## Objectives for the proposed system

Must

1. The Main focus of the program will be the A2 maths course, anything prebuilt must be based upon this.
2. The system must store flashcard data.
   1. This data must be stored in a user friendly way, that allows easy access to the flashcards while using a deck or editing one.
      1. Navigating around the program must be easy and intuitive
      2. Selecting, deleting and adding decks must be easy.
      3. Adding cards must be through a easy to use menu.
   2. The data must be editable from the application.
   3. The data store can't require additional paid software.
3. The system must allow for different packs within each deck.
   1. There must be some prebuilt packs in the program.
   2. Allow for user made packs.
      1. The cards can be of different formats.
   3. Have some topics which produce a randomised new question when the pack is run, which will give the user extensive practice at a certain topic.
4. Have an algorithm to determine which card gets shown next.
   1. This should be based on multiple factors ; user rating, time, and if the user was correct.
   2. Works with the randomised decks to allow for pre-generated cards based upon their previous ratings, and for difficulty of generated cards to increase as they improve.
5. Be able to toggle entering an answer , and other features if they are suitable.
6. The flashcards must be easy to use ,edit and view.
   1. Be able to see past answers to flashcards.
7. Be able to select multiple packs at once.
8. Be able to copy cards or add them to a favourite list.
   1. Be able to view the favourite list.
9. Track deck, pack and overall statistics.
   1. Award achievements, and badges based upon progress.
10. Offer certain maths tools such as graphing to the user outside the flashcards.
    1. This should work for functions including; trig, logs, exponentials, polynomials, modulus , and functions applied to bracketed areas.
    2. Inputted as a nY+k=........ , and a graph is drawn from it.
    3. Add multiple lines to the same graph.
    4. Graphs should be possible to add to a flashcard.
11. Operate on a windows computer.

Could but not required

1. Allow for deck sharing, using a simple and easy method.
2. Create revision games that use the flashcards.
   1. Eg ; Snap, timed questions, dominos , and memory.