REVISION HISTORY

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| --- | --- | --- | --- |
| **Date** | **Version** | **Description** | **Author** |
| 23.10.2018 | 0.1 | Initial edits to the paper | Yazan Shehab,  Güneş Büyükgönenç,  Kaan Kırlı |
| 26.10.2018 | 0.2 | Edited Introduction (1) and Test Prep. (2) Parts. | Yazan Shehab,  Kaan Kırlı,  Arman Hasanzade |
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| 26.10.2018 | 0.4 | Edited the Test Description (3) | Arman Hasanzade |
| 26.10.2018 | 1.0 | Finalized the part (3) and minor fixes all over the paper | Arman Hasanzade |
| 9/11/2018 | 1.1 | Grammatical corrections and fixes on (3) | Kaan Yıldız,  Güneş Büyükgönenç |
| 9/11/2018 | 2.0 | Finalized Test Descriptions (Part 3) | Kaan Yıldız,  Güneş Büyükgönenç |

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# Introduction

## Document overview

This document is the software test plan of the SUP software development project. It contains the description of tests.

## References

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| --- | --- | --- |
| # | Document Identifier | Document Title |
| [SRS] | SUP-SRS-1 | SUP Software Requirements Specifications |
| [R1] | MSPaint3D | <https://www.microsoft.com/tr-tr/p/paint-3d/9nblggh5fv99#activetab=pivot:overviewtab> |
| [R2] | Gimp | <https://www.gimp.org/> |

## Conventions

Each test case will be presented in a table format as shown below:

|  |  |  |
| --- | --- | --- |
| **Test ID** | <ID of the test> |  |
| Test description | <A brief description of the test> |  |
| Verified Requirement | <ID numbers of requirements that are to be verified with this test.> | Verification method: <I,A,D,T> |
| Initial conditions | <The state of software before test> |  |
| Tests inputs | <Input data from any test tool, input files name and location, if any > |  |
| Data collection actions | <Recording and post processing of output data, if any > |  |
| Tests outputs | <Output data files, if any> |  |
| Assumptions and constraints | If any, may be limited access to a tool, license … |  |
| Expected results and criteria | <list of expected results> | <special criteria to be met by the result, if any> |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | <actions listed row by row> | <expectation after each action if any> |
| 2 | … | … |

# Tests preparations

This section contains tasks and recommendations before executing tests.

## Hardware preparation

ASUS Laptop model N552VW with Windows 10 64-bit Home Single Language installed

Intel® Core™ i7-6700HQ CPU @ 2.60GHz processor

16.0 GB Ram and 1TB hard disk

## Software preparation

The Computer which the software is going to be installed must have a Windows or Linux operating system with internet connection for database access. The operating system must have Java Version 10.0.1 or higher and it must have enough disk space for the software to be installed properly.

## Other test preparation

Ensure that the software is stable enough to do several tests.

The testing crew must know the software and how to test it.

## Safety, security and privacy precautions

None

# Tests descriptions

## Functional and Non-functional Requirement Tests

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| **Test ID** | ***SRS-SUP-001*** |  |
| Test description | Drawing using different Brushes, Colors and Brush sizes |  |
| Verified Requirement | SRS-SUP-001 | Demonstration |
| Initial conditions | The computer must have SUP installed and running |  |
| Tests inputs | Different brush sizes and colors |  |
| Data collection actions | N/A |  |
| Tests outputs | Drawn Shapes on the UI |  |
| Assumptions and constraints | The tester has the latest version on SUP |  |
| Expected results and criteria | Tester drawn shapes can be seen in the drawing area of SUP | The shapes match the tester’s mouse movements and the color and the size of the selected brush |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | Select oval Brush | Oval Brush is selected |
| 2 | Select any Color | Desired Color is Selected |
| 3 | Enter 10 in Brush size | Desired Size is Selected |
| 4 | Click and hold left mouse button and move the mouse in the drawing area | Shapes are drawn on the drawing area matching the brush info from the previous steps |

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| **Test ID** | **SRS-SUP-002** |  |
| Test description | Drawing and Saving images to the tester’s computer |  |
| Verified Requirement. | SRS-SUP-002 | Demonstration |
| Initial Condition. | SUP must be running, and tester must have enough disk space in their computer and have a valid folder to save the images |  |
| Tests inputs | Drawn image by SUP |  |
| Data collection | N/A |  |
| Tests outputs | An image in JPG format |  |
| Assumptions & Constraints | The tester has the latest version of SUP |  |
| Expected results and criteria | The tester saves the drawn image in the drawing are to the defined directory in their computer | There is a JPG file in the tester defined directory and it matches the drawn image in SUP’s drawing area |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | Click option button on the right top of SUP software | The option panel opens with different options to choose from |
| 2 | Click to Select Directory button and write a directory | A text field opens for the tester to write a directory |
| 3 | Tester draws something in the drawing area of SUP and presses the Save Button | A JPG file is formed in the defined directory and it matches the thing that the tester drew |

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| **Test ID** | **SRS-SUP-003** |  |
| Test description | Selecting different Brushes, Colors and Sizes |  |
| Verified Requirement | SRS-SUP-003 | Demonstration |
| Initial Condition | SUP must be running, and the computer must have access to the internet |  |
| Tests inputs | Orange Brush from the brush panel |  |
| Data collection | N/A |  |
| Tests outputs | Drawing Shapes on the UI |  |
| Assumptions & Constraints | The user has the latest version of SUP and a stable connection to internet |  |
| Expected results and criteria | The tester selects desired Brushes, Colors and Sizes from the SUP brush panel |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | Select a Brush, Color and Size from brushes table | The desired Brush with the desired attributes is selected |
| 2 | Draw in the drawing panel of SUP | The drawn shapes attributes match with the selected brushes’ attributes |
| 3 | Repeat for different Brushes, Colors and Sizes | The same result as Step number 2 |

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| **Test ID** | **SRS-SUP-004** |  |
| Test description | Creating and saving brushes for current and future use |  |
| Verified Requirement. | SRS-SUP-004 | Demonstration |
| Initial Condition. | SUP must be running, and the computer must have an Internet connection |  |
| Tests inputs | Any Custom Colored Brush |  |
| Data collection | N/A |  |
| Tests outputs | The Brush is saved to the database |  |
| Assumptions & Constraints | The tester has the latest version of SUP and a stable Internet connection |  |
| Expected results and criteria | The Brush can be seen from the database and can be selected by the tester |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | Click Create Brush button | A page opens with brush related fields |
| 2 | Enter Brush info and press Ok | The saved brush can be seen in Brushes panel |
| 3 | Select the saved Brush and use it to draw something on the drawing area | The drawing attributes match the saved brushes attributes |
| 4 | Close the application and re-launch the application then repeat step 3 | Same as step 3 |

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| **Test ID** | **SRS-SUP-005** |  |
| Test description | Opening and editing an existing JPG file from testers computer |  |
| Verified Requirement. | SRS-SUP-005 | Demonstration |
| Initial Condition | SUP must be running, and the tester must have a JPG file |  |
| Tests inputs | JPG File |  |
| Data collection | N/A |  |
| Tests outputs | JPG File |  |
| Assumption & Constraints | The tester has the latest version of SUP and a non-corrupted JPG file |  |
| Expected results and criteria | The tester opens a JPG file and draws/edits it | The JPG file is opened and can be worked on |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation criteria** |
| 1 | Click Options button and select Open JPG button and insert the JPG directory | Option menu opens and then the Open text field for JPG directory opens. |
| 2 | The JPG opens | The selected JPG is visible in SUP’s drawing area |

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| **Test ID** | **SRS-SUP-006** |  |
| Test description | Installing SUP again after Deleting it |  |
| Verified Requirement | SRS-SUP-006 | Demonstration |
| Initial Condition | Download link of the latest version of SUP and Internet connection |  |
| Tests inputs | Custom Brushes made before the deletion of SUP |  |
| Data collection | N/A |  |
| Tests outputs | N/A |  |
| Assumptions & Constraints | The tester has the latest version of java in their computer |  |
| Expected results and criteria | The Preset Brushes and User Brushes are accessible. |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Creating a Custom Brush | Custom Brush is created successfully |
| 2 | Uninstalling and Deleting the SUP | SUP is uninstalled successfully |
| 3 | Downloading and Installing SUP from the link provided. | SUP is Installed with no problem |
| 4 | Accessing the Brush created before the Uninstallation | The Brush can be selected with no problems |

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| **Test ID** | **SRS-SUP-007** |  |
| Test description | Downloading and Installing the SUP software |  |
| Verified Requirement | SRS-SUP-007 | Demonstration |
| Initial Condition | Tester must have an internet connection or the installation file from us. |  |
| Tests inputs | N/A |  |
| Data collection | N/A |  |
| Tests outputs | SUP files are generated in tester’s computer |  |
| Assumptions & Constraints | Tester has enough space to install the SUP software |  |
| Expected results and criteria | SUP installed and working with no problems |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Tester should create a Folder in their computer containing an Images folder and place the SUP.jar there | SUP.jar is in a folder with a folder named images |
| 2 | Launch the SUP.jar and set the Saved Images directory to images folder mentioned above | SUP launches with no problem and Directory for saved images is set |

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| **Test ID** | **SRS-SUP-008** |  |
| Test description | Uninstalling the SUP software |  |
| Verified Requirement | SRS-SUP-008 | Demonstration |
| Initial Condition | N/A |  |
| Tests inputs | N/A |  |
| Data collection | N/A |  |
| Tests outputs | N/A |  |
| Assumptions & Constraints | SUP is uninstalled and left no trace behind |  |
| Expected results and criteria | SUP is uninstalled from testers computer |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Delete both SUP.jar and Images folder | SUP is deleted and no longer be launched and left no traces |

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| **Test ID** | **SRS-SUP-009** |  |
| Test description | SUP’s ease of use and helpful pop-ups |  |
| Verified Requirement | SRS-SUP-009 | Demonstration |
| Initial Condition | Tester must have the latest version of SUP installed and Running |  |
| Tests inputs | Selecting various items like Brushes, Colors etc. |  |
| Data collection | N/A |  |
| Tests outputs | N/A |  |
| Assumptions & Constraints | N/A |  |
| Expected results and criteria | When selecting items such as Brushes a useful pop-up lets the tester know about its properties. |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Selecting a Brush | Brush info pops up and gives the tester information about the Brush |
| 2 | Selecting a Color | Color info pops up and gives the tester information about the Color |

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| **Test ID** | **SRS-SUP-010** |  |
| Test description | Testing the delay between mouse action and |  |
| Verified Requirement | SRS-SUP-010 | Analysis |
| Initial Condition | The computer must have SUP installed and running, oval brush and black color is selected |  |
| Tests inputs | Mouse inputs |  |
| Data collection | N/A |  |
| Tests outputs | Drawn Shapes on the UI |  |
| Assumptions & Constraints | The tester has the latest version of SUP |  |
| Expected results and criteria | The delay between mouse click and drawing is less than 2 seconds |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Click a random place in the drawing canvas | A black oval appears in the clicked location |
| 2 | Drag the mouse while clicking | Black oval brush fills the canvas at mouse path |
| 3 | Calculate function calculates the time it takes between the mouse click and the color appearing | The time it takes is less than 2 seconds |

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| **Test ID** | **SRS-SUP-011** |  |
| Test description | Testing if the brushes are fetched from database successfully. |  |
| Verified Requirement | SRS-SUP-011 | Demonstration |
| Initial Condition | The tester has SUP running. |  |
| Tests inputs | N/A |  |
| Data collection | N/A |  |
| Tests outputs | Drawn Shapes on the UI |  |
| Assumptions & Constraints | The tester has the latest version of SUP and is connected to the internet. |  |
| Expected results and criteria | All of the brushes are fetched from the database and draw correctly |  |
| **Test procedure** |  |  |
| **Step number** | **Operator actions** | **Expected result and evaluation and criteria** |
| 1 | Importing the brushes from database. | All brushes are received. |
| 2 | Using imported brushes. | All brushes work with no problem. |