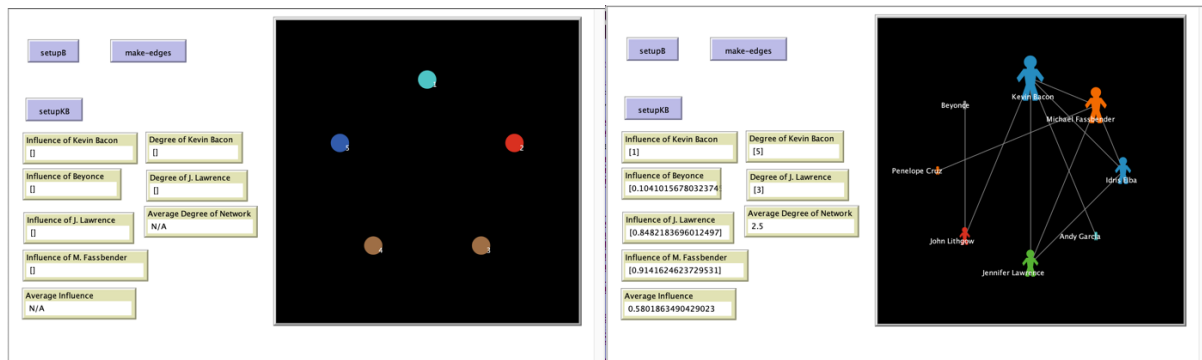


CS108L Computer Science for All

Module 8: Rubric Networks Milestone 1

The Basics and Kevin Bacon Game



In this module you will create 2 independent networks, a basic one and one used for the Kevin Bacon game. For both of these, turn wrapping off.

The Basic Network

- Create a breed called vertices (plural) or vertex (singular)
- Create an undirected link breed called edges (plural) or edge (singular)
- Create a “setupB” button that clears the world and creates a 5 vertices.
 - The vertices are all circle shaped with a size of 2.
 - Each vertex is labeled with a number 1 through 5 (vertex one is labeled 1, etc..)
 - The vertices use the circle layout in sorted order.
- Create a “make-edges” button and within the button (Do **not** use a foreach loop)
 - link vertex labeled 1 to labeled 4
 - link vertex labeled 2 to labeled 5
 - link vertex labeled 3 to labeled 4
 - link vertex labeled 4 to labeled 5
 - NOTE: use labels not turtle numbers to identify vertices to form edges with.

The Kevin Bacon Game

- Create 8 monitors.
 - 4 of the monitors show the influence of Kevin Bacon, Beyonce, J. Lawrence and M. Fassbender.
 - 1 monitor shows the Average Influence.
 - 2 of the monitors show the degree of Kevin Bacon and J. Lawrence.
 - The last monitor is the Average Degree.



- Create a breed called people (plural) or person (singular)
- Create a “setupKB” button that clears the world and
 - Set the default shape of people to “person”.
 - Call the setup-kevin-bacon procedure.
 - Call the setup-bacon-number-one procedure.
 - Call the setup-bacon-number-two procedure.
 - Call the setup-intermediate-links procedure.
 - Call the setup-size-degree procedure.
 - The people use a circle layout in sorted order of radius 10.
- Create a “setup-kevin-bacon” procedure and
 - Create 1 person with the label [Kevin Bacon](#).
- Create a “setup-bacon-number-one” procedure and
 - Create a variable named ‘labels’ that contains the list [Michael Fassbender](#), [Idris Elba](#), [Andy Garcia](#), [Jennifer Lawrence](#) and [John Lithgow](#).
 - Using a foreach loop create people associated with the labels variable and link them to [Kevin Bacon](#).
- Create a “setup-bacon-number-two” procedure and
 - Create a variable named ‘node’ that contains the list [Penelope Cruz](#) and [Beyonce](#)
 - Create a variable named ‘nodeConnection’ that contains the list [Michael Fassbender](#) and [John Lithgow](#).
 - Using a foreach loop create people associated with the node variable and link them to the nodeConnection variable (a multivariable foreach loop).
- Create a “setup-intermediate-links” procedure
 - Create a variable name ‘node’ that contains the list [Michael Fassbender](#), [Idris Elba](#) and [Jennifer Lawrence](#).
 - Create a variable named ‘nodeConnection’ that contains the same list as above.
 - Use nested foreach loops to link each of the those from the node list to the nodeConnection list (the outer loop cycles through the node list while the inner loop cycles through the nodeConnection list). Note: do not link to ‘yourself’ (e.g. Michael Fassbender should not link to Michael Fassbender).
- Create a “setup-size-degree” procedure so that the size of the ‘people’ is the same as the number of links connecting it.

Module 8: Networks Milestone 1 (20 Points Total)		
Done	Points	Task
	1	A: <ul style="list-style-type: none">• Submit a NetLogo source code with the file name: <i>M1.firstname.lastname.nlogo</i>.



		<ul style="list-style-type: none"> The first few lines of your Code tab are comments including your name, the date, your school, and the assignment name (Lab 1: Spirograph).
	1	<p>B:</p> <ul style="list-style-type: none"> Include appropriate in-line comments.
	1	<p>C:</p> <ul style="list-style-type: none"> Include a detailed Info tab.
	3	<p>D:</p> <ul style="list-style-type: none"> Breeds for vertices, edges and people
	2	<p>E:</p> <ul style="list-style-type: none"> The influence of Kevin Bacon, Beyonce, J.Lawrence and M. Fassbender are shown in monitors The average Influence of all people is shown in a monitor The degree of Kevin Bacon and J. Lawrence in monitors The average Degree of all people is shown in a monitor
	2	<p>G:</p> <ul style="list-style-type: none"> The setupB button creates 5 vertices, labels them 1 – 5, sets their shape to “circle”, sets size to 2 and
	2	<p>H:</p> <ul style="list-style-type: none"> The make-edges button links the vertices as described above without using a foreach loop.
	1	<p>I:</p> <ul style="list-style-type: none"> The setupKB button sets the default shape of ‘people’ to “person”. It calls the procedures listed above. It sets ‘people’ to a sorted circle layout.
	6	<p>J:</p> <ul style="list-style-type: none"> The setup-kevin-bacon, setup-bacon-number-one, setup-bacon-number-two and setup-intermediate-links buttons create, label and link the ‘people’ as described above using foreach loops where described.
	1	<p>K:</p> <ul style="list-style-type: none"> The setup-size-degree button sets the size of ‘people’ to the number of links attached.