# High Level Design Document

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### Introduction:

• This document will specify requirements and high level design architecture of our link state routing protocol simulator.

#### Requirements:

- Graphical User Interface(GUI) Implementation.
- Build connection table for each router and display them.
- If there are multiple shortest path available between two routers with the same cost, find all of them.
- Provide a functionality of modifying a network topology.
- Provide a functionality of adding a new edge in a network topology.
- Provide a functionality of adding a new router in a network topology.

#### Behaviour:

• A user can upload network topology text file and after that it will show the connection table of each router. A user can specify a Source and Destination router, and it will find the shortest path between those two routers. User can also find all shortest path available with the same cost between Source and Destination. The User can modify a network topology, in that User can add router, remove router, modify cost/weight of a link, and add an edge.

## Use-Case Diagram:

CS542: Link State Routing Protocol Simulator

