Lab 2: Standards

**Brain Storming Task:**

You work for a research company as a member of the **Experimental Research Team**. Presently, the company is growing quickly and to exchange files, users must physically walk a disk or drive over to someone else if they wish to share files; this is inefficient. The company wants your team to develop a new way to exchange files electronically between to two computers using a cable. Today, is the first meeting of the team to discuss the problem. 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.

Two most important components that are necessary to communication to take place are sender and receiver.

The sender is an individual, group, or organization that initiates the communication.

The receiver is the individual or individuals who received the message.

1. Discuss that why the proposed components are important.

Sender and Receiver are two important components because there will be no communication if there is no one who starts the conversation which calls Sender. If we have a sender but there is no one receives that information that the sender initiates. Which out a receiver that no more communication. It's just talking alone or talking to our self which can be identified as thinking.

**Encoding:**

1. Do a Google search and find the ASCII decimal and binary values for the capitalized first letter of your first name.
2. Write the decimal value \_\_72\_\_\_. Write the binary value\_\_\_\_\_\_\_\_ 01001000 \_\_\_\_\_\_\_\_\_
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 horizontal axis in mapping your value.
5. After mapping the value, answer the following questions:
   1. How many characters in total were transmitted? \_\_\_\_\_\_One character (H)\_\_\_\_\_\_\_\_\_\_\_
   2. How many bits in total were transmitted? \_\_\_\_\_\_\_\_8\_\_\_\_\_\_\_\_\_\_\_\_
   3. How many times did the signal change? (baud rate) \_\_\_\_2\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. What is the bit rate? \_\_\_8 bits\_\_\_\_\_\_

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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?

https://www.iso.org

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

The ISO's General Assembly is its decision-making body. It consists of representatives from the members and elected leaders called principal officers. The organization has its headquarters in Geneva, Switzerland, where a central secretariat oversees operations.

1. What is an example of an ISO standard?

ISO 14001- https://www.iso.org/iso-14001-environmental-management.html

1. **Institute of the Electrical and Electronic Engineers (IEEE)**
2. What is the web site address for the IEEE?

https://www.ieee.org

1. What type of standard making body is it and who are its members?  
   IEEE SA develops standards that are consensus-based and has two types of standards development participation models. These are individual and entity. IEEE SA is not a body formally authorized by any government, but rather a community. ISO, IEC and ITU are recognized international standards organizations.
2. What is an example of an IEEE standard?  
   IEEE P80- https://standards.ieee.org/project/80.html
3. **International Telecommunications Council (ITU-T) Telecommunications**
4. What is the web site address for the ITU?  
   https://www.itu.int/en/Pages/default.aspx
5. What is the web site address for the ITU-Telecom?  
   https://www.itu.int/en/ITUTELECOM/Pages/default.aspx
6. What type of standard making body is it ITU-T and who are its members?  
   Since the ITU-T is part of the ITU, which is a United Nations specialized agency, its standards carry more formal international weight than those of most other standards development organizations that publish technical specifications of a similar form.
7. What is an example of an ITU-T standard?

X.509

1. **What is the name of Canada’s standard organization?**

The Standards Council of Canada (SCC)

1. What is its mission or mandate?

The Standards Council of Canada (SCC) is a federal Crown corporation with the mandate to promote voluntary standardization in Canada, where standardization is not expressly provided for by law, however certification to some standards could be required through regulation (both provincial and federal).

**Grading:**

* learnname\_Lab2\_StandardBodies.docx

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

Submit using the Lab2 Submission link under MySeneca\Graded Work