ENGG 680 – Introduction to Digital Engineering
ASSIGNMENT NO: 1

BY

Name: Deep Vyas
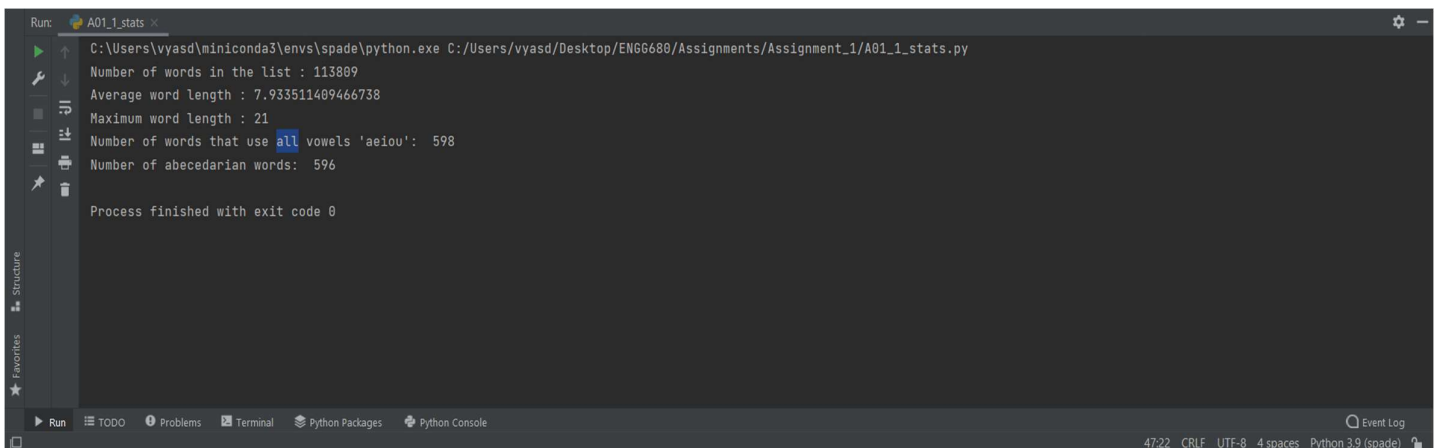
UCID: 30139014

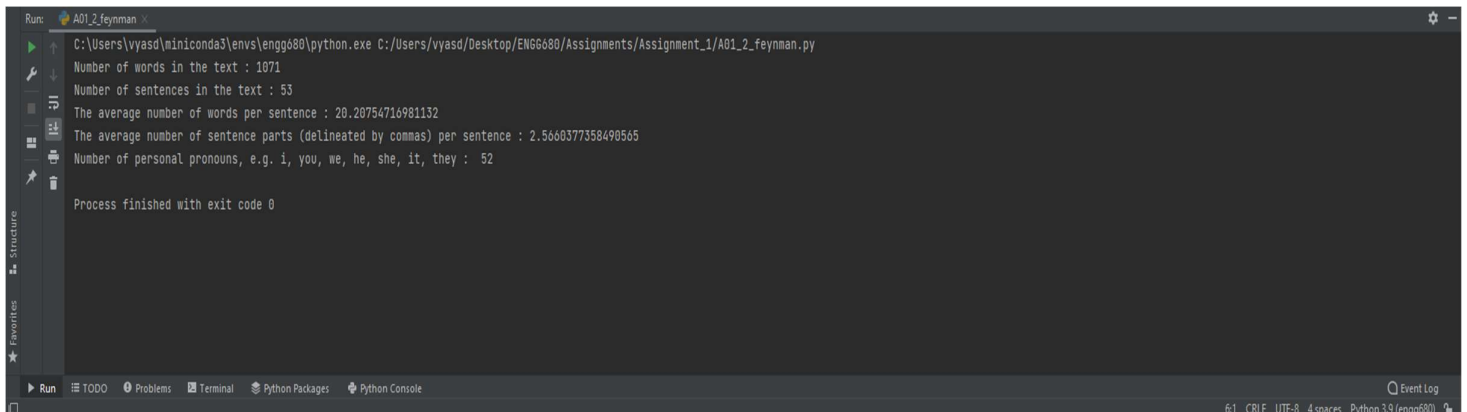**Email:** deep.vyas@ucalgary.ca

Date: January 28, 2022

Results:

1) **Word List Statistics: (A01_1_stats.py)**


```
C:\Users\vyasd\miniconda3\envs\spade\python.exe C:/Users/vyasd/Desktop/ENGG680/Assignments/Assignment_1/A01_1_stats.py
Number of words in the list : 113809
Average word length : 7.933511409466738
Maximum word length : 21
Number of words that use all vowels 'aeiou':  598
Number of abecedarian words:  596

Process finished with exit code 0
```

2) **Text Analysis: (A01_2_feynmen.py)**


```
C:\Users\vyasd\miniconda3\envs\engg680\python.exe C:/Users/vyasd/Desktop/ENGG680/Assignments/Assignment_1/A01_2_feynman.py
Number of words in the text : 1071
Number of sentences in the text : 53
The average number of words per sentence : 20.20754716981132
The average number of sentence parts (delineated by commas) per sentence : 2.5660377358490565
Number of personal pronouns, e.g. i, you, we, he, she, it, they :  52

Process finished with exit code 0
```
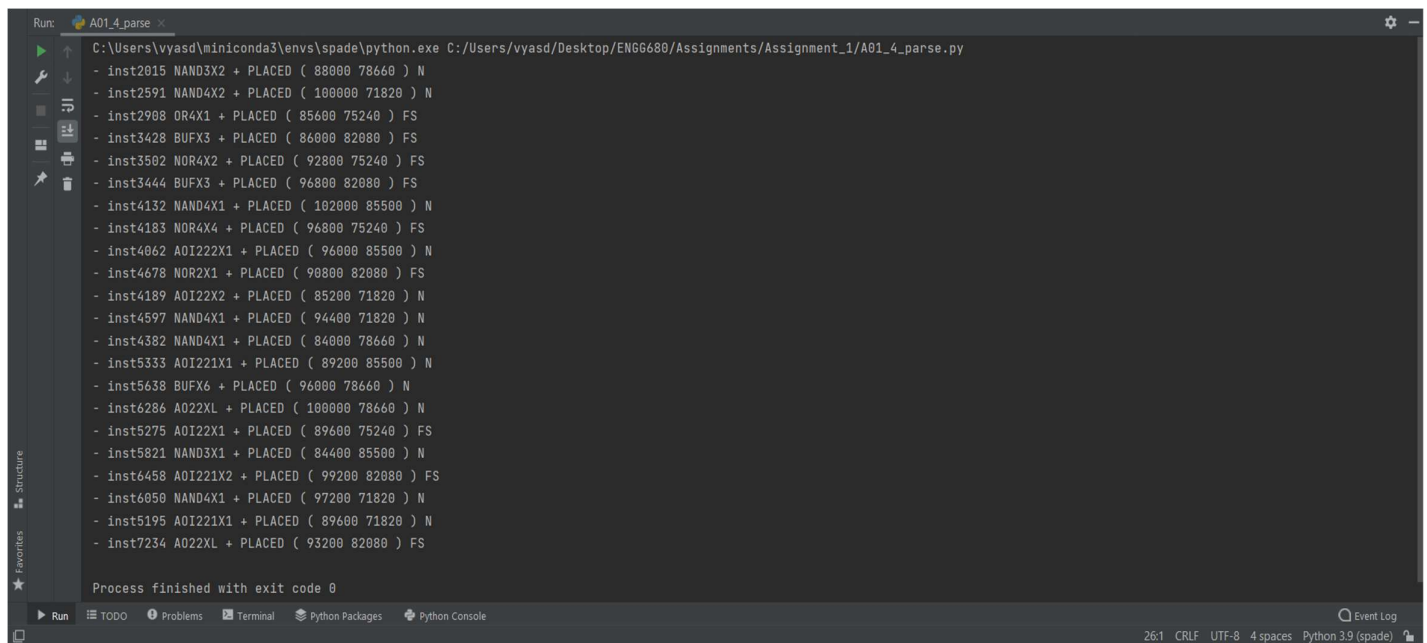
3) Credit Card Number Check (A01_3_creditcard.py)

```
C:\Users\vyasd\miniconda3\envs\spade\python.exe C:/Users/vyasd/Desktop/ENGG680/Assignments/Assignment_1/A01_3_creditcard.py
9384 3495 3297 0121 True
9384 3495 3297 0123 False
9384 3495 3297 01236 False
9384 3495 3297 012A False

Process finished with exit code 0
```

4) Parsing industrial input file by using regular expression (A01_4_parse.py)

```
C:\Users\vyasd\miniconda3\envs\spade\python.exe C:/Users/vyasd/Desktop/ENGG680/Assignments/Assignment_1/A01_4_parse.py
- inst2015 NAND3X2 + PLACED ( 88000 78660 ) N
- inst2591 NAND4X2 + PLACED ( 100000 71820 ) N
- inst2908 OR4X1 + PLACED ( 85600 75240 ) FS
- inst3428 BUFX3 + PLACED ( 86000 82080 ) FS
- inst3502 NOR4X2 + PLACED ( 92800 75240 ) FS
- inst3444 BUFX3 + PLACED ( 96800 82080 ) FS
- inst4132 NAND4X1 + PLACED ( 102000 85500 ) N
- inst4183 NOR4X4 + PLACED ( 96800 75240 ) FS
- inst4062 AOI222X1 + PLACED ( 96000 85500 ) N
- inst4678 NOR2X1 + PLACED ( 90800 82080 ) FS
- inst4189 AOI22X2 + PLACED ( 85200 71820 ) N
- inst4597 NAND4X1 + PLACED ( 94400 71820 ) N
- inst4382 NAND4X1 + PLACED ( 84000 78660 ) N
- inst5333 AOI221X1 + PLACED ( 89200 85500 ) N
- inst5638 BUFX6 + PLACED ( 96000 78660 ) N
- inst6286 AO22XL + PLACED ( 100000 78660 ) N
- inst5275 AOI22X1 + PLACED ( 89600 75240 ) FS
- inst5821 NAND3X1 + PLACED ( 84400 85500 ) N
- inst6458 AOI221X2 + PLACED ( 99200 82080 ) FS
- inst6050 NAND4X1 + PLACED ( 97200 71820 ) N
- inst5195 AOI221X1 + PLACED ( 89600 71820 ) N
- inst7234 AO22XL + PLACED ( 93200 82080 ) FS

Process finished with exit code 0
```