

ENGI301: Assignment #3

Due: 09/21/2023 8pm

For problem 1, create a zip file (<last_name>_engi301_assignment_03.zip) that contains a screenshot or picture (jpg or png) of each of the following items. The pictures should be named "question_1a", "question_1b", etc. The zip file should be emailed to welsh@rice.edu and erikwelsh@gmail.com before the assignment due date. Pictures should be "medium" quality (i.e. they do not need to be extremely high resolution; just enough to see everything).

NOTE: To take a screenshot, in Windows use "Snipping Tool"; in MacOS use "Shift-Command-4".

1) Command Line (pictures of Cloud9 IDE required for each item):

- Clone your ENGI301 repository into /var/lib/cloud9; then make a directory "assignment_03" in ENGI301
- Change to directory "ENGI301/assignment_03"
- Create a file "temp.txt" in the assignment_03 directory
- Add "Hello World!" to the file
- Concatenate the file to the command line
- Perform a long listing of all the files in the ENGI301/assignment_03 directory

2) Base conversion: Express the following decimal numbers in Binary, Octal and Hexadecimal

- 64,206
- 48,879
- 57,005
- 34,370
- 79,225

3) Binary Representations: Express the following numbers as

- Decimal (Base 10) assuming each number below is an **Unsigned Binary Integer**
 - 0x2A (convert entire 8-bit number)
 - 0xFF (convert entire 8-bit number)
 - 0111 1110 0111
 - 1010 1100 1110 1101
- Decimal (Base 10) assuming each number below is a **2's Complement Signed Integer**
 - 0x2A (convert entire 8-bit number)
 - 0xFF (convert entire 8-bit number)
 - 0111 1110 0111
 - 1010 1100 1110 1101
- ASCII Characters
 - 0x49
 - 0110 1100 0110 1111 0111 0110 0110 0101
 - 0x454E4749
 - 3,354,673

4) Python reading:

- Read the Python style guide: <https://www.python.org/dev/peps/pep-0008/>
- In your email to welsh@rice.edu or erikwelsh@gmail.com answer the following questions (please provide a thoughtful response but limit each answer to around 250 words):
 - What aspect of the python style guide do you disagree with most and why?
 - Do you agree that whitespace should matter in Python and why?
 - What is the most interesting thing you found in the style guide and why?