Timescales

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As my project progressed, I sometimes tweaked my timescale to better reflect where the project was going. My timescale was never particularly detailed.

1 The original timescale

The very first timescale, from the first couple of weeks. Transcribed from the markdown file `timescale.md`

Month	Vague Ideas
December	Research string distance: 1. Hamming distance 2. Levenshtein distance 3. Find some sources
January	Have written about string distances and how these apply to sequences in my dissertation
February	Have implemented the code to find different distance metrics and apply this to a pool of codes (sieve)
March	Have done more research on Hamming codes, and have independently generalised to base-4
April	Have implemented Hamming codes
May	Do research on Hadamard codes, gray codes, and polynomial codes
June	Have implemented these.

2 Improvements

Developed over Christmas, as I had started my project and gotten a better feel of how it was going to happen. My original scope for the project had been a little ambitious. Again, transcribed from Markdown file.

Month	More specific ideas
Completed	Start to gain proficiency with LaTeX, and familiarise myself with the basic literature on error-correcting codes using resources like JSTOR.
January	Do some research on Hamming codes, trying to find academic sources. Also have a look at how a Hamming code could apply to DNA (base 4).

February	Start writing some code to implement Hamming encoding. Maybe also write some test plans/ unit tests. If time start writing about Hamming codes in dissertation.
March	Research string distance: 1. Hamming distance 2. Levenshtein distance 3. Find some sources Have written about string distances and how these apply to sequences in my dissertation
April	Finish writing up Hamming codes in dissertation.
May	Do research on Hadamard codes, and try to finish a basic implementation of some type of Hadamard code.
June	Write up Hadamard codes. Maybe try to do some Hadamard visualisation with Postscript…

3 After exams

At this point I have a clearer idea of what has been done and what needs to happen. Also, at this point I brought the old timescales over to this document.

It looks like I have crammed more into the last few months, but really it's just a higher level of detail.

Month	Tasks
Completed	Start to gain proficiency with LaTeX, and familiarise myself with the basic literature on error-correcting codes using resources like JSTOR. Do some research on Hamming codes, trying to find academic sources. Also have a look at how a Hamming code could apply to DNA (base 4). Start writing some code to implement Hamming encoding. Maybe also write some test plans/ unit tests. Writing about Hamming codes in dissertation. Have done some research on string distances: 1. Hamming distance 2. Find some sources And written a short section in dissertation. Hadamard matrices research - various papers on types of Hadamard matrix and generators. Hadamard matrices generator - with the simple 2^n method I've managed to implement Hadamard matrices. Hadamard visualisation with Postscript! Some very pretty figures representing the matrices.
May	Finish writing up Hamming codes in dissertation - last couple of bits regarding applications/limitations. If time, look at the Levenshtein distance.

June	Also, start trying to write or at least prototype a Hadamard decoder (looking at generator matrices/linear algebra, or string distances). May need to fully implement string distance programs. See if I can implement Levenshtein distance, and if it will help with Hadamard decoder.
July	Fully write up Hadamard matrices/codes, and the generator I'm using, with some recursive/iterative matrix notation. Make sure the dissertation is absolutely ready to go, double check all spelling, get people to proofread. If I have any more time I can look for some more sources for corroborration/extra citation.