

Network Theory and Dynamic Systems (S...

Course info Calendar Participant info Course search

My course

Network Theory and Dynami

Course Team

BigBlueButton: NTDS

Module Overview

Books and Other Resources

Lecture Material

Assignments

Assignment 01: Introducti

Assignment 02: Network El

Assignment 03: Small Worl

Assignment 04: Hubs

Assignment 05: Strong and

Assignment 06: Graph-base

Assignment 07-08: Network

Assignment 09: Dynamics I

Assignment 10: Dynamics I

Exam Eligibility Assignme

Demo Exam Paper

Forum

Assignment 01: Introduction to Network Science



Performance summary

Assessed

Success status



Undefined

Score

80 of 100 points



Attempts

1

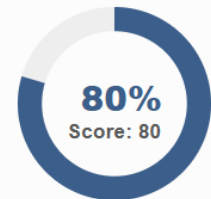


Results

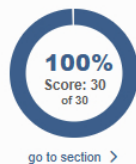
Course	Network Theory and Dynamic Systems (SS 2025) ID: 4669112833 / 109642120441666
Test	Assignment 01 ID: 4548624937

This are your test results

Duration	0h 16m 53s 4/27/2025, 11:33 AM - 4/27/2025, 11:50 AM
Answered	6 of 6 questions (100%)
Your score	80 of 100 points (80%)



1. Road Map (30 points) 2



go to section >



2. Transportation Network (40 points) 2



go to section >



3. Facebook Network (15 points) 1



go to section >



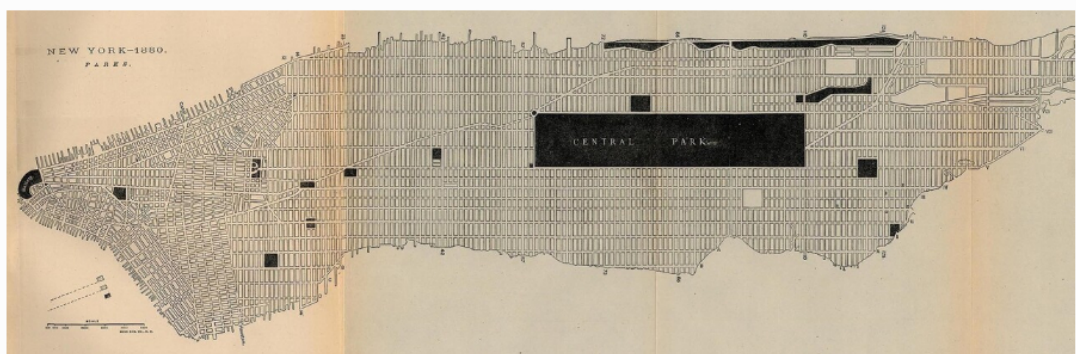
Twitter Network (15 points) 1



go to section >



1. Road Map (30 points) 30 of 30 points (100%)



Q1 (15 points)

Status Answered

Your score 15 / 15 100%

Response

Consider the above road map. If one were creating a network representation of traffic patterns, which of the following would be the best choice to make up the links of the network?

- ☐ Entire roads (e.g. 5th Ave.)
- ☐ Pedestrians traveling along the streets
- ☒ Road segments (e.g. 5th Ave. between 12th and 13th streets)
- ☐ Vehicles traveling on the roads

► Solution

Q2 (15 points)

Status Answered

Your score 15 / 15 100%

Response

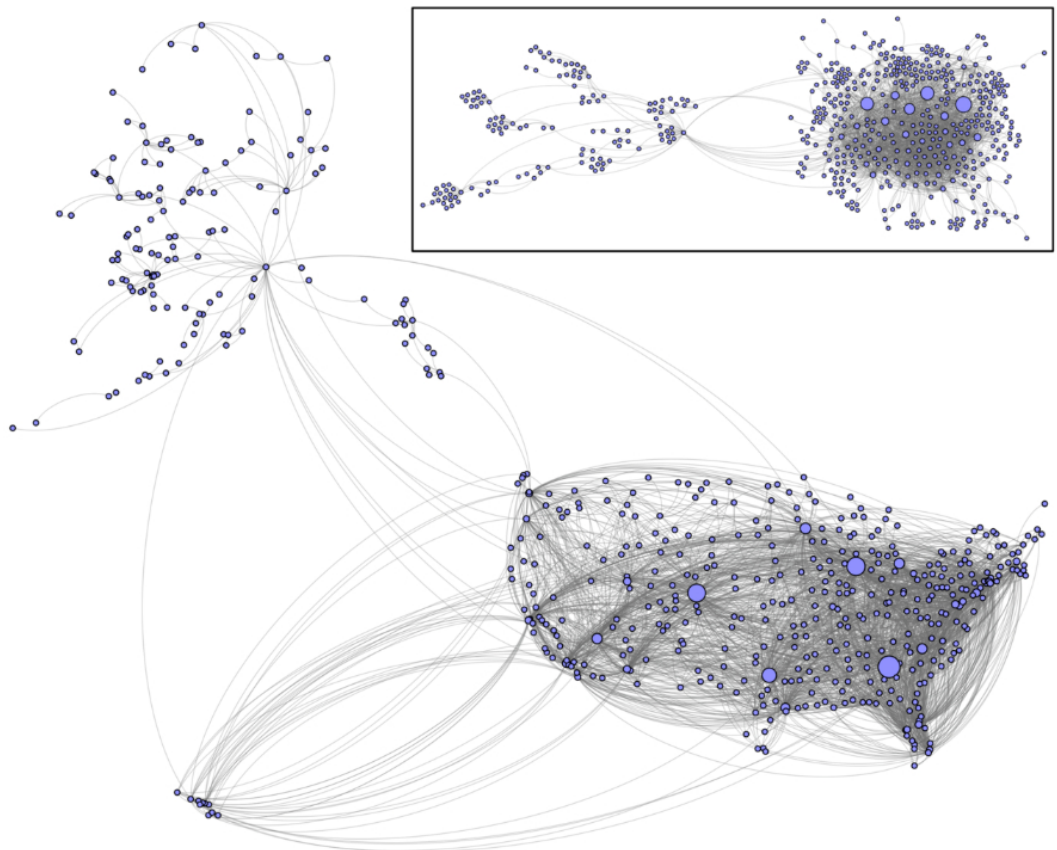
Consider the road map in Figure 0.9. In a network representation of traffic patterns, which of the following would be the best choice to make up the nodes of the network?

- ☐ Vehicles traveling on the roads
- ☐ Pedestrians moving along the streets
- ☒ Street intersections (e.g. 5th Ave. and 12th St.)
- ☐ City blocks (e.g. the block between 5th–6th avenues and 12th–13th streets)

► Solution

[◀ go back to overview](#)

2. Transportation Network (40 points) 20 of 40 points (50%)



... Q3 (20 points)

Status Answered

Your score 0 / 20 0%

Response

Consider the US air transportation network shown in Figure above. Nodes in this network represent airports. What could a link between two airports represent?

▼ Solution

Consider the US air transportation network shown in Figure above. Nodes in this network represent airports. What could a link between two airports represent? flight, Flight

⦿ Q4 (20 points)

Status Answered

Your score 20 / 20 100%

Response

Compare the US air transportation network in the above figure with the Manhattan road map of section 1 (Q1, Q2 questions). The air transportation network displays a distinguishing feature that the Manhattan road network lacks. What is this key characteristic?

- ☐ Nodes with more than one connected link
- ☒ Hub nodes with many links
- ☐ Singleton nodes with no links
- ☐ Multiple routes between nodes

► Solution

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🔗 3. Facebook Network (15 points) 15 of 15 points (100%)

⦿ Q5

Status Answered

Your score 15 / 15 100%

Response

In a social graph from Facebook, which type of link best represents the "friend" relation?

- ☒ Undirected
- ☐ Directed

► Solution

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🔗 Twitter Network (15 points) 15 of 15 points (100%)

⦿ Q6

Status Answered

Your score 15 / 15 100%

Response

In a social graph from Twitter, which type of link best represents the "follower" relation?

- ☒ Directed
- ☐ Undirected?

► Solution

< go back to overview

Test execution

Information

- ⌚ Availability: Expired at 4/29/2025, 11:59 PM
- 🔄 Max. attempts: Unlimited
- 👁️ Results of this test are visible to administrators and tutors of this course.

Start test

► Change log

[^ Go to top](#)

Logged in as *Ravi Himmatbhai Ramani* (1387 People are online)



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Datenschutzerklärung

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