Assume, that due to some reason the team cannot meet, and the team leader has asked all the team members to send their suggestions before having a formal meetup. Being the team member submit your suggestions.



**Instructions:**

1. Identify the two most important topics or components that are necessary for communication to occur.

A good network connection

A cloud server (Either can get from a provider if they don’t want to spend too much, or they can build a private network that only their employees can based on their position in the company get access to the files)

1. Discuss that why the proposed components are important.

First of a good connection because their server has to be on-line which they could have access to it from long distances, in the question it is saying they have to either walk to their co-worker or drive to them, which means branch to branch of their company may need to collaborate, in order to that they need to have an on-line server which requires a good, fast and reliable network connection in order to be able to send and receive all files especially the large files easily without losing any packets (Packet loss).

Secondly, to complement the first one, like I have mentioned before they need a cloud server (on-line server) that they can have access to it from everywhere (All their branches and offices). In order to do so they have two different options, one is to get a subscription from a host like Microsoft, google or amazon which are famous and based on their needs expensive but reliable, or find another less-famous host company which might be cheaper but not as reliable as those ones are in the matter of support or service or whatever. It is actually the simplest way to do so. And the other option is to hire a group of technicians to build an exclusive server for them that only they can have access to it. This scenario is more costy and takes a longer time considering the first option, but at-least they are their own boss.

**Encoding:**

1. Do a Google search and find the ASCII decimal and binary values for the capitalized first letter of your first name .  
   [M]atin 🡺 capital m in ASCII is 77 as you can press and hold alt and press 7 from numpad two times to get it
2. Write the decimal value \_\_\_77\_\_ . Write the binary value\_\_\_\_\_\_\_01001101\_\_\_\_\_\_\_\_\_\_\_\_
3. Write the binary value at the top of the chart. Write a bit between each vertical dotted line.
4. Use the chart to map the binary value using NRZI encoding (Non-Return to Zero Inverted). A change in voltage at the beginning of a clock cycle (vertical dotted lines) is a “1”. No change in voltage at the beginning of a clock cycle is a “0”. The horizontal dotted lines represent voltage 0.5 voltage levels. Map each letter to 6th horizontal line which represents +3 volts. Do not go below the hortizontal axis in mapping your value.
5. After mapping the value, answer the following questions:
   1. How many characters in total were transmitted? \_\_\_\_\_1\_\_\_\_\_\_
   2. How many bits in total were transmitted? \_\_\_\_\_\_\_8\_\_\_\_\_\_\_\_\_
   3. How many times did the signal change? (baud rate) \_\_\_\_\_\_4\_\_\_\_\_\_\_\_\_\_
   4. What is the bit rate? \_\_\_\_\_\_\_\_\_

If we assume that this one character has been transmitted in one second which the actual time is much much less than that

The bit rate would be 8 bits per second 8/s

01001101

0 1 0 0 1 1 0 1

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| --- | --- | --- | --- | --- | --- | --- | --- |
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| 3 |  |  |  |  |  |  |  |
| 2.5 |  |  |  |  |  |  |  |
| 2 |  |  |  |  |  |  |  |
| 1.5 |  |  |  |  |  |  |  |
| 1 |  |  |  |  |  |  |  |
| 0.5 |  |  |  |  |  |  |  |
| 0 |  |  |  |  |  |  |  |
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**Standard Making Bodies**

Do a Google search and write the answers in the space below. Use your own words. DO NOT copy and paste the answers. The answers are all one line of text.

1. **International Organization for Standardization (ISO)**
2. What is the web site address for the ISO?

iso.org

1. What type of standard making body is it and who are its members?

Their job is to make quality standards and determine any businesses and companies if they pass their standard or not. If they pass they would get the certificate of the standard section they were looking for which helps their costumer to trust their product

Basically they have one and only one branch in each country. And they called their members. And each of them has three sections specified for specific products which they say member categories.

* + - 1. Full members (They have full access; they join their meetings about the standards, vote and participate, they can sell the certificates)
      2. Correspondent members (They can only join the meeting to keep themselves up to date, they cant vote or anything, they can sell the certificates)
      3. Subscriber members (They are basically there for fun, they don’t do anything they just keep themselves up to date about the policy and standards)

1. What is an example of an ISO standard?

ISO 9000 which is the famous standard

1. **Institute of the Electrical and Electronic Engineers (IEEE)**
2. What is the web site address for the IEEE?  
   ieee.org
3. What type of standard making body is it and who are its members?  
   they actually make standards in the engineering, computing and technology fields and their goal is to inspire the world for innovations in order to build a better future

It has 419,000 members in 160 countries

1. What is an example of an IEEE standard?  
   **IEEE** 802 LAN/MAN standards is their famous one
2. **International Telecommunications Council (ITU-T) Telecommunications**
3. What is the web site address for the ITU?  
     
   itu.int
4. What is the web site address for the ITU-Telecom?  
   itu.int/en/ITUTELECOM
5. What type of standard making body is it ITU-T and who are its members?  
   they make standards for telecommunications and Information Communication Technology

They have 193 member stated and over 900 companies, universities and organizations all over the globe has their membership

1. What is an example of an ITU-T standard?

The standard **ITU**-**T** H 264 is their famous standard in video compressing field which won an award as well.

1. **What is the name of Canada’s standard organization?  
     
   Standards council of Canada**
2. What is its mission or mandate?

Their mandate is to promote voluntary standardization in Canada.

Their mission and aim is to help their “stakeholders and customers” to get their standards in order to make Canada a better competitor in world and improve Canada’s and Canadian lives quality.

**Grading:**

* learnname\_Lab2\_StandardBodies.docx

Remember replacing **learnname** with **your name** for submission.

Submit using the Lab2 Submission link under MySeneca\Graded Work