Agile methodology is a development method in which requirements and solutions evolve through collaborative effort. It is based on iterative development which encourages frequent inspection of the software and its stages. It is reliable when it comes to adaptation to change and developing high quality software as a team. The scrum is a largely popular agile framework which has at its core the sprint. A sprint is based on short periods of development followed by reviews and changes. Scrum meetings are held regularly to ensure clear communication and collaboration.

We have developed our project using the Scrum methodology and we have benefitted from doing so by being able to adapt to change and keep track of our progress. Once our ideas were clear and we knew in what direction we were heading with our project, we started creating a list of requirements for creating the basic functionality. Based on our set of requirements we decided our first sprint would be 2 weeks. We used GitHub to track our sprint progress. We made use of a Product Backlog where all new requirements went, a Sprint Backlog where we kept the requirements that had to be done in the current sprint, an In Progress column used to suggest someone is currently working on those requirements, a Blocked column that contained requirements that were dependent on other requirements being completed first, an In review column in which the work was awaiting reviewing from the team, and a Done column in which completed work was listed.

Our first sprint consisted of creating login and registration systems for our product, checking credentials, connecting to Spotify and obtaining an authorisation token from them and working on the backend by creating a database using MongoDB and node.js. A testing plan was also created and changed during our sprint. This has helped the developers have a clear understanding of what the software had to accomplish in the end. Our team decided to have meetings twice a week and these were held on Mondays and Thursdays, giving us time to progress in between the meetings. The meetings consisted of reviewing done work, keeping track of our requirements, and making any changes, and combining our set of skills and knowledge to help each other complete the assigned tasks. On the side, documentation was being created to help with the progress and planning of our project. The first sprint went as planned with no major changes to the requirements, we finished everything we wanted in the 2 weeks of time allocated. At the end of the sprint our testing plan was containing input output tests for our login and registration system, as well as other tests for the functionality of our product. Our tutor helped us go through and test our software and has told us our first sprint was a success. The documentation made in the first sprint helped us decide where our product was heading and shortly after the first sprint had finished, we had a new set of requirements ready to be completed in the second sprint.

Our second sprint lasted 3 weeks and it’s when agile methodology really proved to be efficient. We used the same methods for our second sprint, but our team was faced with the difficulty of the Coronavirus pandemic. Once it was clear that we would be unable to meet in person, we discussed the options we had. The risk assessment we had previously created helped us be prepared for the situation. We decided to have online calls and use Teams for our regular meetings on the same days as before. Work was constantly uploaded on GitHub and reviewed in the meeting by sharing our screens. The situation has proved difficult, as many of our team members had personal issues created by the pandemic, and it has caused distress for our team. In the beginning people could not attend the meetings as often but we kept communicating through WhatsApp. We decided we would slow down our process and have a longer sprint than originally planned to be able to complete the work. An extension for the completion of our project was given and we allocated one more week to our second sprint. After a week almost everyone was able to participate in our planned meeting, which we still had twice a week. We kept in touch with our tutor and asked for advice and feedback. We used a Google Docs document for our documentation so everyone could access it at any time, even if most of the work was already uploaded on GitHub. We were able to access each other's code by using GitHub. Any changes made were uploaded and everyone had access to them. Our second sprint consisted of securing our software by using password hashing and getting data about songs from Spotify. Upon research we decided on a way of classifying the songs based on their attributes. We worked on the algorithms for deciding the mood of a song and implemented it. We have also dealt with user sessions and creating diagrams and charts based on their data for the user to reflect on. We did our sprint review in a Teams meeting by sharing our screens and showing our tutor our testing plan, sprint backlog and how our software worked. The second sprint taught us how important organisation was when trying to coordinate our team from afar.

Our third sprint lasted 2 weeks and we planned it so that we would have 1 week to review and make any last changes to our project. Our third sprint mostly consisted of frontend development. We dealt with the UI and navigating through pages as well as the charts displayed to the user. As for the backend we created a way of working with the data to obtain useful information that will be displayed to the user.