Software Design Notes

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| Rev. | Revision Notes | DCN | Date |
| 1 | Initial Release | N/A | 24SEP2021 |
| 2 |  |  |  |

# Introduction

## Purpose

This document presents software design notes for a VBA subroutine that logs a form and saves the form as a PDF.

This software is intended to automatically log and file the Observation Form, 100-001.

Minimal risk is associated with this software.

## Scope

This document applies to the VBA subroutine(s) listed in Table 1 – VBA Form Submission Subroutine.

Table 1 – VBA Form Submission Subroutine

|  |  |
| --- | --- |
| **Subroutine** | **Description** |
| submitButton\_Click() | * Adds a row to an Excel file located in OBSERVATION\_LOG\_FILEPATHNAME. * Unprotects/Protects the Excel file with OBSERVATION\_LOG\_PASSWORD. * Saves a PDF in PDF\_FILEPATH. * The subroutine must be located in the ThisDocument.cls file. |

## References

### File Locations

#### Published Files

A controlled Observation Form is available in the GitHub repository.

* https://github.com/nolan210/BexarVBA.git

#### VBA Source Code

A text file of the ThisDocument.cls source code is available in the GitHub repository.

* https://github.com/nolan210/BexarVBA.git

#### Engineering Files

A copy of the Word Macro Enabled Template, Excel file and VBA Source Code is in the GitHub repository.

* https://github.com/nolan210/BexarVBA.git

# Software Specification Requirements

#### SSR1 – Usability

No text (title)

#### SSR1.1

Embedded in a Word Macro Enabled Template.

#### SSR1.2

Accesses and saves files on a local file server.

#### SSR1.3

Does not require the document user to locate files or navigate folders.

#### SSR1.4

A single “Submit” button accomplishes all logging and file saving functionality.

#### SSR2 – Functionality

No text (title)

#### SSR2.1

Log date and time at button click.

#### SSR2.2

Log username of account logged into computer at button click.

#### SSR2.3

Log computer ID at button click.

#### SSR2.4

Log a primary key at button click, which is equal to the row index of the form’s Excel entry.

#### SSR2.5

Log the Obseration Form’s text form fields in the Excel file.

#### SSR2.6

Save the Obseration Form as a PDF document.

#### SSR2.7

Unprotect the sheet immediately prior to logging.

#### SSR2.8

Protect the sheet immediately after logging.

# Flowchart



# Source Code

Table 2 – VBA Source Code

|  |
| --- |
| VERSION 1.0 CLASS  BEGIN  MultiUse = -1 'True  END  Attribute VB\_Name = "ThisDocument"  Attribute VB\_GlobalNameSpace = False  Attribute VB\_Creatable = False  Attribute VB\_PredeclaredId = True  Attribute VB\_Exposed = True  'Used to move documents  Private Const PDF\_FILEPATH As String = "C:\Repos\Software\Bexar VBA\BexarVBA\100\001 Observation Form\Observation Log\PDFs\"  Private Const OBSERVATION\_LOG\_FILEPATHNAME As String = "C:\Repos\Software\Bexar VBA\BexarVBA\100\001 Observation Form\Observation Log\Observation Log.xlsx"  Private Const OBSERVATION\_LOG\_PASSWORD As String = "Z45KUWkf37Drdy\*2"  'Used to access Content Controls  Private Const oTitle = "observationTitle"  Private Const oType = "observationType"  Private Const oObservation = "observation"  Private Const oCaption1 = "caption1"  Private Const oCaption2 = "caption2"  'Used to access data array  Enum formInputEnums  iUser  iComputer  iDatetime  iTitle  iType  iObservation  iCaption1  iCaption2  iPDF  End Enum  Private Sub submitButton\_Click()  'Nolan Manteufel  '10JUL2020  'Logs form in OBSERVATION\_LOG\_FILEPATHNAME excel file.  'Protects the OBSERVATION\_LOG\_FILEPATHNAME excel file with OBSERVATION\_LOG\_PASSWORD.  'Saves pdf of form in PDF\_FILEPATH folder.  'Variables  Dim formDoc As Document  Set formDoc = ActiveDocument  Dim cc As ContentControls  Dim excelApp As Excel.Application  Dim logWB As Excel.Workbook  Dim logSheet As Excel.WOrksheet  'User  Dim formUser As String  formUser = Environ$("username")  formUser = LCase(formUser)  'Computer  Dim formComputer As String  formComputer = Environ$("computername")  formComputer = LCase(formComputer)  'Datetime  Dim dateTime As String  Dim timeOnly As String  timeOnly = Format(Time, "hhmmss")  dateTime = Format(Date, "yyyymmdd")  dateTime = dateTime & timeOnly  'Inputs array  Dim formInputs(8) As String  'Populate metadata  formInputs(iUser) = formUser  formInputs(iComputer) = formComputer  formInputs(iDatetime) = dateTime  'Populate data  Set cc = formDoc.SelectContentControlsByTag(oTitle)  formInputs(iTitle) = cc(1).Range.Text  Set cc = formDoc.SelectContentControlsByTag(oType)  formInputs(iType) = cc(1).Range.Text  Set cc = formDoc.SelectContentControlsByTag(oObservation)  formInputs(iObservation) = cc(1).Range.Text  Set cc = formDoc.SelectContentControlsByTag(oCaption1)  formInputs(iCaption1) = cc(1).Range.Text  Set cc = formDoc.SelectContentControlsByTag(oCaption2)  formInputs(iCaption2) = cc(1).Range.Text  formInputs(iPDF) = PDF\_FILEPATH & dateTime & "\_" & formUser & ".pdf"  'Launch excel  Set excelApp = New Excel.Application  'The workbook  Set logWB = excelApp.Workbooks.Open(FileName:=OBSERVATION\_LOG\_FILEPATHNAME)  'The worksheet  Set logSheet = logWB.Worksheets("Observations")  'Unprotect the log  logSheet.Unprotect (OBSERVATION\_LOG\_PASSWORD)  'Log the entry  Dim observationPKey As Long  observationPKey = logSheet.UsedRange.Rows.Count + 1  logSheet.Cells(observationPKey, 1).Value = observationPKey  logSheet.Cells(observationPKey, 2).Value = formInputs(iDatetime)  logSheet.Cells(observationPKey, 3).Value = formInputs(iUser)  logSheet.Cells(observationPKey, 4).Value = formInputs(iComputer)  logSheet.Cells(observationPKey, 5).Value = formInputs(iType)  logSheet.Cells(observationPKey, 6).Value = formInputs(iTitle)  logSheet.Cells(observationPKey, 7).Value = formInputs(iObservation)  logSheet.Cells(observationPKey, 8).Value = formInputs(iCaption1)  logSheet.Cells(observationPKey, 9).Value = formInputs(iCaption2)  logSheet.Cells(observationPKey, 10).Value = formInputs(iPDF)  'Protect the log  logSheet.Protect (OBSERVATION\_LOG\_PASSWORD)  'Close log  logWB.Close savechanges:=True  'Release object references  Set cc = Nothing  Set logSheet = Nothing  Set logWB = Nothing  Set excelApp = Nothing  'Save as PDF  formDoc.ExportAsFixedFormat \_  OutputFileName:=formInputs(iPDF), \_  ExportFormat:=wdExportFormatPDF, \_  OpenAfterExport:=False  'Confirmation message  MsgBox ("Awesome, " & formUser & ". Your observation has been submitted successfully.")  End Sub |