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CS3
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Agile Development Git Assignment 1
20/10/2018

Cork Institute of Technology

Individual Skill Assessment

Module Title: **Agile Processes**

Module Code: **COMP7039**

Programme Title: **B.Sc. Hons in Computer Systems – Stage 3**

Programme Code: **CS3**

Date Given: **October 15, 2018.**

Date Due: **October 26, 2018, on/before 13:00.**

Value: **20% of Module total-score.**

<Name/Class/Email> <-- fill in please & then pages 5+ then submit this edited document>

1. **Cork Greenway Cycle Trails wishes to create a web page but is unsure of the specification so wishes to have it developed in stages.** Create an initial web page and subsequently update it in stages, using git to manage the changes.

    (a)　　　　Create a very basic HTML home page document for the group. The page only contains the name of the group and its current contact-address, (likely to change). Create a GIT repository and commit the initial version of the page.

    (b)　　　　Add items to the web page create and commit 5 variations, each time committing to the repository.

    (c)　　　　Add a second file to the repository e.g. a css file to change the look of the page and commit that css file also with two revisions of the css file. Also revise the html code to use the css file. Thus, there are 7 versions of the web page.

    (d)　　　　　Demonstrate rolling back to version 3. Branch version 5 into a new web page to demonstrate a new variation for the customer.

    (e)　　　　Demonstrate merging, versioning and stashing.

    (4 marks ea, 20 marks total)

    NB:

    "By submitting this electronically, using an account & password only I have access to, I hereby certify that this material which I now submit for assessment is entirely my own work and has not been taken from the work of others, save and to the extent, that such work has been cited and acknowledged within the text of my work."

    CIT has access to plagiarism tools and these may be used on submitted assignments. The use of 'rent a coder' type services in preparing your assignment is forbidden.

    Demo
    You may be asked to demo your assignment in the lab.

    Screenshots
    See below example of screenshots to use when submitting this assignment – please ensure the **command prompt uses your login id or student ID**.

Submitting.

Please submit THIS edited document with screenshots on page 5+ AND a zip/7z archive file of your git folder including the hidden **.git** folder.

Submissions to be made as an e-mail attachment to:

Your e-mail must contain the following **Subject** content only:
"Git Assignment_October_26_2018"

Additionally, a **hardcopy of THIS edited document** must be handed in by the due-date. Please ensure that your hardcopy-submission top-page displays:

    your ***CIT student number,***
    name,
    mycit e-mail address,
    date,
    signed originality-declaration, *and*
    assignment title, *(i.e. "Git Assignment_October_26_2087").*

Place each item of the assignment on a separate page stating if completed or not and showing screen shot(s) of how you achieved the task item and a description of what you've done..

1 (a) <task description copied from page 2>

Completed? Yes|No

1(a) Example task "initialize a Git repository and set the user's name and password"

Screenshot of *Init*

Description: the *Git init* command created an empty git repository

Screen shot of setting **username** and **email address:**

Confirm name and   email address:

Description: name and email address set suing git con fig command, *git –list* displays all configurations including name and email address. Alternatively using *git config user.name* with out parameters also displays the name, similar for email address.

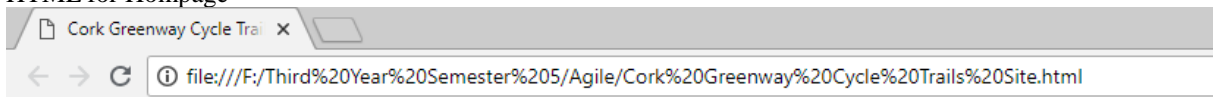*--- **New page = insert page break** for1(b) etc.*
(NEW PAGE)

1 (a) < Create a very basic HTML home page document for the group. The page only contains the name of the group and its current contact-address, (likely to change). Create a GIT repository and commit the initial version of the page.>

Completed? **Yes**

```
Cork Greenway Cycle Trails Site.html ☒
1      <!DOCTYPE html>
2      <!-- Author: (Dan Coleman) -->
3    □ <html lang="en-IE">
4    □     <head>
5              <meta charset="utf-8">
6              <title>Cork Greenway Cycle Trails</title>
7              <link rel="CatIcon" href="images/cat.ico">
8          </head>
9    □    <body>
10   □    <main>
11   □    <p> Cork Greenway Cycle Trails. <br>
12            5 Airport Business Park (likely to change soon)</p>
13                    </main>
14
15        </body>
16   └ </html>
```

HTML for Hompage

```
🗋 Cork Greenway Cycle Trai ✕
← → C  ⓘ file:///F:/Third%20Year%20Semester%205/Agile/Cork%20Greenway%20Cycle%20Trails%20Site.html
```

Cork Greenway Cycle Trails.
5 Airport Business Park (likely to change soon)

What homepage looks like

```
Dan@GlaDOs MINGW64 ~
$ cd D:

Dan@GlaDOs MINGW64 /d
$ mkdir git

Dan@GlaDOs MINGW64 /d
$ cd git

Dan@GlaDOs MINGW64 /d/git
$ git init
Initialized empty Git repository in D:/git/.git/

Dan@GlaDOs MINGW64 /d/git (master)
$ git config user.name "Dan Colman"

Dan@GlaDOs MINGW64 /d/git (master)
$ git config user.email "daniel.coleman1@mycit.ie"

Dan@GlaDOs MINGW64 /d/git (master)
$ git config --list
core.symlinks=false
core.autocrlf=true
core.fscache=true
color.diff=auto
color.status=auto
color.branch=auto
color.interactive=true
help.format=html
rebase.autosquash=true
http.sslcainfo=C:/Program Files/Git/mingw64/ssl/certs/ca-bundle.crt
http.sslbackend=openssl
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
credential.helper=manager
core.editor='C:\Users\Dan\Notepad++\notepad++.exe' -multiInst -notabbar -nosessi
on -noPlugin
user.name=Dan
user.email=daniel.coleman1@mycit.ie
core.repositoryformatversion=0
core.filemode=false
:
```

Setting up git. The directory is created with mkdir, git init initializes the hidden .git folder appear in the folder, I then configure the user name and email. Git config –list allows me to check the configurations

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)

        Cork Greenway Cycle Trails Site.html

nothing added to commit but untracked files present (use "git add" to track)

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Initial Commit"
[master (root-commit) be4fdab] Initial Commit
 1 file changed, 15 insertions(+)
 create mode 100644 Cork Greenway Cycle Trails Site.html

Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master
nothing to commit, working tree clean
```

Commiting initial version of the html file. Git status allows me to see what files are in the folder that aren't committed or files that arent up to date on the repo. I could have used git add [filename] to add just the file to the repo, but since we use . in the labs, I chose to use that. I then commit to the master branch and leave a comment to later differenciate this version from the others. Finally I redo git status to show it added succesfully

1 (b) < Add items to the web page create and commit 5 variations, each time committing to the repository. >

Completed? **Yes**

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 879f656..bd0602e 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -11,5 +11,11 @@
         <p> Cork Greenway Cycle Trails. <br>
             5 Airport Business Park (likely to change soon)</p>
                             </main>
+        <footer> <details>
+            <summary><small> All images and text are belong to Cork Greenway Cycle Trails.
+                        &copy; , &reg; and <sup><small>&trade;</small></sup> are belong to Dan Coleman of Cork Greenway Cycle Trails </small>
+            </summary>
+        </details>
+        </footer>
         </body>
 </html>
\ No newline at end of file

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Added footer"
[master 6778529] Added footer
 1 file changed, 6 insertions(+)
```

Commit #1: Commited and added message "Added a footer"

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index bd0602e..9b97d74 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -8,9 +8,12 @@
         </head>
         <body>
         <main>
-        <p> Cork Greenway Cycle Trails. <br>
-                5 Airport Business Park (likely to change soon)</p>
-                        </main>
+        <address>
+                Visit us at:<br>
+                Cork Greenway Cycle Trails. <br>
+                5 Airport Business Park (likely to change soon)
+        </address>
+                        </main>
         <footer> <details>
                 <summary><small> All images and text are belong to Cork Greenway Cycle Trails.
                         &copy; , &reg; and <sup><small>&trade;</small></sup> are belong to Dan Coleman of Cork Greenway Cycl

Dan@GlaDOs MINGW64 /d/git (master)
Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Used address tags"
[master d641fdc] Used address tags
 1 file changed, 6 insertions(+), 3 deletions(-)
```

Commit #2: Commited and Added message "Used Address Tags"

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 9b97d74..2490df9 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -8,11 +8,13 @@
         </head>
         <body>
         <main>
-           <address>
+               <address>
+                   Visit us at:<br>
+                   Cork Greenway Cycle Trails. <br>
+                   5 Airport Business Park (likely to change soon)
-           </address>
+               </address>
+           Any Questions? <br>
+           Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
                                </main>
         <footer> <details>
               <summary><small> All images and text are belong to Cork Greenway Cycle Trails.

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Added Contact Number"
[master b5326d4] Added Contact Number
 1 file changed, 4 insertions(+), 2 deletions(-)
```
Commit #3: Commited and added message "Added Contact Number"

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 2490df9..9cf5cc6 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -15,6 +15,7 @@
               </address>
         Any Questions? <br>
         Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
+           Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail.com</a><br>
                                </main>
         <footer> <details>
               <summary><small> All images and text are belong to Cork Greenway Cycle Trails.

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .
Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Added Email"
[master 7162e25] Added Email
 1 file changed, 1 insertion(+)
```
Commit #4:Commited and added message "Added Email"

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 9cf5cc6..1d021c2 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -15,7 +15,10 @@
                </address>
         Any Questions? <br>
         Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
-         Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail.com</a><br>
+         Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail.com</a><br> <br>
+         <p> What do our clients say?</p>
+         <blockquote> Cork Greenway Cycle Trails is MONDO COOL!
+         <br> <strong> -Jamie Cotter</strong></blockquote>
                             </main>
         <footer> <details>
                 <summary><small> All images and text are belong to Cork Greenway Cycle Trails.

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .
Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Added Client Quote"
[master 1a36487] Added Client Quote
 1 file changed, 4 insertions(+), 1 deletion(-)
```

Commit #5:Commited and added message "Added Client Quote"

NOTE: git diff "Cork Greenway Cycle Trails Site.html" allows me to see what has been added to each file since last commit, the red parts are what have beed changed/deleted from the previous version, while the green are what has been inserted (added to the file)

1 (c) <Add a second file to the repository e.g. a css file to change the look of the page and commit that css file also with two revisions of the css file. Also revise the html code to use the css file. Thus, there are 7 versions of the web page.> Completed? **Yes**

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)

        git.css

nothing added to commit but untracked files present (use "git add" to track)

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Added a css file"
[master f96bb60] Added a css file
 1 file changed, 6 insertions(+)
 create mode 100644 git.css
```

Commit #6:2nd file (.css) file added to repository

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 1d021c2..d431afc 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -5,6 +5,7 @@
                <meta charset="utf-8">
                        <title>Cork Greenway Cycle Trails</title>
                        <link rel="CatIcon" href="images/cat.ico">
+                       <link rel="stylesheet" type="text/css" href="git.css">
                </head>
                <body>
                <main>

Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Cork Greenway Cycle Trails Site.html

no changes added to commit (use "git add" and/or "git commit -a")

Dan@GlaDOs MINGW64 /d/git (master)
$ git add.
git: 'add.' is not a git command. See 'git --help'.

The most similar command is
        add

Dan@GlaDOs MINGW64 /d/git (master)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Css connected to html"
[master 8c2ab30] Css connected to html
 1 file changed, 1 insertion(+)
```

Commit #7 the website can now use the css.

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff git.css
diff --git a/git.css b/git.css
index 5633420..b5cc6b9 100644
--- a/git.css
+++ b/git.css
@@ -1,5 +1,5 @@
 body {
-    background-color: lightblue;
+    background-color: blue;
 }
 * {
        font-family: "Comic Sans MS";

Dan@GlaDOs MINGW64 /d/git (master)
$ git add git.css

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Changed the CSS as requested"
[master c623767] Changed the CSS as requested
 1 file changed, 1 insertion(+), 1 deletion(-)
```

Css revision #1

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git diff git.css
diff --git a/git.css b/git.css
index b5cc6b9..91ec3dc 100644
--- a/git.css
+++ b/git.css
@@ -1,5 +1,5 @@
 body {
-    background-color: blue;
+    background-color: lightgreen;
 }
 * {
        font-family: "Comic Sans MS";

Dan@GlaDOs MINGW64 /d/git (master)
$ git add git.css

Dan@GlaDOs MINGW64 /d/git (master)
$ git commit -m "Css revision #2"
[master baea7c9] Css revision #2
 1 file changed, 1 insertion(+), 1 deletion(-)
```

Css revision #2

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git log
commit baea7c99a889f4556610e2fda9f199cde8884513 (HEAD -> master)
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 19:05:37 2018 +0100

    Css revision #2

commit c62376771294274c43ea1433c393b48a6755da6e
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 19:02:50 2018 +0100

    Changed the CSS as requested

commit 8c2ab30182d4bcad4d842926c655ad2d40a24d36
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:56:25 2018 +0100

    Css connected to html

commit f96bb60140dd1aee8255959884bdde719667d695
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:55:18 2018 +0100

    Added a css file

commit 1a3648709b26d935abf05a18e7f8bbd96e61d5c4
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:45:11 2018 +0100

    Added Client Quote

commit 7162e25b6776d2f73e23939364a89dd104604191
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:39:12 2018 +0100

    Added Email

commit b5326d4462e053c04093cd16dc012a7432bfe67b
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:36:04 2018 +0100

    Added Contact Number

commit d641fdc1499645e38412376a18a3e5f3d20401e1
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:33:08 2018 +0100

    Used address tags
commit 6778529a113176645ba99aeca58f9fb795a33f79
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:22:24 2018 +0100

    Added footer

commit be4fdaba028b70bfb9f20543d26a8660f22a11d9
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:16:41 2018 +0100

    Initial Commit
(END)
```

Git log allows you to see all the commits made to the repository. This proves the 7 webpage updates and the css file with its 2 revisions.

The website after all css variations.

1 (d) < Demonstrate rolling back to version 3. Branch version 5 into a new web page to demonstrate a new variation for the customer.> Completed? **Yes**

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git checkout HEAD~7
Note: checking out 'HEAD~7'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by performing another checkout.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -b with the checkout command again. Example:

  git checkout -b <new-branch-name>

HEAD is now at d641fdc Used address tags

Dan@GlaDOs MINGW64 /d/git ((d641fdc...))
$ git log
commit d641fdc1499645e38412376a18a3e5f3d20401e1 (HEAD)
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:33:08 2018 +0100

    Used address tags

commit 6778529a113176645ba99aeca58f9fb795a33f79
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:22:24 2018 +0100

    Added footer

commit be4fdaba028b70bfb9f20543d26a8660f22a11d9
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 16:16:41 2018 +0100

    Initial Commit
```

We use checkout HEAD~7 to rollback 7 times to the 3rd commit. If we want to go back to our more recent version, we can use git checkout master.

```
Dan@GlaDOs MINGW64 /d/git ((d641fdc...))
$ notepad "Cork Greenway Cycle Trails Site.html"
```

Used to check out the old version

```html
<!DOCTYPE html>
<!-- Author: (Dan Coleman) -->
<html lang="en-IE">
    <head>
            <meta charset="utf-8">
                    <title>Cork Greenway Cycle Trails</title>
                    <link rel="CatIcon" href="images/cat.ico">
        </head>
        <body>
        <main>
         <address>
                Visit us at:<br>
                Cork Greenway Cycle Trails. <br>
                5 Airport Business Park (likely to change soon)
        </address>
                                    </main>
         <footer> <details>
         <summary><small> All images and text are belong to Cork Greenway Cycle Trails.
                            &copy; , &reg; and <sup><small>&trade;</small></sup> are belong to Dan Coleman of Cork Greenway Cycle Trails </small>
        </summary>
    </details>
        </footer>
        </body>
</html>
```

The old version of the html file (version 3)

We go back to the master then checkout the 5th version.

Create a branch at version 5 called demoBranch. Git branch allows you to see all branches.

```
Dan@GlaDOs MINGW64 /d/git ((5b79e9d...))
$ git checkout demoBranch
Warning: you are leaving 1 commit behind, not connected to
any of your branches:

  5b79e9d Sample addition to demoBranch

If you want to keep it by creating a new branch, this may be a good time
to do so with:

 git branch <new-branch-name> 5b79e9d

Switched to branch 'demoBranch'

Dan@GlaDOs MINGW64 /d/git (demoBranch)
$ notepad "Cork Greenway Cycle Trails Site.html"

Dan@GlaDOs MINGW64 /d/git (demoBranch)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 9cf5cc6..f6b743b 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -16,7 +16,8 @@
        Any Questions? <br>
        Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
        Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail.com</a><br>
                        </main>
-       [SAMPLE TEXT]
+</main>
        <footer> <details>
            <summary><small> All images and text are belong to Cork Greenway Cycle Trails.
                &copy; , &reg; and <sup><small>&trade;</small></sup> are belong to Dan Coleman of Cork Greenway Cycle Trails </small>

Dan@GlaDOs MINGW64 /d/git (demoBranch)
$ git add "Cork Greenway Cycle Trails Site.html"

Dan@GlaDOs MINGW64 /d/git (demoBranch)
$ git commit -m "Sample addition to demoBranch"
[demoBranch 47c088e] Sample addition to demoBranch
 1 file changed, 2 insertions(+), 1 deletion(-)
```

Here we see me add sample text to version 5 on the demoBranch.

1 (e) < Demonstrate merging, versioning and stashing > Completed? **Yes**
MERGING:

```
Dan@GlaDOs MINGW64 /d/git (demoBranch)
$ git checkout master
Switched to branch 'master'

Dan@GlaDOs MINGW64 /d/git (master)
$ git merge demoBranch
Auto-merging Cork Greenway Cycle Trails Site.html
CONFLICT (content): Merge conflict in Cork Greenway Cycle Trails Site.html
Automatic merge failed; fix conflicts and then commit the result.
```

At first I cannot merge the branches as the text we added to demoBranch is different to the text in a later version.

```
Dan@GlaDOs MINGW64 /d/git (master|MERGING)
$ notepad "Cork Greenway Cycle Trails Site.html"

Dan@GlaDOs MINGW64 /d/git (master|MERGING)
$ git merge demoBranch
error: Merging is not possible because you have unmerged files.
hint: Fix them up in the work tree, and then use 'git add/rm <file>'
hint: as appropriate to mark resolution and make a commit.
fatal: Exiting because of an unresolved conflict.

Dan@GlaDOs MINGW64 /d/git (master|MERGING)
$ git add "Cork Greenway Cycle Trails Site.html"

Dan@GlaDOs MINGW64 /d/git (master|MERGING)
$ git add .

Dan@GlaDOs MINGW64 /d/git (master|MERGING)
$ git commit -m "Merged master and demoBranch"
[master 0ed8851] Merged master and demoBranch
```

We solve the issue by removing the additional text in the demoBranch and then we add and commit the files, successfully merging the two.

```
[master 0ed8851] Merged master and demoBranch

Dan@GlaDOs MINGW64 /d/git (master)
```

Versioning: Versioning is done with tags, there are 2 kinds. Annotated and lightweight, git tag -a [version name] -m [message about tag] is used for annotated tags. Git tag allows you to see all available tags. Git show [version name] is used to see the tag.

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git tag -a v1.0 -m "This is a sample tag!"

Dan@GlaDOs MINGW64 /d/git (master)
$ git tag
v1.0

Dan@GlaDOs MINGW64 /d/git (master)
$ git show v1.0
tag v1.0
Tagger: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 20:25:45 2018 +0100

This is a sample tag!

commit 0ed88518eee2503383f60d4a2fbff50be86a1f82 (HEAD -> master, tag: v1.0)
Merge: baea7c9 47c088e
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 20:04:38 2018 +0100

    Merged master and demoBranch

diff --cc Cork Greenway Cycle Trails Site.html
index d431afc,f6b743b..9f259a4
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@@ -16,11 -15,9 +16,17 @@@
                </address>
         Any Questions? <br>
         Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
++<<<<<<< HEAD
 +        Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail
.com</a><br> <br>
 +        <p> What do our clients say?</p>
 +        <blockquote> Cork Greenway Cycle Trails is MONDO COOL!
 +        <br> <strong> -Jamie Cotter</strong></blockquote>
 +                        </main>
++=======
+         Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail
.com</a><br>
-         [SAMPLE TEXT]
++
+ </main>
++>>>>>>> demoBranch
         <footer> <details>
                <summary><small> All images and text are belong to Cork Greenw
ay Cycle Trails.
                        &copy;  , &reg; and <sup><small>&trade;</small></
sup> are belong to Dan Coleman of Cork Greenway Cycle Trails </small>
```

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git tag v1.0-lw

Dan@GlaDOs MINGW64 /d/git (master)
$ git tag v1.0-lw
fatal: tag 'v1.0-lw' already exists

Dan@GlaDOs MINGW64 /d/git (master)
$ git show v1.0-lw
commit 0ed88518eee2503383f60d4a2fbff50be86a1f82 (HEAD -> master, tag: v1.0-lw, t
ag: v1.0)
Merge: baea7c9 47c088e
Author: Dan Colman <daniel.coleman1@mycit.ie>
Date:   Mon Oct 22 20:04:38 2018 +0100

    Merged master and demoBranch

diff --cc Cork Greenway Cycle Trails Site.html
index d431afc,f6b743b..9f259a4
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@@ -16,11 -15,9 +16,17 @@@
                </address>
        Any Questions? <br>
        Call us as <a href="tel:3530214554775">0214554775 </a> or <br>
++<<<<<<< HEAD
 +      Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail
.com</a><br> <br>
 +      <p> What do our clients say?</p>
 +      <blockquote> Cork Greenway Cycle Trails is MONDO COOL!
 +      <br> <strong> -Jamie Cotter</strong></blockquote>
 +                      </main>
++=======
+       Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail
.com</a><br>
-       [SAMPLE TEXT]
++
+ </main>
++>>>>>>> demoBranch
        <footer> <details>
                <summary><small> All images and text are belong to Cork Greenw
ay Cycle Trails.
                        &copy; , &reg; and <sup><small>&trade;</small></
sup> are belong to Dan Coleman of Cork Greenway Cycle Trails </small>

Dan@GlaDOs MINGW64 /d/git (master)
$ git tag
v1.0
v1.0-lw
```

The lightweight tags have less information. This time, if you run git show on the tag, you don't see the extra tag information. The command just shows the commit.

Stashing:

```
Dan@GlaDOs MINGW64 /d/git (master)
$ notepad "Cork Greenway Cycle Trails Site.html"

Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Cork Greenway Cycle Trails Site.html

no changes added to commit (use "git add" and/or "git commit -a")

Dan@GlaDOs MINGW64 /d/git (master)
$ git diff "Cork Greenway Cycle Trails Site.html"
diff --git a/Cork Greenway Cycle Trails Site.html b/Cork Greenway Cycle Trails Site.html
index 9f259a4..779de4f 100644
--- a/Cork Greenway Cycle Trails Site.html
+++ b/Cork Greenway Cycle Trails Site.html
@@ -21,6 +21,7 @@
        <p> What do our clients say?</p>
        <blockquote> Cork Greenway Cycle Trails is MONDO COOL!
        <br> <strong> -Jamie Cotter</strong></blockquote>
+        STASHING EXAMPLE
                        </main>
 =======
        Email: <a href="mailto:Dan(Coleman)@fakeemail.com">DanColeman@fakeemail.com</a><br>
```

File edited to show stashing

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git stash
git status
Saved working directory and index state WIP on master: 0ed8851 Merged master and
 demoBranch
Dan@GlaDOs MINGW64 /d/git (master)
$ git status
On branch master
nothing to commit, working tree clean

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash list
stash@{0}: WIP on master: 0ed8851 Merged master and demoBranch

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash apply
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Cork Greenway Cycle Trails Site.html

no changes added to commit (use "git add" and/or "git commit -a")

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash list
stash@{0}: WIP on master: 0ed8851 Merged master and demoBranch

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash
Saved working directory and index state WIP on master: 0ed8851 Merged master and
 demoBranch

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash list
stash@{0}: WIP on master: 0ed8851 Merged master and demoBranch
stash@{1}: WIP on master: 0ed8851 Merged master and demoBranch
```

Git stash allows us to switch branches without committing, this is useful as it allows you to do bits of work in a branch and you can come back to it at a later point. Stashing takes the dirty state of your working directory (i.e your modified files) and save it in a stack of unfinished changes you can reapply at any time.
Git stash list allows you to see a list of all your stashes with an index number and a description of them.
Git stash apply allows you to reopen one of these stashed states.

```
Dan@GlaDOs MINGW64 /d/git (master)
$ git stash pop
On branch master
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git checkout -- <file>..." to discard changes in working directory)

        modified:   Cork Greenway Cycle Trails Site.html

no changes added to commit (use "git add" and/or "git commit -a")
Dropped refs/stash@{0} (be175ebd268aac58774c318434c1bcbb8cebce48)

Dan@GlaDOs MINGW64 /d/git (master)
$ git stash drop
Dropped refs/stash@{0} (793355076ad8a89375f7763d5adfccf10a1a4472)
```

Git stash pop is similar to apply in that it reopens one of the stashed states, however it throws away the (topmost, by default) stash after applying it, whereas git stash apply leaves it in the stash list for possible later reuse.
Finally git stash drop gets rid of the top stash without applying it.