testing

**4.Exit Criteria:**

The below exit criteria must be met for the API testing to be considered complete:

* Test scenarios are all passed according to API documentation

**5.Environmental and Infrastructure Needs:**

API TYPE: RESTFUL API

API TOOL: POSTMAN (MANUAL &AUTOMATION)

BUG TRACKING: JIRA

CODE REPOSITORY: GITHUB

API METHODS: GET, POST,PUT,DELETE