STOR-609 Assessment 1 - Marks and Feedback

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1 Quality of Source Code

- Your source code is of an extremely high quality. Concise, effective, and very "pythonesque".
- Your code very clearly expresses its intent.
- You have provided good supporting comments where appropriate.

Mark (out of 5) : 5

2 Solution

- For both problems you have provided example code that produces a correct solution.
- Your code is designed so that it was easy for me to change the problem and produce further correct solutions (i.e. your code is both **re-usable** and **re-runnable**)

Mark (out of 5) : 5

3 Understanding Design Principles

- You have provided an implementation for a generic backtracking algorithm which is immediately recognisable as such when compared with the pseudo code provided.

- Your use of bitwise operators in generating Gray codes is very efficient.
- You have managed to avoid inefficient deep copies during the recursion which is difficult when using mutable data structures such as lists.

Suggestion - It would be useful for you to consider the computational complexity of your methods in more detail (i.e. how much extra "computation" is required as your problem size increases).

Mark (out of 5) : 4.5

4 Quality of Written Communication

- You have provided some excellent supporting information. It is very clear and understandable, and discusses your main design ideas and the representations you used

- You have provided additional pseudo code to describe how your problem specific methods work. This is particularly relevant with respect to **replication** and **re-use**.

Mark (out of 5) : 5

5 Overall Comments and Marks

- Overall an excellent piece of work. Well done !!
- You are clearly a highly proficient programmer. I would recommend that you explore other programming systems/languages with view to extending your knowledge of other computing paradigms. In particular, try and find out more about type systems, parametric polymorphism, and functional programming. I only suggest this because you are clearly capable of doing so - and it would look very good on a CV !!

Overall Mark (out of 20) : 19.5