

1.

- a) 11
- b) 16
- c) 4
- d) No, it is not possible as a digraph is a graph with directed edges and this graph does not have directed edges

Question 1e) and 1f) and 2 are done separately on another pdf file

3.

a)

		Predicted label:	
		Positive	Negative
Actual label:	Positive	30	30
	Negative	20	20

b) Classifier R:

$$\text{Accuracy} = 30 + 20 / 100 = 50\%$$

$$\text{Recall} = 30 / (30 + 30) = 50\%$$

$$\text{Precision} = 30 / (30 + 20) = 60\%$$

$$\text{f-measure} = (2 * 0.6 * 0.5) / (0.6 + 0.5) = 0.55$$

c)

		Predicted label:	
		Positive	Negative
Actual label:	Positive	60	40
	Negative	0	0

d) Classifier B:

$$\text{Accuracy} = 60 / 100 = 60\%$$

$$\text{Recall} = 60 / (60 + 40) = 60\%$$

$$\text{Precision} = 60 / (60 + 0) = 100\%$$

$$f\text{-measure} = (2 * 0.6 * 1) / (0.6 + 1) = 0.75$$

e) Classifier A:

$$\text{Accuracy} = (35 + 25) / 100 = 60\%$$

$$\text{Recall} = 35 / (35 + 25) = 58\%$$

$$\text{Precision} = 35 / (35 + 15) = 70\%$$

$$f\text{-measure} = (2 * 0.58 * 0.7) / (0.58 + 0.7) = 0.63$$

f) The best classifier is B because it has the highest f-measure

4)

- SELECT customer\_lastname, customer\_firstname  
FROM Tableorders  
ORDER by customer\_lastname;
- SELECT name from Table products  
WHERE (Table products.product\_id = Table orders\_contents.product\_id)  
AND (Table orders\_contents.kg\_bought >= 0.6);
- SELECT order\_id, name, kg\_bought, price\_kg, (kg\_bought\*price\_kg) "item\_price"  
FROM Table products, Table orders\_contents  
ORDER by order\_id;

5)

- Visibility: How easy it is for the user to find what he/she wants

Affordances: The actions the user can perform through the system

Signifiers: Signs that tell the user how the system works

Constraints: Restrictions on what the user can do

Mappings: Relationship of controls to their effects

Feedback: Reactions from the system due to user actions

Consistency: Using the similar concepts for similar operations
- Focus on visibility on connex website:

The screenshot shows the University of Victoria website interface. The top navigation bar includes links for 'My Workspace', 'Academic Advising', 'Competitions', 'CSC 106: 201605 A01', 'CSC 115: 201605 A01', and 'More Sites'. The left sidebar contains a list of links: 'Home', 'Syllabus', 'Announcements', 'Resources', 'Assignments', 'Gradebook', 'Site Info', and 'Roster'. The 'Resources' link is highlighted with a red circle. The main content area displays the 'CSC 106: 201605 A01: Resources' page. It shows the location 'CSC 106: 201605 A01 Resources / Labs' and a table of resources.

Title	Access	Created By	Modified
Labs			
Lab 4	Entire site	Saad Malik	Jun 2, 2016 9:47 pm
Lab 5	Entire site	Saad Malik	Jun 9, 2016 7:17 pm
Lab 6	Entire site	Saad Malik	Jun 17, 2016 1:18 am

In this example, we cannot easily see how we can navigate back to the previous folder in the resources tab. The function to do this can be found as shown, however it is not very clear that is used to do the case thus is not very effective. Furthermore, the symbol itself is very ambiguous as to what it actually does.

- c) A cognitive walk-through is simply trying to put yourself in the mind of the reader and see how he would use and interact with the system. The best way to achieve this is by constantly asking yourself these questions:
1. Will users know what to do next to complete the task?
  2. Will they know what controls to use?
  3. Will they know if the controls produced the right effect?
  4. Will the users understand they did the correct thing from the feedback they received?