

GitHub

- Github gives you a centralised remote (sometimes called a Forge)
- can create central repos that all people with access to the repo can push and pull to and from

To create a remote repository:

git remote set-url origin \ git@github.com:alice/coursework

Key generation for Git Forges

```
SSH keys
     To use a forge you usually need to use SSH to authenticate. This means you need to use keys:
     On Macs/Linux/BSD
  To generate a key:
                                                                                        In your ~/.ssh/config
                                                                                        file:
  $ ssh-keygen
  Generating public/private rsa key pair.
                                                                                        Host github.com
  Enter file in which to save the key (/home/joseph/.ssh/id_rsa): /home/joseph/.ssh/github
Enter passphrase (empty for no passphrase):
                                                                                        User git
                                                                                        IdentityFile ~/.ssh/github
  Enter same passphrase again:
  Your identification has been saved in /home/joseph/.ssh/github
                                                                                        Make sure you upload
  Your public key has been saved in /home/joseph/.ssh/github.pub
                                                                                        the public .pub key not
  The key fingerprint is:
  SHA256:L1Xg2W2I1EgXocqPpuSefRbYlgop/H2x5TXl4EKs0qA joseph@bristol.ac.uk
                                                                                        the private one to
  The key's randomart image is:
                                                                                        Github!
   +---[RŚA 3072]---
           .+0+0
                                                                                        And test with:
           o.B.o
            =.+ 0
                                                                                        $ ssh git@github.com
          ... .0.. .
                                                                                        PTY allocation request failed on c
         oS=.+ . +
                                                                                        Hi uob-jh! You've successfully aut
       o E o=0 o + .
                                                                                        Connection to github.com closed.
        0.0++0* 0 .
        0.=0.= .
       -[SHA256]----+
```

GitHub 1

What happens if changes have been made to the same lines of code in the same file and then committed?

```
$ git merge bob/main
Auto-merging coursework.c
CONFLICT (content): Merge conflict in coursework.c
Automatic merge failed; fix conflicts and then commit the result
```

Git has seen two changes and cant decide which one to go with

How to resolve this conflict?

When you get a merge conflict, NEVER delete just one side of it

- some people get fired for this as they deleted a load of someones work
- fix the merge conflict yourself, when finished git add and then commit

```
$ git add coursework
$ git commit
[main 16d3aa6] Merge remote-tracking branch 'bob/main'
```

Pushing new Branches

• use -u flag for bnew branch pushes

git push -u origin new-feature // new feature is on a seperate I

GitHub 2