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| **Prepared By** | **Xiaofeng Gao** | **Signature** |  |
|  | **Date** |  |
| **Approved By** |  | **Signature** |  |
|  | **Date** |  |
| **Released By** |  | **Signature** |  |
|  | **Date** |  |

|  |  |
| --- | --- |
| **Contributors** | |
| **Alan Bridger** |  |
|  |  |
|  |  |

**TABLE OF CONTENTS**

[1 Requirements 4](#_Toc535360258)

[2 Tasks 5](#_Toc535360259)

[2.1 Become Familiar with LabVIEW 5](#_Toc535360260)

[2.2 Create a project structure in subfolders 5](#_Toc535360261)

[2.3 Create SVN or Github repository for projectName 5](#_Toc535360262)

[2.4 Understand how to setup serial communication with other hardware from LabVIEW 6](#_Toc535360263)

[2.5 Create a testing monitor VI under ../projectName/Example 7](#_Toc535360264)

[2.6 Create monitoring VIs under ../projectName/Monitor 8](#_Toc535360265)

[2.7 Create a testing control VI under ../projectName/Example 8](#_Toc535360266)

[2.8 Create temperature control VIs under ../projectName/Control 9](#_Toc535360267)

[2.9 Create/debug the mainVI under ../projectName 9](#_Toc535360268)

[2.10 Write user manual and test report under ../projectName/Document 10](#_Toc535360269)

[3 Issues 10](#_Toc535360270)

[4 Summary 10](#_Toc535360271)

[5 Appendix 10](#_Toc535360272)

**List of Figures**

|  |  |
| --- | --- |
| FIGURE | PAGE |

**No table of figures entries found.**

**List of Abbreviations**

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**Applicable Documents**

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| **Document Number** | **Document Title** | **Version Number** |
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**Reference Documents**

|  |  |  |
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| **Document Number** | **Document Title** | **Version Number** |
| 1 | 2014-11-24 v1 Swiss Cryo Procedure.docx |  |
| 2 | Fa17\_Electrical sceme.pdf |  |
| 3 | Fa18\_Electrical sceme.pdf |  |
| 4 | Fa19\_Electrical sceme.pdf |  |
| 5 | Sensorposition.pdf |  |
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# Requirements

[RD1]

# Tasks

## Become Familiar with LabVIEW

## Create a project structure in subfolders

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| **Project folder** |  |  |  |
| projectName |  |  |  |
|  | mainVIName.vi |  |  |
|  |  | **Subfolder** |  |
|  |  | Common | Some common used VIs |
|  |  | Monitor | Temperature/pressure monitor VIs. |
|  |  | Control | Temperature control VIs. |
|  |  | Example | Some initial test VIs |
|  |  | Document | Some short user manual and test report |

## Create SVN or Github repository for projectName

Keep updating repository regularly after major step

a gitHub repository <https://github.com/ukatc/swissCryoMonCtrl> has been create for this project

Using “git clone” to check out to your local disk directory, such as

/d/SwissCryoInternStudent/swissCryoMonCtrl

The directory will have:

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Right click on swissCryoMonCtrl.lvproj, the LabVIEW project will start as shown below

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## Understand how to setup serial communication with other hardware from LabVIEW

Read from Website, particularly look for “set up serial communication with lakeshore 218 (or 340) from LabVIEW”

## Create a testing monitor VI under ../projectName/Example

**Read the Example: LS218-TempTester.vi => : read temperature from lakeshore 218**

Click

/d/SwissCryoInternStudent/swissCryoMonCtrl/Example/LS218-TempTester.vi

To understand how to write a simple working VI

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**Read the Example: TPG261\_ReadData.vi =>:read pressure readings from TPG 261 gauge**

Click

/d/SwissCryoInternStudent/swissCryoMonCtrl/Example/TPG261\_ReadData.vi

To understand how to write a simple working VI

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## Create monitoring VIs under ../projectName/Monitor

Example: expand the above test VI to include all 4 Lakeshore218 temperature readings

## Create a testing control VI under ../projectName/Example

**Read the Example: LS340-TempTester.vi =>: control/monitor temperature from lakeshore 340**

Click

/d/SwissCryoInternStudent/swissCryoMonCtrl/Example/LS340-TempTester.vi

To understand how to write a simple working VI

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## Create temperature control VIs under ../projectName/Control

Example: expand the above test VI to include all 2 Lakeshore 340 temperature control

## Create/debug the mainVI under ../projectName

Combine 2.5 and 2.7, to construct the main GUI for control/monitor

**The empty swissCryoMonCtrl.vi is included. Develop it to a full working VI**

## Write user manual and test report under ../projectName/Document

# Issues

# Summary

# Appendix

Some screenshots from previous GUI and document [RD1]

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