

**Test Plan Document**

**YouTube**

*Submitted to*



Prepared by : M Vinuthna

Date Submitted : 09/27/2025

Customer Contact : Ravi

Project Manager : Sita

Version :0.1

Creation Date : 09/27/2025

Last revised date : MM/DD/YYYY

*Submitted by*

M Vinuthna

**Revision and Signoff Sheet**

**Document History**

| **Version** | **Date** | **Author** | **Description of Change** |
| --- | --- | --- | --- |
| 0.1 | 27/09/2025 | M Vinuthna | Initial Document |
| 0.2 | 29/09/2025 | M Vinuthna | Changed the user story from module name to actual user story style |

**Revision History**

| Name | Role | Approver / Reviewer | Approval / Review Date |
| --- | --- | --- | --- |
| **Sumala** | **Scrum Master** |  |  |
| **Kaja** | **Product Owner** |  |  |
|  |  |  |  |

**Table of Contents**

[1. INTRODUCTION 4](#_heading=h.x6zwqjqgbrgq)

[1.1. Purpose 4](#_heading=h.mf3c42pv5m6j)

[1.2. Project Overview 4](#_heading=h.or3o6qgwgw9m)

[1.3. Audience 4](#_heading=h.j3x232effh4w)

[2. TESTING SCOPE 4](#_heading=h.k3jywtjzeb8l)

[2.1. In Scope 4](#_heading=h.z8vew21ofze0)

[2.2. Out of Scope 4](#_heading=h.o6th36opdyje)

[3. TESTING SYNOPSIS 5](#_heading=h.1faclmtzuuhc)

[3.1. Features to be tested 5](#_heading=h.5zm1v4ef8sai)

[3.2. Features not to be tested 5](#_heading=h.8phggpgbxy4j)

[4. TEST STRATEGY 5](#_heading=h.l8ebn3ixtrt2)

[4.1. Test Objectives 5](#_heading=h.u1grqh94mjzs)

[4.2. Test Approach 5](#_heading=h.pvlsy58n8pa8)

[4.3. Test Process 5](#_heading=h.pqpt1ew0y19o)

[4.4. Scope and Levels of Testing 6](#_heading=h.qbj5d5aw612g)

[4.4.1. System Testing 6](#_heading=h.5qtqnudhfm0n)

[4.4.2. Exploratory Testing 6](#_heading=h.h1ogkqnuaewu)

[4.4.3. User Acceptance Test (UAT) 6](#_heading=h.v86mvlmrp915)

[5. EXECUTION STRATEGY 7](#_heading=h.8mxdcp2zewfc)

[5.1. Analysis & Planning Phase Entry Criteria 7](#_heading=h.l3268udvlucj)

[5.2. Analysis & Planning Phase Exit Criteria 7](#_heading=h.ajzc6duwkx2g)

[5.3. Test Phase Entry Criteria 7](#_heading=h.4y1ckuotkyx0)

[5.4. Test Phase Exit Criteria 7](#_heading=h.lq5m41el0maf)

[6. TEST MANAGEMENT AND DEFECT TRACKING 8](#_heading=h.8q7urr9l0hfv)

[6.1. Test Reports 8](#_heading=h.9np2s5k6059s)

[6.2. Defect tracking & Reporting 9](#_heading=h.7t30wh5tbakv)

[6.3. Pass/Fail Criteria 9](#_heading=h.n0gwxqdb7azy)

[6.4. Severity & Priority Definition 10](#_heading=h.3pk19xe53sab)

[6.5. Suspension Criteria & Resumption 10](#_heading=h.o6r77bjl59fl)

[7. TEST DELIVERABLES 11](#_heading=h.d8ws9gtvf252)

[8. TEST](#_heading=h.kjtmf3b4vfss) ENVIRONMENT AND INFRASTRUCTURE NEED 11

[8.1. Software 11](#_heading=h.u9eyorkjowo6)

[8.2. Infrastructure 11](#_heading=h.sio26z58aen)

[8.3. Browser Supported 11](#_heading=h.ct4hi4mhtzz4)

[8.4. Tools 11](#_heading=h.h6nc65waw0kl)

[9. TESTING](#_heading=h.hwo5ok3plkkn) SCHEDULE 12

[10. RISK AND CONTINGENCIES 13](#_heading=h.aaojjs3pi31f)

[11. TERMS AND DEFINITIONS 13](#_heading=h.5yke69fkac5p)

[12. REFERENCES 14](#_heading=h.cist1eqc6ri0)

# INTRODUCTION

## Purpose

This test plan describes the testing approach and activities that will be followed for the testing of the ***YouTube***. The document introduces:

## Project Overview

YouTube is a highly regarded video-sharing and streaming platform online, which allows users to upload, view, share, and comment on videos in a wide variety of categories. The platform was specifically developed to ingest large amounts of multimedia content and serve it to millions of users around the world with optimal streamability. The main intention of this project is to ensure that YouTube's core value remains tested for reliability, usability, and performance.

The focus of the project is to validate important user activities, which include video upload, playback, search, and subscription management. In this scope, we will cover account-related functionality where we ensure that users can securely sign up, log in, and manage their profile. Both the desktop version of the platform and mobile will be considered to verify consistency and cross-platform compatibility.

From a technical perspective, the aim of the project is to test YouTube’s capability of handling large-scale video data, streaming quality across different network speeds, and responsiveness of its recommendation algorithms. The project also focuses on testing monetization for video and advertisements, and moderation features to confirm that the platform meets standards and expectations for its users.

Ultimately, the project will also assess non-functional elements like security, scalability, and accessibility as well. Testing will aim to protect user data, verify the platform's ability to manage concurrent end users at peak traffic loads, and remain inclusive for all users, including users with disabilities. By providing a scaffolded testing plan, this project guarantees YouTube will remain a trustworthy, user-friendly, and high-performing video-sharing platform.

## Audience

* Project team members perform tasks specified in this document, and provide input and recommendations on this document.
* Project Owner Plans for the testing activities in the overall project schedule, reviews the document, tracks the performance of the test according to the tasks herein specified, approves the document and is accountable for the results.
* The stakeholder’s representatives and participants may take part in the UAT test to ensure the business is aligned with the results of the test.
* Technical Team ensures that the test plan and deliverables are in line with the design, provides the environment for testing and follows the procedures related to the fixes of defects.
* Business analysts/Solution Owner will provide their inputs on functional changes.

# TESTING SCOPE

## In Scope

**Browsers**

* *Google chrome*
* *Edge*
* *FireFox*
* *Safari*

## Out of Scope

*Any other browsers which are not mentioned in the above list are out of scope.*

# TESTING SYNOPSIS

## Features to be tested

| User ID | User Story |
| --- | --- |
| U1231 | As a user, I want to create and manage my account so that I can securely log in, update my profile, and access personalized features. |
| U1232 | As a creator, I want to upload and manage my videos (edit, delete, set privacy) so that I can control how my content is shared. |
| U1233 | As a viewer, I want to play, pause, forward, and adjust video quality so that I can enjoy smooth streaming and control my viewing experience. |
| U1234 | As a user, I want to search for videos and receive personalized recommendations so that I can easily discover relevant content. |
| U1235 | As a viewer, I want to like, comment, share, and subscribe so that I can engage with content and stay connected with creators I follow. |
| DE1238 | When a user clicks the pause button during playback, the video does not stop as expected, causing interruption in viewing control. |

## Features not to be tested

* Any other features which are not mentioned above
* U1236 - User Emotions and Satisfaction
* U1237 - Content Quality

# TEST STRATEGY

## Test Objectives

The objective of the test is to verify that the functionality of ***YouTube*** works according to the specifications.

The test will execute and verify the test scripts, identify, fix and retest all high and medium severity defects per the entry criteria, prioritize lower severity defects for future fixing & testing.

The final outcome of the testing phase is two-fold:

* A production-ready software
* A set of stable test cases that can be reused for System testing and UAT

## Test Approach

The testing approach is designed to test the completeness, consistency and accuracy of the application being tested. Following areas will be covered in the test cases:

* Functionality
* Data validation
* User Interface

The primary components of a test effort focus on planning, execution, reporting and problem resolution. Testing is iterative and may require a return to business requirements, design and additional development effort depending on the test problem resolution.

## Test Process

* *Production like data required and be available in the system prior to start of System Testing*
* *Exploratory Testing would be carried out once the build is ready for testing*
* *The Test Team will be provided with access to Test environment*
* *The Test Team assumes all necessary inputs required during Test design and execution will be supported by the Development/Solution Owner appropriately.*
* *Test case preparation will be performed by the QA team*
* *Test environment and preparation activities will be owned by Dev Team*
* *Dev team will provide Defect fix plans during the daily sync up meetings.*
* *Solution Owner will review and sign-off all the test cases prepared by Test Team prior to start of Test execution*
* *The dev team will share the list of defects fixed with the Test Team prior to applying the fixes on the Test environment*
* *Project Owner/Solution Owner will review and sign-off all the test deliverables*
* *The project team will provide test planning, test design and test execution support*
* *There is no environment downtime during test due to outages or defect fixes.*
* *The system will be treated as a black box; if the information shows correctly online and in the reports, it will be assumed that the database is working properly.*
* *UAT test execution will be performed by end users and QA Group will provide their support on creating UAT script*

## Scope and Levels of Testing

### System Testing

**PURPOSE:**  System Testing is a black box testing, performed by the test team. At the start of the system testing the complete system is configured in a Test environment. Company

testing team will do whole functional testing as well regression testing as part of system testing.

**METHOD**: The test will be performed according to test scripts

### Exploratory Testing

**PURPOSE**: Exploratory testing is an approach to software testing that is concisely described as simultaneous learning, test design and test execution. This test is performed to check if there are any uncovered areas in the test scripts.

**METHOD**: this exploratory testing is carried out in the application without any test scripts and documentation

### User Acceptance Test (UAT)

**PURPOSE**: this test focuses on validating the business logic. It allows the end users to complete one final review of the system prior to deployment.

**TESTERS**: the UAT is performed by the end users.

# EXECUTION STRATEGY

## Analysis & Planning Phase Entry Criteria

* Release scope item list is locked and prioritized
* Approved Functional Specification document, use case documents must be available prior to start of Test design phase

## Analysis & Planning Phase Exit Criteria

* Test Plan and Test Cases are written and reviewed
* Solution Owner sign-off for the Test Plan and Test Cases

****

## Test Phase Entry Criteria

* Test cases are approved and signed-off prior to start of Test execution
* Development completed, unit tested with pass status and results shared to Testing team to avoid duplicate defects
* Test environment with application installed, configured and ready to use state

## Test Phase Exit Criteria

* All planned testing activities have been completed
* All high/medium priority bugs have been fixed, retested and passed
* The test defect summary has been prepared and shared with Project Owner



NOTE: *Entry and exit criteria are flexible benchmarks. If they are not met, the test team will assess the risk, identify mitigation actions and provide a recommendation. All this is input to the project owner for a final “go-no go” decision.*

# TEST MANAGEMENT AND DEFECT TRACKING

## Test Reports

The test report will give us the detail explanation about the test execution conducted during each release. The test results will be summarized and sent to development team for internal purpose along with the following information

* No. of tests (test cases) executed
* No of tests cases passed
* No of tests cases failed
* No of tests cases blocked
* No of New issues (bugs)
* Existing issues (bugs)

It is planned to use ***Rally*** to identify the test cases and to track the status of each test case. The test results will be summarized in ***Rally*** as untested, blocked, passed, or failed. In summary, ***Rally*** will be setup to support the following attributes for each test case:

* Test status
* Test Steps
* Incident (Bug) ID (If it refers to an existing incident)

It will be the responsibility of the QA team to update the Test status in ***Rally***

## Defect tracking & Reporting

When defects are found, the testers will complete a defect submission in the defect tracking system ***Rally*** . The defect tracking tool is accessible to testers, developers & all members of the project team. When a defect has been fixed or more information is needed, the developer will change the status of the defect to indicate the current state. Once a defect is verified by the testers, the testers will close the defect.

In addition to defect submission, the QA team will capture the following metrics.

* Total Number of Bugs Raised and Closed per Period
* Total Number of Bugs Closed Vs. Total Number of Bugs Re-Opened (Bounce Rate)
* Bug Distribution Totals by Severity per Period
* Bug Distribution Totals by Functional Areas/Requirements by Severity per Period

## Pass/Fail Criteria

Each test cycle will be assigned a Pass or Fail state dependent on two criteria:

* All testing identified in the "Test Plan" has been completed
* No defects classified as priority "Critical" exist
* No defects classified as priority "High" exist
* Less than 20% of “Medium” priority defects exist
* Less than 20% of "Low" priority defects exist

The combination of above criteria will be used to recognize whether the Test Item can be declared Test Complete or not.

The MINIMUM set of Test cases that must pass before the Test Item can be considered for release.

Unforeseen issues arising during the Test Phase may impact the agreed ‘Pass/Fail’ Criteria for the Test Item. Issues can be managed through review with the Test Team and the project authorities.

## Severity & Priority Definition

Below is the list of Issue severity & their definition

| **Severity** | **Definition** |
| --- | --- |
| S1 | Critical/Show Stopper – Completely hampers or blocks testing of the product/ feature, No workaround |
| S2 | Major – When the functionality is functioning grossly away from the expectations or not doing what it should be doing, Operational error, wrong result |
| S3 | Moderate – When the product or application doesn’t meet certain criteria or still exhibits some unnatural behaviour, however, the functionality as a whole is not impacted |
| S4 | Low – When there is almost no impact to the functionality but it is still a valid defect that should be corrected, Cosmetic problems |

Below is the list of Issue priority & their definition

| **Priority** | **Definition** |
| --- | --- |
| P0 | Critical – Must be resolved as soon as possible |
| P1 | High – Must be resolved once all critical defects are fixed |
| P2 | Medium – Should be resolved in the normal course of development activities |
| P3 | Low – Should be fixed after other priority defects have been fixed |

## 

## 

## Suspension Criteria & Resumption

Testing of Test Items will be suspended if:

| **No** | **Suspension Criteria** | **Resumption Requirement** |
| --- | --- | --- |
| 1 | A Severity 1 issue is logged and requires fixing before further testing can take place (a Blocking Issue) | The issue will need to be fixed before the Test Item is returned to the Test Team for testing. |
| 2 | Significant differences exist between observed behavior of the Test Item and that shown in Test Cases. | The Development team, the QA Team and PM must come to a conclusion on resolving the issue and agreeing a definition of the expected behavior. |

# TEST DELIVERABLES

The following artifacts will be produced during the testing phase:

* Test Plan
* Test Cases
* Defect Report
* Test Report
* RTM

# TEST ENVIRONMENT AND INFRASTRUCTURE NEED

The following section provides the detail on the environmental and infrastructure needs required for the System Testing:

## Software

*NA*

## Infrastructure

*Browsers.*

## Browser Supported

* *Google chrome*
* *Edge*
* *FireFox*
* *Safari*

## Tools

* *Rally access*
* *Figma access*
* *Lucid access required*

# TESTING SCHEDULE

| **Task/User Story** | **Owner** | **Duration** | **Start** | **Finish** |
| --- | --- | --- | --- | --- |
| As a user, I want to create and manage my account so that I can securely log in, update my profile, and access personalized features – U1231 | M Vinuthna | 2 days | 27/09/2025 | 28/09/2025 |
| As a creator, I want to upload and manage my videos (edit, delete, set privacy) so that I can control how my content is shared – U1232 | Nava | 3days | 29/09/2025 | 01/10/2025 |
| As a viewer, I want to play, pause, forward, and adjust video quality so that I can enjoy smooth streaming and control my viewing experience – U1233 | M Vinuthna | 1 day | 02/10/2025 | 02/10/2025 |
| As a user, I want to search for videos and receive personalized recommendations so that I can easily discover relevant content – U1234 | Nava | 1 day | 03/10/2025 | 03/10/2025 |
| As a viewer, I want to like, comment, share, and subscribe so that I can engage with content and stay connected with creators I follow – U1235 | M Vinuthna | 2 days | 04/10/2025 | 05/10/2025 |
| When a user clicks the pause button during playback, the video does not stop as expected, causing interruption in viewing control – DE1238 | Nava | 1 day | 06/10/2025 | 06/10/2025 |

# RISK AND CONTINGENCIES

| **Sno** | **Risk** | **Contingency Plan** | **Mitigation Plan** | **Probability** | **Impact** | **Status** |
| --- | --- | --- | --- | --- | --- | --- |
| 1 | Schedule Slippage | Check schedules often for any slip, & to compensate the slippage extra effort will be spent to balance the slippage | Monitor progress on daily basis and raise the flag if there seems any slippage | Medium | Medium | Open |
| 2 | Application delivery to testing team with minimal time for testing | Only Sanity testing will be executed and the project team is intimated about that. | Only Sanity testing will be executed & the project team is intimated about that. | Medium | High | Open |
| 3 | Change in scope, additional Change request | Changes due to scope changes after estimate is provided would need additional time for re-estimate planning and resource allocation to the project. | Baseline FDD | Medium | Medium | Open |
| 4 | Inconsistent video streaming due to network issues | Highlight as environment limitation and test on available stable networks | Define minimum network bandwidth for testing and use simulated conditions | High | Medium | Open |
| 5 | Device/Browser Compatibility Issues | Prioritize testing on most used devices and browsers | Maintain device/browser matrix and test critical features first | Medium | High | Open |

# 

| 6 | High defect leakage in production | Quick fixes and hot patches will be applied to production if defects escape | Thorough regression testing before release and early defect detection | Low | High | Open |
| --- | --- | --- | --- | --- | --- | --- |
| 7 | Lack of test data for large-scale scenarios (e.g., 1000+ videos) | Use sample test data and mock uploads to validate functionality | Coordinate with development team to create dummy datasets | Medium | Medium | Open |
| 8 | Security vulnerabilities in video upload or user accounts | Apply emergency patches if critical security issues are found | Perform regular security testing, penetration testing, and code review | Low | High | Open |

# TERMS AND DEFINITIONS

| **Acronyms and Abbreviations** | **Expanded form** |
| --- | --- |
| SW | Software |
| QA | Quality Assurance |
| UAT | User Acceptance Test |
| RTM | Requirements Tranceability Matrix |
| PO | Product Owner |
| SM | Scrum Master |

# REFERENCES

| **SNO** | **Document Name** |
| --- | --- |
| 1 | User stories |
| 2 | Design Documents |
| 3 | Features and Epics |