This is the solution for the 2nd question (sub question: e and g) which was left un attempted during initial submission.

https://colab.research.google.com/drive/1X4kPx3xOqisC106fq3NRcC3wPBeqfMBl?usp=sharing

This is the solution for the 3rd question, I was not able to answer this during the first attempt but I re-tried after the submission and based on my understanding I have come up with the following solution! (refer the link)

https://colab.research.google.com/drive/1mRQsGEgkopliFOCArdplLilypv-BXIBu?usp=sharing

Thank You

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