Project Planning of Software for a Writing Robot

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Software Description

This software is aimed to generate a G-code to the writing robot for writing the text which is read from a file. The G-code will be executed by the writing robot and draw the text on the paper.

The text which needs to be ‘draw out’ is input to the software by saving as a file. The output G-code will be sent to the control unit of the writing robot (Arduino in this case) using a virtual RS232 serial port.

In this software, some font data and open-source libraries will be used, for example, an additional font file contains the pre-defined G code for each character will be required. The RS232 serial port communication will be handled by a RS232 library.

For the serial port communication, before sending more G-code, the software will wait until receiving the acknowledge signal from the Arduino.

The software interface with user will be a console window. The communication code and possible errors during the process will be displayed on this console window.

Function Declarations

void Function(parameters)

Parameters:

Return value:

Key Data Items

|  |  |  |
| --- | --- | --- |
| Name | Data type | Rationale |
|  |  |  |
|  |  |  |

Test Information

|  |  |  |  |
| --- | --- | --- | --- |
| Function | Test Case | Test Data | Expected Output |
|  |  |  |  |
|  |  |  |  |

Flowcharts

