



## STD Document





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## Introduction

### Document Overview:

This document serves as the software test description for the GeeksforGeeks software development project. It provides a comprehensive overview of the tests outlined in the software test plan. These tests are important to the success of the project as they include both functional and non-functional aspects, ensuring the platform's stability and reliability.

The test types covered in this description include:

**Functional Tests:** These encompass various aspects such as integration, unit testing, sanity checks, and user interface (UI) testing to validate the functionality of the YouTube platform.

**Non-Functional Tests:** These tests focus on critical aspects beyond functionality, including performance evaluation, security measures, and globalization testing. They are essential for guaranteeing that YouTube meets the highest standards of performance, security, and accessibility across diverse user demographics and regions.



## Abbreviations:

- **STP: Software Test Plan**
- **STD: Software Test Description**
- **STR: Software Test Report**
- **API: Application Programming Interface**
- **GUI: Graphical User Interface**
- **DBMS: Database Management System**
- **OS: Operating System**
- **IDE: Integrated Development Environment**
- **CI/CD: Continuous Integration/Continuous Deployment**
- **QA: Quality Assurance**
- **VCS: Version Control System**
- **UI: User Interface**
- **UX: User Experience**
- **SRS: Software Requirements Specification**
- **SRD: Software Requirements Document**
- **API: Application Programming Interface**
- **HTTP: Hypertext Transfer Protocol**
- **HTTPS: Hypertext Transfer Protocol Secure**
- **IP: Internet Protocol**
- **TCP: Transmission Control Protocol**
- **UDP: User Datagram Protocol**

## Glossary:

- **Test Case:** A specific set of conditions and actions designed to verify the functionality, behavior, or performance of a software application.
- **Traceability:** The ability to track and link project artifacts, such as requirements, design elements, and test cases, throughout the software development lifecycle to ensure alignment and completeness.
- **Integration Testing:** Testing approach that verifies the interactions between different software modules or components to ensure they function together correctly.
- **Unit Testing:** Testing methodology where individual units or components of a software application are tested in isolation to validate their functionality.
- **Sanity Testing:** Subset of regression testing focused on quickly determining whether recent changes to the software have not adversely affected its existing functionalities.
- **Performance Testing:** Testing technique used to assess the speed, responsiveness, scalability, and stability of a software application under various workload conditions.
- **Security Testing:** Testing process that evaluates the software's ability to protect data, maintain functionality, and resist unauthorized access.
- **Globalization Testing:** Testing approach aimed at ensuring that a software application can function properly across different languages, cultures, and regions.
- **Functional Requirements:** Specifications detailing the desired behavior and functionalities of a software application.
- **Non-Functional Requirements:** Specifications concerning aspects such as performance, security, usability, and reliability, which are not directly related to the application's functionality but are crucial for its overall success.
- **User Acceptance Testing (UAT):** Testing performed by end-users or stakeholders to validate whether the software meets their requirements and expectations before deployment.



- **Cross-Browser Testing:** Testing process that evaluates the compatibility of a web application across different web browsers to ensure consistent user experience.
- **Regression Testing:** Testing methodology focused on verifying that recent code changes have not adversely affected the existing functionalities of the software.
- **API Testing:** Testing approach that assesses the functionality, reliability, performance, and security of application programming interfaces.
- **Load Testing:** Testing methodology focused on evaluating the behavior of a software application under anticipated and peak workload conditions.
- **Usability Testing:** Testing process that assesses how easy and intuitive it is for users to interact with a software application to accomplish their tasks effectively.

## Test Preparations for GeeksforGeeks:

The sub-sections to be tested:

This test preparation plan is designed to cover various aspects of testing on GeeksforGeeks:

- Hardware Preparation.
- Software Preparation.
- Localization Settings.
- Safety, security and privacy precautions.

### Hardware Preparation:

We ensure a mix of Windows and macOS devices for comprehensive OS testing and Included iOS and Android devices to cover mobile operating systems.

Device Selection

- **Laptop Devices:**

- Windows laptop: a Windows laptop for testing purposes

- MacBook Air (M1, macOS Big Sur): a MacBook Air with M1 chip running macOS Big Sur for testing.

- **Mobile Devices:**

- iPhone 12 (iOS 15): iPhone 12 running iOS 15 for mobile testing.

- Samsung Galaxy S21 (Android 11): Samsung Galaxy S21 running Android 11 for Android testing.

- **Network Conditions**

- Test on various network speeds (3G, 4G, Wi-Fi).
  - Evaluate performance under low bandwidth conditions.

The initial phase of device selection involves identifying a diverse set of devices for GeeksforGeeks testing, including laptops, and mobile devices. The selected devices represent a variety of configurations, covering different operating systems, screen sizes, and browser or app configurations. This comprehensive approach ensures thorough testing across various platforms and enhances the overall quality of the testing process.

## Software Preparation:

- **Operating System Versions:**

- Install and update different operating system versions (Windows, macOS, Android, iOS).
- Validate YouTube compatibility across various operating systems.

- **Browser Testing:**

- Install and configure popular browsers (Chrome, Safari, Edge).
- Verify GeeksforGeeks functionality and compatibility on each browser.

The Software Preparation phase focuses on ensuring GeeksforGeeks compatibility across diverse operating systems and browsers. This phase is crucial for guaranteeing a seamless user experience across various platforms.

## Localization Settings:

- Adjust language and regional settings for testing localization features.
- Validate the application's response to different language and regional configurations.

The Localization Settings phase is dedicated to testing GeeksforGeeks adaptability to different languages and regional configurations. By adjusting language and regional settings, the testing team aims to validate the application's responsiveness to diverse linguistic and cultural requirements.

## Safety, security, and privacy precautions:

- **User Privacy Protection:**
  - Ensure that test accounts don't contain personal or sensitive information.
  - Test and verify privacy settings for user accounts.
- **Security Measures:**
  - Confirm that testing procedures adhere to security protocols.
  - Use dummy data for security-sensitive tests.

The Safety, Security, and Privacy Precautions phase is designed to safeguard user data and uphold the integrity of the testing process. By implementing privacy protection measures and adhering to security protocols, this phase ensures responsible testing practices.









## Test Cases

Test Cases		
Sort: <a href="#">Section</a>   Filter: <a href="#">None</a>		
<b>login_logout</b> <span>3</span> <a href="#">✎</a> login and logout test cases		
<input type="checkbox"/>	ID	Title
<input type="checkbox"/>	C3	To verify that a user can successfully log in to GeeksforGeeks.
<input type="checkbox"/>	C4	To verify that a user cannot log in to GeeksforGeeks with the wrong password.
<input type="checkbox"/>	C5	To verify that a user can successfully log out from GeeksforGeeks.
<a href="#">Add Case</a>   <a href="#">Add Subsection</a>		
<b>videos</b> <span>2</span> <a href="#">✎</a> all the videos tests		
<input type="checkbox"/>	ID	Title
<input type="checkbox"/>	C6	Saving and Checking a Video in GeeksforGeeks
<input type="checkbox"/>	C7	To verify that a user can successfully unsave a video in GeeksforGeeks
<a href="#">Add Case</a>   <a href="#">Add Subsection</a>		
<b>Articles</b> <span>2</span> <a href="#">✎</a> all the articles tests		
<input type="checkbox"/>	ID	Title
<input type="checkbox"/>	C8	To verify that a user can successfully write and save an article on GeeksforGeeks.
<input type="checkbox"/>	C9	To verify that a user can successfully modify an existing article on GeeksforGeeks.
<a href="#">Add Case</a>   <a href="#">Add Subsection</a>		
<b>Run_Code</b> <span>1</span> <a href="#">✎</a> all the code tests		
<input type="checkbox"/>	ID	Title
<input type="checkbox"/>	C10	To verify that the code runs successfully on GeeksforGeeks and produces the expected result.
<a href="#">Add Case</a>   <a href="#">Add Subsection</a>		



Search 2 

	 ID	Title
	 C11	To verify that searching in Hebrew on GeeksforGeeks returns relevant results.
	 C12	To verify that searching with invalid input on GeeksforGeeks returns no results found.

[Add Case](#) | [Add Subsection](#)



## Test case 1 :

C3 To verify that a user can successfully log in to GeeksforGeeks.

Edit

login\_logout

Type	Priority	Assigned To	Estimate
Functional	Critical	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
User credentials (username/email and password)  
Stable internet connection

### Steps

1	Navigate to the GeeksforGeeks website URL.	The GeeksforGeeks website loads successfully.
2	Click on the menu icon to open the menu.	The menu is displayed.
3	Click on the "Sign In" option from the menu.	The sign-in modal window opens.
4	Enter the username/email in the designated field.	The username/email is entered successfully.
5	Enter the password in the designated field.	The password is entered successfully.
6	Verify successful login by checking for the presence of the user profile logo or any other indication of logged-in status.	The user is logged in successfully.
7	Verify successful login by checking for the presence of the user profile logo or any other indication of logged-in status.	The user profile logo or indication of logged-in status is visible.



## Test case 2 :

C5 To verify that a user can successfully log out from GeeksforGeeks.

Edit

login\_logout

Type	Priority	Assigned To	Estimate
Functional	Critical	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection  
A logged in GeeksforGeeks account

### Steps

1	Click on the menu icon to open the menu.	The menu is displayed.
2	Click on the "Logout" option from the menu.	The user is logged out from the system.
3	Click on the menu icon to open the menu again.	The menu is displayed.
4	Verify that the "Sign In" option is visible in the menu.	The "Sign In" option is visible, indicating successful logout.

## Test case 3 :

C4 To verify that a user cannot log in to GeeksforGeeks with the wrong p...

Edit

login\_logout

Type	Priority	Assigned To	Estimate
Functional	High	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
User credentials (username/email and incorrect password)  
Stable internet connection

### Steps

1	Navigate to the GeeksforGeeks website URL.	The GeeksforGeeks website loads successfully.
2	Click on the "Sign In" option from the menu.	The sign-in modal window opens.
3	Enter the username/email in the designated field.	The username/email is entered successfully.
4	Enter an incorrect password in the designated field.	The incorrect password is entered successfully.
5	Click on the "Sign In" button.	The user attempts to log in.
6	Verify that an error message appears indicating the login failure.	An error message indicating login failure is displayed.

## Test case 4 :

### C6 Saving and Checking a Video in GeeksforGeeks

[Edit](#)

videos

<b>Type</b> Functional	<b>Priority</b> High	<b>Assigned To</b> Me	<b>Estimate</b> None
<b>References</b> None	<b>Automation Type</b> None		

#### Preconditions

GeeksforGeeks website URL  
Stable internet connection  
logged in to geeks account

#### Steps

1	Scroll down to the videos section on the GeeksforGeeks website.	The videos section is scrolled down to.
2	Click on a specific video link.	The video page opens.
3	Retrieve the name of the video being viewed.	The name of the video is retrieved successfully.
4	Click on the "Save" button to save the video.	The video is saved successfully.
5	Open the menu on the website.	The menu is opened successfully.
6	Click on the "Saved Videos" option.	The saved videos page is opened.
7	Check if the saved video name appears in the list of saved videos.	The saved video name appears in the list of saved videos.

## Test case 5 :

C7 To verify that a user can successfully unsave a video in GeeksforGee...

Edit

videos

Type	Priority	Assigned To	Estimate
Functional	High	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection  
logged in to geeks account

### Steps

1	Open the menu on the website.	The menu is opened successfully.
2	Click on the "Saved Videos" option.	The saved videos page is opened.
3	Click on a specific video link.	The video page opens.
4	Click on the "Unsave" button to unsave the video.	The video is successfully unsaved.
5	Open the menu on the website.	The menu is opened successfully.
6	Click on the "Saved Videos" option.	The saved videos page is opened.
7	Check if the unsaved video name is absent in the list of saved videos	The unsaved video name is not present in the list of saved videos.

## Test case 6 :

C8 To verify that a user can successfully write and save an article on Ge...

Edit

### Articles

<b>Type</b> Functional	<b>Priority</b> High	<b>Assigned To</b> Me	<b>Estimate</b> None
<b>References</b> None	<b>Automation Type</b> None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection  
logged in to geeks account

### Steps

1	Scroll down to the articles section on the GeeksforGeeks website.	The articles section is scrolled down to.
2	Click on the "Write Article" button.	The article writing page is opened.
3	Enter the title of the article.	The title of the article is entered successfully.
4	Enter the body content of the article.	The body content of the article is entered successfully.
5	Select a category for the article	A category is selected for the article.
6	Save the article for later.	The article is successfully saved.
7	Navigate to "My Articles" section to verify if the article is saved.	The saved article is found in the "My Articles" section.



## Test case 7 :

C9 To verify that a user can successfully modify an existing article on Ge...

Edit

### Articles

Type	Priority	Assigned To	Estimate
Functional	High	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection  
logged in to geeks account

### Steps

1	Scroll down to the articles section on the GeeksforGeeks website.	The articles section is scrolled down to.
2	Click on the "Articles" link.	The articles page is opened.
3	Click on the "Write Article" button.	The article writing page is opened.
4	Click on "My Articles" to view the list of articles.	The list of user's articles is displayed.
5	Click on the first article in the list to modify.	The first article is opened for modification.
6	Enter a new title for the article.	The new title is entered successfully.
7	Click on the "Save" button to save the modifications.	The modifications are saved successfully.
8	Navigate to "My Articles" section to verify if the article is modified.	The modified article is found in the "My Articles" section.

## Test case 8 :

C10 To verify that the code runs successfully on GeeksforGeeks and pro...

Edit

Run\_Code

Type	Priority	Assigned To	Estimate
Functional	High	Me	None
References	Automation Type		
None	None		

### Preconditions

GeeksforGeeks website URL  
Test Python code  
logged in account

### Steps

1	Click on the search bar and type "python string len".	The search term is entered into the search bar.
2	Click on the search button.	The search is initiated.
3	Click on the first search result.	The first search result is opened.
4	Scroll down to the "Run Code" section.	The page is scrolled down to the "Run Code" section.
5	Click on the "Edit Code" button.	The code editing area is opened.
6	Click on the line of code that needs to be modified.	The line of code is selected.
7	Modify the code by deleting a portion and typing a new word.	The code is successfully modified.
8	Click on the "Run Code" button.	The code is executed.
9	Wait for the code to finish running and get the result.	
10	The result of running the code is obtained.	check if it matches our expected result.

## Test case 9 :

C12 To verify that searching with invalid input on GeeksforGeeks returns ...

Edit

Search

<b>Type</b>	<b>Priority</b>	<b>Assigned To</b>	<b>Estimate</b>
Usability	High	Me	None
<b>References</b>	<b>Automation Type</b>		
None	None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection

### Steps

1	Click on the search bar and type invalid characters such as "#\$@%".	The invalid characters are entered into the search bar.
2	Click on the search button.	The search is initiated.
3	Check for the presence of the "No Results Found" message.	The "No Results Found" message is displayed indicating that no relevant results were found.
4	Return true if the "No Results Found" message is present, false otherwise.	The presence of the "No Results Found" message is verified as expected.



## Test case 10 :

C11 To verify that searching in Hebrew on GeeksforGeeks returns relevan...

Edit

Search

<b>Type</b> Usability	<b>Priority</b> High	<b>Assigned To</b> Me	<b>Estimate</b> None
<b>References</b> None	<b>Automation Type</b> None		

### Preconditions

GeeksforGeeks website URL  
Stable internet connection

### Steps

1	Click on the search bar and type "פיייתון".	The Hebrew search term is entered into the search bar.
2	Click on the search button.	The search is initiated.
3	Check the first search result for relevance.	The first search result contains the term "Python" indicating relevance.
4	Return true if the search result is relevant, false otherwise.	The result of the relevance check is returned as expected.