

## 4 Implementation

This chapter contains the description of the implementation stage of this project. I will explain in detail my implementation strategy, as well as any problems I found particularly difficult to solve or algorithms I felt necessary to write about – if they make a difference to my application. For certain features, I will also highlight the amount of time I needed to develop them, especially if it took too long.

### 4.1 Implementation Strategy

It is important to describe in detail my plan of implementing all of the features to be able to see which of them caused the development of my project to lag behind. The dates included are mostly accurate, though it has to be said that from time to time it was necessary to return to an already implemented feature in order to improve or enhance some of its parts, for example to make it co-operate with a different one. What is more, the “Actual completion date” will not always mean that a feature’s implementation was completed and the feature itself is working – rather than that, it indicates when the work on the developing the feature was finished, regardless of the result; sometimes it was actually necessary to make a trade-off by abandoning working on one feature which was taking too much time so that another feature could be implemented.

Figure 22 below is a table based on the weekly plan for the project included in my progress report.

Fig. 22. Weekly plan for the project.

Feature name	Description	Planned completion date	Actual completion date
Basic GUI structure	Three most required Activities: MainActivity, SelectDirectoryActivity, PlaySongActivity	23 <sup>rd</sup> January – 27 <sup>th</sup> January	27 <sup>th</sup> January
File browser	SelectDirectoryActivity should have a basic file browser	30 <sup>th</sup> January – 3 <sup>rd</sup> February	3 <sup>rd</sup> February
FLAC support	The application’s core	6 <sup>th</sup> February – 10 <sup>th</sup> February	13 <sup>th</sup> Feb
Handling song	Play, pause, stop, rewind, FF	13 <sup>th</sup> February – 18 <sup>th</sup> February	20 <sup>th</sup> Feb
List of songs	Means of playing several songs from the chosen folder/list	20 <sup>th</sup> February – 24 <sup>th</sup> February	24 <sup>th</sup> February
Extract metadata and stream data from FLAC files	Song’s title, artist, etc.; also length of song	27 <sup>th</sup> Feb – 2 <sup>nd</sup> March	5 <sup>th</sup> March
Progress bar	Progress bar for currently played song	5 <sup>th</sup> March – 9 <sup>th</sup> March	8 <sup>th</sup> March
Seek bar	Turn progress bar into seek bar	12 <sup>th</sup> March – 16 <sup>th</sup> March	25 <sup>th</sup> March
Music data structures	Song, Artist, Album and Genre classes	19 <sup>th</sup> March – 23 <sup>rd</sup> March	27 <sup>th</sup> March
Scan SD card	Create a Service to scan the SD card in search	26 <sup>th</sup> March – 30 <sup>th</sup> March	30 <sup>th</sup> March