## GUI Import

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GIMP1 | * Button Press * String File Name | * Returns message of success to user. * Returns message of failure to user. * Returns message of failure to user. | * Choose a valid STL file and click Import. * Choose an invalid STL file and click Import. * Choose an invalid file type and click “Import”. | Moderate - 3 |
| GIMP2 | * Button Press * String File Name | * Returns message of success to user. | * Choose an STL file and click “Delete”. | Moderate – 3 |

## GUI MATERIAL

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GM1 | * Button Press * String File Name | * Updates display | * Manually click “New”. | Moderate – 3 |
| GM2 | * Button Press * String File Name * Material Data | * Returns message of success to user. * Returns message of failure to user. | * Insert data of valid type and click “Save”. * Insert data of invalid type and click “Save”. | Moderate – 3 |
| GM3 | * Button Press * String File Name | * Returns message of success to user. | * Choose a material file and click “Delete”. | Moderate - 3 |

## GUI PRINTER CONFIG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GPR1 | * Button Press * String File Name | * Updates display | * Manually click “New”. | Moderate – 3 |
| GPR2 | * Button Press * String File Name | * Returns message of success to user. * Returns message of failure to user. | * Insert data of valid type and click “Save”. * Insert data of invalid type and click “Save”. | Moderate – 3 |
| GPR3 | * Button Press * String File Name | * Returns message of success to user. | * Choose a printer config file and click “Delete”. | Moderate - 3 |

## GUI EXTRUDER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GE1 | * Button Press * String File Name | * Updates display | * Manually click “New”. | Moderate – 3 |
| GE2 | * Button Press * String File Name | * Returns message of success to user. * Returns message of failure to user. | * Insert data of valid type and click “Save”. * Insert data of invalid type and click “Save”. | Moderate – 3 |
| GE3 | * Button Press * String File Name | * Returns message of success to user. | * Choose an extruder config file and click “Delete”. | Moderate - 3 |

## GUI PRINT CONFIG

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GPT1 | * Button Press * String File Name | * Updates display | * Manually click “New”. | Moderate - 3 |
| GPT2 | * Button Press * String File Name | * Returns message of success to user. * Returns message of failure to user. | * Insert data of valid type and click “Save”. * Insert data of invalid type and click “Save”. | Moderate - 3 |
| GPT3 | * Button Press * String File Name | * Returns message of success to user. | * Choose a print config file and click “Delete”. | Moderate - 3 |

## GUI PRINT JOB

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GPJ1 | * Button Press * String File Name | * Updates display | * Choose a print job configuration. | Moderate - 3 |
| GPJ2 | * Button Press | * Updates display | * Click “New Subsection”. | Moderate - 3 |
| GPJ3 | * Button Press * String File Name * Print Job Config Data | * Returns message of success to user. * Returns message of failure to user. | * Insert data of valid type and click “Save”. * Insert data of invalid type and click “Save”. | Moderate - 3 |

## GUI STATUS

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| GS1 | Button Press | * Updates display * Updates display | * Click “pause” button * Click “resume” button | Moderate – 3 |
| GS2 | Button Press | * Updates display | * Click “Cancel” button. | Moderate – 3 |

# UI CONTROLLER

## IMPORT CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| IC1 | * File Name of STL | * Boolean Success state = success * Boolean Success state = failure * Boolean Success state = failure | * Pass a valid STL file to STL.import() * Pass an invalid STL file to STL.import() * Pass an invalid file type to STL.import() | Critical - 1 |
| IC2 | * File Name of STL | * Boolean Success State = success * Boolean Success State = failure | * Pass a valid STL file to STL.delete() * Pass an invalid file to STL.delete() | Critical - 1 |

## MATERIAL CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| MC1 | String File Name  Material Config Object | * Boolean Success State = success * Boolean Success State = failure | * Pass a Material config object with values within boundary to Material.save() * Pass a Material config object with values exceeding boundary to Material.save() | Critical - 1 |
| MC2 | String File Name | * Material Config Object * Error | * Pass valid string name to Material.load() * Pass invalid string name to Material.load() | Critical - 1 |
| MC3 | String File Name | * Boolean Success State = success * Boolean Success State = failure | * Pass valid string name to Material.delete() * Pass invalid string name to Material.delete() | Critical – 1 |
| MC4 | None | * Array List<String> of file names | * Call loadAvailableMaterials() | Moderate – 3 |

## PRINTER CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| PR1 | String File Name  Printer Config Object | * Boolean Success State = success * Boolean Success State = failure | * Pass a Printer config object with values within boundary to PrinterConfig.save() * Pass a Printer config object with values exceeding boundary to PrinterConfig.save() | Critical – 1 |
| PR2 | String File Name | * Printer Config Object * Error | * Pass valid string name to PrinterConfig.load() * Pass invalid string name to PrinterConfig.load() | Critical – 1 |
| PR3 | String File Name | * Boolean Success State = success * Boolean Success State = failure | * Pass valid string name to PrinterConfig.delete() * Pass invalid string name to PrinterConfig.delete() | Critical – 1 |
| PR4 | None | * Array List<String> of file names | * Call the function to loadAvailablePrinters() | Moderate – 3 |
| PR5 | None | * Array List<String> of port descriptors | * Call the function | Critical – 1 |

## PRINT CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| PTC1 | * String File Name * Print Config Object | * Boolean Success State = success * Boolean Success State = failure | * Pass a Print Config object with values within boundary to PrintConfig.save() * Pass a Printer Config object with values exceeding boundary to PrintConfig.save() | Critical – 1 |
| PTC2 | * String File Name | * Print Config Object * Error | * Pass valid string name to PrintConfig.load() * Pass invalid string name to PrintConfig.load() | Critical – 1 |
| PTC3 | * String File Name | * Boolean Success State = success * Boolean Success State = failure | * Pass valid string name to PrintConfig.delete() * Pass invalid string name to PrintConfig.delete() | Critical – 1 |
| PTC4 | * None | * Array List<String> of file names | * Call loadAvailablePrintConfigs() | Moderate – 3 |

## EXTRUDER CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| EC1 | * String File Name * Extruder Config Object | * Boolean Success State = success * Boolean Success State = failure | * Pass a Extruder Config object with values within boundary to Extruder.save() * Pass a Extruder Config object with values exceeding boundary to Extruder.save() | Critical – 1 |
| EC2 | * String File Name | * Extruder Config Object * Error | * Pass valid string name to Extruder.load() * Pass invalid string name to Extruder.load() | Critical – 1 |
| EC3 | * String File Name | * Boolean Success State = success * Boolean Success State = failure | * Pass valid string name to Extruder.delete() * Pass invalid string name to Extruder.delete() | Critical – 1 |
| EC4 | * None | * Array List<String> of file names | * Call loadAvailableExtruders() | Moderate – 3 |

## PRINT JOB CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| PJC1 | * String File Name * Print Job Config Object | * Boolean Success State = success * Boolean Success State = failure | * Pass a Print Job Config object with values within boundary to PrintJob.save() * Pass a Print Job Config object with values exceeding boundary to PrintJob.save() | Critical – 1 |
| PJC2 | * String File Name | * Print Job Config Object * Error | * Pass valid string name to PrintJob.load() * Pass invalid string name PrintJob.load() | Critical – 1 |
| PJC3 | * String File Name | * Boolean Success State = success * Boolean Success State = failure | * Pass valid string name to PrintJob.delete() * Pass invalid string name to PrintJob.delete() | Critical – 1 |
| PJC4 | * None | * Array List<String> of file names | * Call loadAvailablePrintJobs() | Moderate – 3 |
| PJC5 | * Print Job Config Object | * Open Status GUI * Error | * Pass a correct Print Job Config Object with values within boundary to PrintJob.startPrint() * Pass a Print Job Config Object with values outside boundary to PrintJob.startPrint() | Critical – 1 |

## STATUS CONTROLLER

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| SC1 | * Float or double * Vec3 | * Returns variables * Ignore input. | * Pass valid input to StatusController.update() * Pass invalid input to StatusController.update() | Moderate - 3 |
| SC2 | * None | * BooleanStatus = success * BooleanStatus = success | * Call StatusController.pause() * Call StatusController.resume | Moderate - 3 |
| SC3 | * None | * BooleanStatus = success | * Call StatusController.cancel() | Moderate – 3 |

## GUI Subsystem

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| SUI1 | * Button Presses * Text Fields | * Updates display with correct results * Navigating between menus is easy. (This output is subjective) | * Test individual units * Tester navigates the menus by clicking the tabs. | Moderate – 3 |

## Controller Subsystem

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Test ID | Input | Expected Output/Action | Test | Risk |
| SUI2 | * String File * Names Object Files | * Makes the proper load and save requests with the correct info. | * Check how the subsystem handles correct and incorrect data. | Critical – 1 |