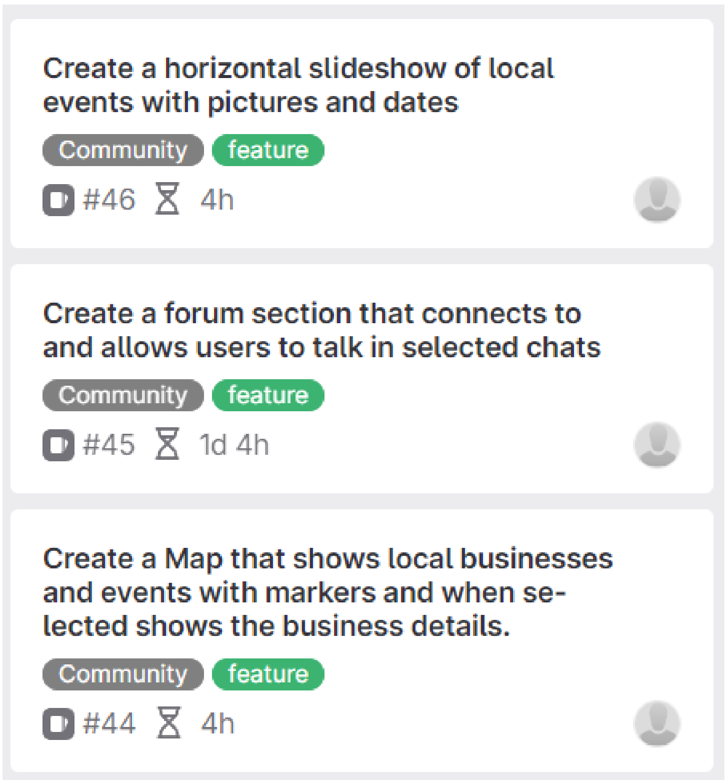
Aadil S2 Submission

Agile Estimation of Kanban Cards



Create a horizontal slideshow of local events with pictures and dates

Community feature

#46 4h

Create a forum section that connects to and allows users to talk in selected chats

Community feature

#45 1d 4h

Create a Map that shows local businesses and events with markers and when selected shows the business details.

Community feature

#44 4h

Each day is worth 8hrs so the estimated time to complete the community page and its features will be 20hrs.

Page of Research on Security for our web app

When moving the application to production you must make sure the access controls are set correctly as by default both the user and admin account are able to perform the same crud operations. When also setting up accounts with different user access you must make sure that they only access parts of the application to prevent them from doing things they shouldn’t.

When setting up our application we must make sure that we do not allow anybody to use http and redirect everyone to https . We can do this by using the third-party software certbot from lets encrypt to gain our SSL certificates. This will ensure that the sensitive data sent between the client and the server are encrypted and protected if intercepted. It will also ensure that when the database and the application transmit data that it is encrypted.

When a user signs up with an account for our web app we must make sure that the password is stored securely in the postgres database. It is a legal requirement to store them safely so we should be hashing the passwords when they are stored to keep their password secure.

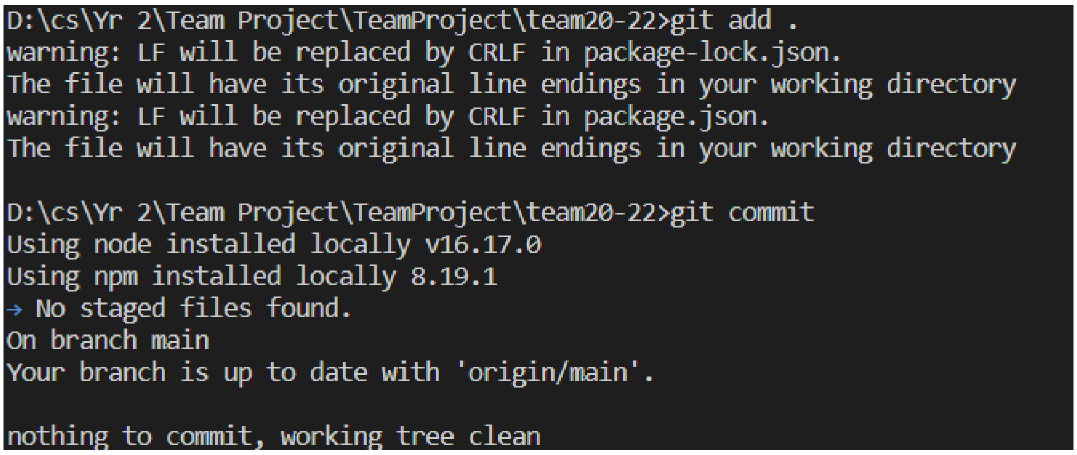
To also ensure that our site remains secure we need to make sure that when we use third party libraries that our app remains secure. Some libraries may contain vulnerabilities that can allow an attacker access to our website. To prevent this from happening we must make sure that we check for vulnerabilities. To do this we can use the program Dependency-check to scan the project of any vulnerabilities. Running this program will give us a report on the reported public vulnerabilities for the web application. This can be run as a maven plugin and can be done when setting up the dependencies .

We also need to ensure that our database is secure and protected from any third party SQL injections. To be able to do this we can use predetermined statements when writing any SQL. This means that an attacker will not be able to use any form on our web application to gain access to our database and use it for malicious purposes.

There are also cross-site scripting attacks that can be done on web applications. This is where an attacker uses a browser side script to run malicious code that will use flaws in the input fields of an application. To prevent this attack from happening we must make sure that all inputs are validated making sure they are of the right value and format. Also making sure input sanitization is done to remove any malicious code that may be in an input that can be used to exploit a vulnerability.

Jhipster also has security features already built in to the application. It has JSON web tokens. This is a stateless security mechanism. When a user logs in to an application, the server generates a JWT and sends it to the client. The client stores the JWT and sends it to the server with every subsequent request. The server verifies the JWT's signature to ensure that it has not been tampered with and extracts the payload to identify the user and their permissions.

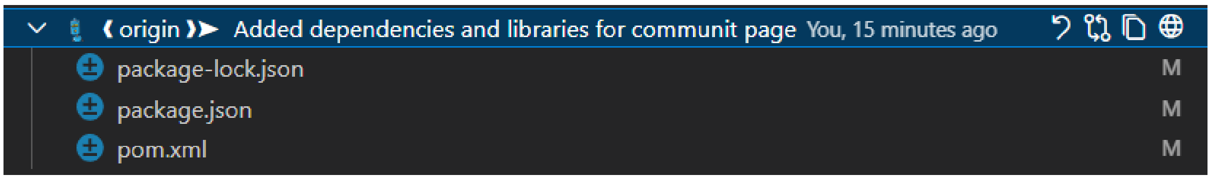
Commit for development prep



```
D:\cs\Yr 2\Team Project\TeamProject\team20-22>git add .
warning: LF will be replaced by CRLF in package-lock.json.
The file will have its original line endings in your working directory
warning: LF will be replaced by CRLF in package.json.
The file will have its original line endings in your working directory

D:\cs\Yr 2\Team Project\TeamProject\team20-22>git commit
Using node installed locally v16.17.0
Using npm installed locally 8.19.1
→ No staged files found.
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
```



```
❮ origin ❯❯ Added dependencies and libraries for communit page  You, 15 minutes ago
    package-lock.json                                              M
    package.json                                                   M
    pom.xml                                                        M
```