

Arizona State University

Network Diagram Analyzer User Guide

CSE 360 Intro to Software Engineering

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Introduction

This document outlines the main overview of the program. This includes installation, a how-to on getting started, a look into the User Interface, instructions and examples on running the program, and how to restart the program. It is important to read this user guide to understand the functionality of the Network Diagram Analyzer program to get desired results.

- Note the images in this manual are for reference. The product may appear somewhat different than depicted.

Overview of the Program

When referencing a network diagram, the Network Diagram Analyzer asks for and uses the activity names, duration of each activity, and a list of dependencies of those activities, to analyze the given network diagram and determine all possible paths in the Network. Along with all the different possible paths in the network, the Network Diagram Analyzer ranks each path in descending order, in terms of duration.

Installation

The first step to getting started is installing the source file from Github. Once the source file is installed into your device, getting the program to run is fast and simple. Open the file and run the executable, NetworkDiagramAnalyzer.exe.

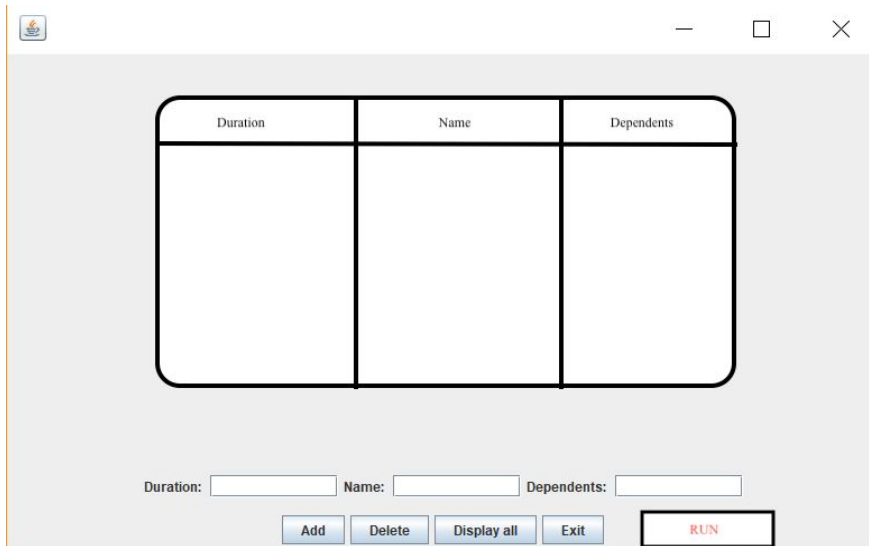
Getting Started

1. Looking at your diagram, make note of each Activity, and in particular, their names, duration, and their dependents.
2. In the Network Diagram Analyzer program, each entry represents one activity. For each entry, add the name of the activity next to “Name:”, add the duration of the activity next to “Duration”, and then add dependants next to “Dependants”.
3. Click Add
4. Do this for as many activities as you have.
5. If you mistakenly add a wrong one, hit the Delete button.
6. Once you have added all the activities, you can click the Run button, and it will prompt you to the list with the activities ordered descending by duration.

User Interface Overview

Main Menu:

-The table in center screen will display all the Activities you have entered.

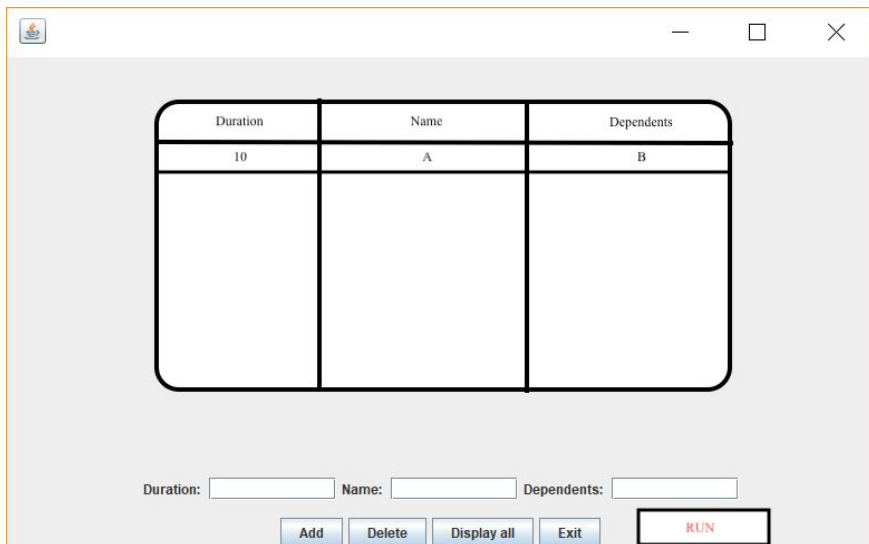


The screenshot shows a window titled "Main Menu" with a table and input fields. The table has three columns: "Duration", "Name", and "Dependents". Below the table are three input fields labeled "Duration:", "Name:", and "Dependents:". At the bottom are five buttons: "Add", "Delete", "Display all", "Exit", and "RUN".

Duration	Name	Dependents
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Duration: Name: Dependents:

Adding an activity:



The screenshot shows the same window as before, but the table now contains one row of data. The input fields and buttons remain the same.

Duration	Name	Dependents
10	A	B

Duration: Name: Dependents:

Entering each activity and hitting Run.

Rank	Activity	Duration
1	C	8
2	A	6
3	B	5
4	D	4

Duration: Name: Dependents:

Example Runs

- Opening the program will prompt you to this screen.

Duration	Name	Dependents
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Duration: Name: Dependents:

- You can start adding activities by entering each activity, one by one, in the entry bars at the bottom of the screen

Duration	Name	Depends

Duration: Name: Depends:

- Hit Add, and the activity will appear on the list. Start adding a new activity in the entry bars.

Duration	Name	Depends
10	A	B

Duration: Name: Depends:

Duration	Name	Depends
10	A	B
5	B	C

Duration: Name: Depends:

Duration	Name	Dependents
10	A	B
5	B	C
7	D	B,C

Duration: Name: Dependents:

Duration	Name	Dependents
10	A	B
5	B	C
7	D	B,C
3	C	A

Duration: Name: Dependents:

- If you entered one incorrectly or by mistake, enter the information of the wrong activity into the entry bars, and hit delete:

Duration	Name	Dependents
10	A	B
5	B	C
3	C	A

Duration: Name: Dependents:

- Hit Run

Possible Network Paths		
Rank	Activity	Duration
1	C	10
2	B	5
3	A	3

Duration: Name: Dependents:

Add Delete Display all Exit

- Done!

Examples of Errors

- Entering a duration that is not an integer

Duration	Name	Dependents

Error:
Duration has to be
an integer value

Duration: Name: Dependents:

Add Delete Display all Exit RUN

- Entering an activity name that is already used for something else

Duration	Name	Dependents
10	A	B

Error:
Activity name
already in use

Duration: Name: Dependents:

Add Delete Display all Exit RUN

Restarting

Restarting the program can be done in three ways. One way is to exit the program and go back in. Another is by pressing the run button, closing the result screen, and start over. If you want to restart the program in the middle of entering the activities, simply delete all the entries and start entering the new activities.

Ending

After you've collected all the necessary information you need from the Network Diagram Analyzer, you can close the program by clicking the X icon.