Kwantlen
POLYTECHNIC UNIVERSITY

Wireless Network
(INFO 3180)

Class Assignment 8

1. **Watch the video -** CDMA Signal Spreading - The VERY basics of how it's done. (https://www.youtube.com/watch?v=XJ81CuujwYE)
2. Using the video show the data from three different users is spread (using codes), combined and sent as a single waveform, and then how the data from each user is recovered using each user-specific code. Use the following specifications:

User #	Spreading Code	Data to transmit
1	0000	11
2	0011	01
3	0101	00

   a. Calculate the Spreading Code for each user.
   b. Assume bit 0 is represented by + 1V, and bit 1 is represented by - 1V. Draw the resulting wave form for spread signal for each user after applying the spreading code.
   c. Draw the combined wave form for all three users that will be transmitted to receiver.
   d. Decode data for each user at the receiving end to retrieve original data for each user.

   Show all steps and show all wave forms as appropriate

3. Submission Requirements

   a. Create a proper professional report save it as Class Assignment 8.docx and submit the file in Class Assignment 8 folder.

Note: You may work in a group for this assignment. Put the names and student ids in your word document. **<u>Submit one copy for whole group.</u>**

******It will be graded******