STP Document

Automation Test Developer

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Planned Schedule

A step in the project process	Start date	End date
Preparation of STP document	07.03.2024	07.03.2024
Preparation of STD document	07.03.2024	07.03.2024
Round of tests #1	08.032024	08.032024
Round of tests #2	08.032024	08.032024
Round of tests #3	09.03.2024	09.03.2024

Purpose Of This Document

The purpose of the document is to define a framework program for testing This framework plan will include all relevant topics for planning and performing the tests, such as the test topics and types of tests, the schedule, and the planned work method for testing the system.

The document will also be used for writing a detailed test plan (STD) in which the various tests will be detailed step by step.

After that, the tests will be carried out according to the instructions in this document.

Description Of CoinPaprika System

Coinpaprika is a comprehensive cryptocurrency market research platform that provides users with extensive information and data on various cryptocurrencies. It includes features such as market overview, individual currency metrics, portfolio tracking, and exchange information. The platform caters to various stakeholders including cryptocurrency investors, traders, researchers, and enthusiasts seeking detailed market data and trends for informed decision-making. Coinpaprika aims to enhance transparency and provide accurate and up-to-date information within the crypto space

Key Features and Functions:

- Real-time Market Data: Offers up-to-date information on cryptocurrency prices, market cap, volume, and changes.
- Historical Data and Charts: Provides detailed price histories and analytical charts for individual cryptocurrencies.
- Coin Rankings: Lists cryptocurrencies based on various metrics like market cap, volume, and more.
- Portfolio Tracker: Allows users to track their cryptocurrency holdings and monitor portfolio performance.
- Exchange Information: Features details on various crypto exchanges including trading volumes and active markets.
- Global Crypto Statistics: Offers insights into the overall market trends and crypto industry statistics.

Stakeholders:

- **Cryptocurrency Investors:** Individuals looking to invest in digital currencies.
- **Traders**: People actively trading cryptocurrencies seeking real-time data.
- **Market Analysts:** Professionals analyzing market trends and data.
- Crypto Enthusiasts: Individuals with a keen interest in the cryptocurrency market and technology.
- **Financial Advisors:** Professionals advising clients on cryptocurrency investments.
- **Crypto Project Teams**: Teams behind the cryptocurrencies listed on the platform.

Terms and Concepts

1**. GUI (Graphical User Interface):** The design of user interfaces based on specified requirements.

2. Functional Testing: Verification that fundamental system functions operate correctly.

3. Conversion Testing: Evaluation conducted during the transition from an old product to a new one.

4. Performance Testing: Includes load testing, evaluating system responsiveness, and stress testing.

5. Security Testing: Focuses on information security and safeguarding the system.

6. Authorization Testing: Validation ensuring users with defined permissions can execute authorized actions.

7. Maintenance Testing: Examination of the functionality of a modified system following changes, updates, or alterations in the working environment.

8. STP (System Test Plan): A comprehensive project planning document encompassing strategy, schedule, and topic tree.

9. STD (System Test Design): Detailed documentation outlining the testing plan.

10. STR (System Test Results): A concise document summarizing test results after three cycles.

11. Usability Testing: Assessment of the system's user-friendliness, measuring its learnability, comprehensibility, and ease of operation.

12. Integration Testing: Inspection of the integration among diverse software components and subsystems in relation to external systems.

Testing Plan

The testing team will communicate the requirements to the development team based on the planned tests.

The development team will work according to these requirements to maximize efficiency.

Hardware Needs:

1. **Computers:**
   - High-performance desktops or laptops to run test scripts and perform manual testing.
2. **Network Equipment:**
   - Routers and switches to simulate different network conditions for testing YouTube's performance under various network scenarios.
3. **Virtual Machines:**
   - Set up virtual machines for testing on different operating systems and browser combinations.
4. **Storage Devices:**
   - Sufficient storage space to store test data, logs, and video files generated during testing.

Software Needed:

1. **Operating Systems:**
    - Install and configure various operating systems for testing, including Windows, macOS, and Linux distributions.
2. **Browsers:**
    - Latest versions of popular browsers (Google Chrome, Microsoft Edge, Safari, Firefox) for cross-browser compatibility testing.
3. **Mobile Emulators/Simulators:**
    - Emulators or simulators to test YouTube's mobile app on different devices and screen sizes.
4. **Performance Testing Tools:**
    - Tools like Apache JMeter, LoadRunner, or Gatling for performance and load testing to simulate high user traffic.
5. **Automation Testing Tools:**
    - Selenium, Appium, or similar tools for automating functional tests across web and mobile platforms.
6. **Database Management System:**
    - Database systems (MySQL, PostgreSQL) for testing YouTube's data handling and retrieval functionality.
7. **Collaboration Tools:**
    - Communication and collaboration tools (e.g., Slack, Microsoft Teams) for effective communication among the testing team.
8. **Test Management Tools:**
    - Test case management tools (e.g., TestRail, Jira) to organize, execute, and track test cases.

This document will be approved by the testing team leader and the project manager.

Following approval, the senior tester will build the STD document based on it.

The STD document will then undergo approval by the testing team leader.

After approval of the STD document, three rounds of testing will be conducted.

At the end of these rounds, the STR document will be prepared by the senior tester, undergo approval by the testing team leader, and serve as the final documentation.

Before the start of testing rounds, **functional tests** will be performed, including:

1) **Unit Testing:** To test individual units or components of a software application.
2) **Testing:** To verify that the most important functionalities of a software application work correctly.
3) **Integration Testing:** To verify the interactions and interfaces between different components or systems within the application.
4) **Regression Testing:** To ensure that new code or changes do not affect the existing functionality of the software.
5) **API Testing:** To validate the functionality of an API by testing its endpoints and request-response mechanisms.
6) **UI Testing:** To validate that the user interface elements and interactions function correctly according to the design.
7) **End-to-End Testing:** To evaluate the entire software system's functionality from start to finish, simulating real user scenarios and interactions.

Afterwards, the following **non-functional tests** will be conducted including:

1) **Performance Tests (Load + Stress + Volume):** they assess how well a system performs under various conditions, including heavy loads, stressful situations, and large data volumes.
2) **Security Tests:** Security tests aim to identify vulnerabilities and weaknesses in a system to ensure protection against unauthorized access.

3) **Upgrade and Installation Test:** Upgrade and installation tests verify the smooth installation of software upgrades and updates, ensuring that the system remains stable and functional.
4) **Recovery Tests:** they assess how well a system can recover from failures including data loss or system crashes.
5) **Localization and Globalization Testing:** Localization testing verifies that a software application adapts to specific regional or cultural requirements, while globalization testing ensures its compatibility with diverse international settings.
6) **Usability Testing:** evaluates the user friendliness and overall user experience of a software application to ensure it meets user expectations.
7) **Compatibility Testing:** Compatibility testing ensures that a software application works seamlessly across different devices, browsers, operating systems.

Starting and Existing Criteria

- **Criteria for starting the tests:**

- 100% of the planned sanity tests were carried out and passed successfully.
- 100% of planned functional and non-functional test cases have been created and reviewed.
- A traceability matrix is established, linking each test case to specific requirements.
- The testing environment, including necessary configurations, data, and tools, is prepared, and verified.
- Sufficient and accurate test data for both positive and negative scenarios is available.
- The test plan, detailing the testing approach, objectives, and schedules, has been reviewed and approved.

- **Completion/Release Criteria:**

- 100% of planned functional and non-functional tests have been executed, and results have been documented.
- 75% of test cases passed successfully.
- All critical bugs have been fixed at this point.
- The remaining bugs are at low severity levels, with no high-severity issues affecting functionality.

Traceability Table

Business Requirement	Test Case ID	Functional Requirement	Test Case ID
Home Page	1	**Search functionality.**	1.a
		Language Change Functionality	1.b
Table Reservation	2	**Make a reservation**	2.a
		Cancel a reservation	2.b
		Share reservation details.	2.c
		Add reservation to calendar	2.d
		Navigation to restaurant.	2.e
Contact Us	3	**Link Functionality**	3.a
Join Us	4	**Social Media Link**	4.a
Open Positions	5	**Link to Open Positions**	5.a
		Application Submission	5.b
Deliveries and TA	6	**Selection of Service Type**	6.a
		Address Input	6.b
		Order Customization	6.c
		Checkout Process	6.d
		Confirmation and Notifications	6.e
Gift It Page	7	**Initial Visit**	7.a
		Choosing a Gift Card	7.b
		Customizing the Card	7.c
		Payment and Confirmation	7.d

Test Tree

- Endpoint Functionality: Verify that each endpoint (e.g., coins, markets, tickers) responds correctly to valid queries.
- Data Accuracy: Check the data returned by the API against known values or another reliable source.
- Error Handling: Test how the API handles invalid requests or unsupported endpoints.
- Rate Limiting: Ensure the API enforces its rate limiting correctly and returns appropriate messages when limits are exceeded.
- Response Time: Measure how long the API takes to respond to requests.
- Pagination: Test pagination features, if available, to ensure they correctly handle large data sets.
- Security: Verify that the API implements security measures such as authentication and data encryption.

Hazard Table

Responsible	Description	Action	Hazard Description	Risk Level	Damage	Chance	Hazard	#
	Description of prevention method	Enclose Monitoring Acceptance	What will happen in case of the hazard	Chance Multiplied by Damage	1-10	1= ידוע ועומד להתממש = 0.5 50%		
System	NA	Monitoring	Unable to connect as a user	5	10	0.5	Bad Internet Connectivity	**1**
	Finding a tester for the project length	Enclose	Bad testing and coverage	1.6	8	0.2	New Testers	**2**
System		Monitoring	Unable to login and retrieve info from the DB	7	7	0.5	Server Crash	**3**
	Postponing / finding replacement	Enclose	Vacations	7	7	1.0	Vacations	**4**
System	Adding servers	Enclose	System Crash	5	10	0.5	Weak Server	**5**

HR	Hiring a stable worker	Monitoring	Lowering Team Morale	5	10	0.5	Employee quitting	**6**
QA Lead	Hiring Experienced Testers	Enclose	Failure to meet the schedule	1	10	0.1	Inexperienced Testers	**7**
CEO	More flexible customer	Monitoring	No income for the company	3	10	0.3	Contract Termination	**8**
CEO	QA Lead bad Management	Enclose	Unsatisfied Customer	10	10	1	Failure to meet the schedule	**9**
CEO	An appointment must be made with the customer and it should be noted to him that it will not be possible to make changes after the system is established	Monitoring	Failure to be prepared for changes by the customer will not ensure a professional, accurate and correct inspection	3.5	7	0.5	Customer requirements document changes frequently during the project	**10**