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| CS3215 Proposal |
| SyncSharp – A free sync tool for tertiary students |
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1. **INTRODUCTION**
   1. **Context of proposal**

This proposal is written in response to develop a file synchronization tool for CS3215 - Software Engineering Project module.

* 1. **Current situation**

Currently, most of the sync tools that are available in the market required installation which may considered as a hassle to some users.

* 1. **Problems and Needs**

Users who work with multiple computers may need to sync files through a intermediate device such as a thumb drive. Installing a program on a PC is not allowed if users are not granted administrative rights, and this could be a problem when user needs to sync files and there is no sync tool installed on the PC or on his immediate device. As such, there is a need for a sync tool that does not required installation and is capable of performing synchronization like any other sync tools.

1. **OUR PROPOSED PRODUCT**
   1. **Product Description**

The sync tool that our team is building is called SyncSharp, which allows users to sync files between multiple computers through an immediate device with no installation required.

* 1. **Our Vision for SyncSharp**

Our team vision for this project is to build a synchronization tool which is easy to use and supports all the basic features of a typical sync tool. In addition, the tool must be reasonably fast and efficient to use.

1. **DOMAIN MODEL**



1. **USE CASES**



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| **Use Case Number: 01** | **Use Case Name: Compare Folders** |
| **Actors: Player, System** | |
| **Main Success Scenario:**   1. Player sets the source and destination directories to compare. 2. Player proceeds to compare the directories 3. System validates the input for source & destination 4. System begins to compare the directories 5. System proceeds to retrieve the contents of the directories 6. System performs source & target files matching 7. System report the differences found   **Extension(s):**  3a. Player provides invalid source or destination directory  3a1. System prompts an error message  Use case resumes from step 1.  5a. System does not have permission to access the file/folder  5a1. System will skip the file/folder and update the log file  Use case resumes from step 5. | |

1. **FEATURE LIST**
   1. **SyncSharp v0.0**

We plan to deliver the following features for SyncSharp v0.0:

* Create, edit and save synchronization profiles.
* Compare source and target directories.
* Perform 1 way synchronization between the source and target directories.
* Generate text log file after synchronization
  1. **SyncSharp v0.9**

For SyncSharp v0.9, we plan to incorporate the following features:

* Perform 2 ways synchronization between the source and target directories
* Define inclusion/exclusion filters
* Define copy/deletion rules
* Provide comparison options
* Email log file
  1. **SyncSharp v1.0**

For SyncSharp v1.0, we plan to incorporate the following features:

* Support local network sync
* Provide byte by byte verification after synchronization is completed
* Backup files
* Restore backups
  1. **SyncSharp v2.0**

For final version of the product, we plan to incorporate the following features:

* Support file encryption/ decryption
* Backup to FTP server
* Sync files with a FTP server

1. **GLOSSARY**

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| Term | Definition |
| SyncSharp | The name of our sync tool |
| 1 way sync | Update destination directory to have the same state as source directory |
| 2 ways sync | Update source and destination directories to have the same state |
| Differences window | Window form that displays the differences between the source & destination directories |
| Log files | A html or text files that records the operations perform in the synchronization process |
| Profiles | Configuration file that contains source & target information to be synchronized |
| Target | The destination directory to be sync or compared |
| Detector | The sub-system that detect changes from the source or destination directory |
| Reconciler | The sub-system that resolves conflicts between the source & destination directories |