**Test Plan for PhotoPrism Platform: Automated Testing of Photo Search and Filtering**

**Test Plan Identifier**

TP002 - PhotoPrism Automation Test Plan - v1.0 - Draft

**Date:** 19/1/2025  
**Approval Authority:**  
• Prepared By: Haya Hussien  
• Approved By: Quality Assurance Manager and Project Manager

**Change History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Version** | **Date** | **Description** | **Author** |
| 1.0 | [15/1/2025] | Initial Draft | Haya Hussien |

**Introduction**

This test plan outlines the strategy for automated testing of the Photo Search and Filtering functionality in the PhotoPrism web application. Automation will ensure consistent testing coverage, improve efficiency, and enable integration with CI/CD pipelines.

**Objectives**

* Automate validation of keyword-based photo search functionality.
* Automate verification of filtering options (country, year, month, camera, and category).
* Implement a CI/CD pipeline to trigger automated tests and generate reports.
* Collect and report metrics on test execution and coverage.

**References**

* PhotoPrism Documentation
* API Reference
* REST Assured Documentation
* Lighthouse Reporting Documentation

**Analysis of Testing**

**Test Items**

* **Photo Search**: Automate search functionality using keywords through the UI and API.
* **Filters**: Automate filtering options (country, year, month, camera, and category) through the UI and API.

**Test Scope**

**Included:**

* Automated testing of the web application’s UI using Selenium WebDriver.
* Automated API testing using REST Assured.
* Execution of automated smoke tests and regression tests in CI/CD pipelines.

**Excluded:**

* Mobile application testing.
* Detailed image quality analysis.
* Stress and load testing.

**Assumptions and Constraints**

* Access to a local environment with PhotoPrism installed.
* A preloaded dataset containing sample photos with metadata.
* REST APIs are functional and accessible.

**Design of Testing**

**Test Strategies**

* **Regression Testing:**
  + **Purpose:** Re-test the system to ensure new changes have not introduced defects**.**
  + **Execution:** Run the full test suite on updated app versions.
* **Smoke Testing:**
  + **Purpose:** Quickly verify critical functionalities.
  + **Execution:** Run a subset of tests to validate photo search and filtering.
* **Black-box Testing:**
  + **Purpose:** Validate the system’s functionality against requirements without considering internal code or implementation.
  + **Execution**: Design tests to evaluate input-output relationships for photo search and filtering

**Test Deliverables**

* Automated Test Scripts (Selenium and REST Assured).
* CI/CD Configuration (GitHub Actions).
* Test Summary Reports (Lighthouse).

**Test Completion Criteria**

* All high-priority automated test cases executed and passed.
* All critical and major defects resolved.

**Metrics to be Collected**

* Test case execution progress (run/not run, pass/fail).
* Number of defects .
* Test coverage (UI and API).
* Lighthouse Metrics: Performance, Accessibility, Best Practices, SEO .

**Test Data Requirements**

* **Login details:**
  + **UserName:** admin
  + **Password:** yourpassword
* **Photo with Different Attributes:**
  + **Countries:** Israel, Germany
  + **Categories:** Nature, Animals
  + **Timestamps:** Year/Month
  + **Colors** :Red, Green.
* **Photo for Specific Keywords:**
  + Cat
  + Dog
  + Car
* **Edge Case:**
  + Search with the Keyword "**invalidKeyword**"

**Test Environment Requirements**

* **Local Environment**: PhotoPrism running locally.
* **Browsers**: Chrome (latest), Firefox (latest).
* **Operating Systems**: Windows 11.
* **Tools**:
  + Selenium WebDriver
  + REST Assured
  + GitHub Actions
  + Lighthouse Reporting
* **Network**: Stable connection.

**Risk Register**

* Inconsistent API responses.
* CI/CD integration issues.
* Limited resources for test execution.

**Tasks**

|  |  |  |
| --- | --- | --- |
| Task | Time Estimate | Responsible Team Member |
| Test Plan Creation | 1 days | Haya Hussien |
| Automation Script Development | 1 days | Haya Hussien |
| CI/CD Pipeline Configuration | 2 days | Haya Hussien |
| Test Execution | 1 days | Haya Hussien |
| Report Preparation | 1 days | Haya Hussien |

**Staffing**

* **Test Engineer**: Haya Hussien

**Schedule**

|  |  |  |
| --- | --- | --- |
| Activity | Start Date | End Date |
| Test Planning | [15/1/2025] | [15/1/2025] |
| Script Development | [16/1/2025] | [16/1/2025] |
| CI/CD Setup | [17/1/2025] | [18/1/2025] |
| Test Execution | [19/1/2025] | [19/1/2025] |
| Reporting | [20/1/2025] | [20/1/2025] |