Project Report

# Loading the Input File

In this Function I have installed a python library python-docx to read from the file.

To install that library the command if

pip install python-docx

After Installing this library, I have loaded the data and plotted the Graph

# Node Operations

The node operations have been implemented that are find, insert, delete, update the node. All the operations are performed on the dictionary that has been made for the graph.

# Edge Operations

The Edge operations have been implemented that are find, insert, delete, update the node. All the operations are performed on the dictionary that has been made for the graph.

# Changing the Parameter

A function to change the parameter and the penalty is implemented. You just need to pass the parameter and value then it will set is accordingly.

# Display Graph and Save

Display Graph and save function is implemented. It is implemented in a way that it traverses the whole list and prints all its adjacent nodes and also saves it into a file that is passed to it.

# Display World and Save

Display World and save function is implemented. It is implemented in a way that it traverses the whole list and prints that where the Food is present and where the Dog is present and also saves that all into a file.

# Generate Route

The function to find the shortest path from source node to the target node has also been implemented. It uses the dijextra algorithm approach to find the best path to reach the Target.

# Display Route

This Function displays the routes on the console.

# Save Network

This Function saves the Route and path to a file named network.txt