

COP3035 - Intro to Programming in Python
Lab Guide 2

Instructions:

Go over each step in sequential order.

Practice to ensure you master the skills from each objective.

Don't forget to submit in Canvas your lab work progress to get your attendance after you complete this lab.

Please reach any of the TAs or the instructor if you have questions.

1. Use the given floating number and format it in various ways using string formatting within a print statement:

```
number = 123.245345346
```

```
$          123.245
```

```
$=====123.245
```

```
$123.245=====
```

```
*****123.2*****
```

```
_____123.2_____
```

2. Reorder the famous quote provided below:

ORIGINAL: That's one small step for man, one giant leap for mankind.

MODIFIED: That's one giant leap for mankind, one small step for man.

TWISTED: That's one giant leap for man, one small step for mankind.

2.1. Attempt to reorder it using only string slicing.

2.2. Attempt to reorder it again, this time using the .replace() function.

3. Copy a paragraph from the internet and, using the .upper() and .replace() functions, convert vowels to numbers:

Example:

ORIGINAL TEXT

Ingenuity, nicknamed Ginny, is an autonomous NASA helicopter that operated on Mars from 2021 to 2024 as part of the Mars 2020 mission. The helicopter arrived on the planet attached to the underside of the Perseverance rover, which landed February 18, 2021. [5][6] Ingenuity made its first flight on April 19, 2021, the first powered, controlled extraterrestrial flight by any aircraft. [7][8][9][10][11] Originally intended to make five flights, the rotorcraft greatly exceeded expectations and made a total of 72 flights over a period of about 3 years until rotor damage sustained in January 2024 forced an end to the mission. [4][12]

REPLACED TEXT

1NG3N21TY, N1CKN4M3D G1NNY, 1S 4N 42T0N0M02S N4S4 H3L1C0PT3R TH4T 0P3R4T3D 0N M4RS FR0M 2021 T0 2024 4S P4RT 0F TH3 M4RS 2020 M1SS10N. TH3 H3L1C0PT3R 4RR1V3D 0N TH3 PL4N3T 4TT4CH3D T0 TH3 2ND3RS1D3 0F TH3 P3RS3V3R4NC3 R0V3R, WH1CH L4ND3D F3BR24RY 18, 2021. [5][6] 1NG3N21TY M4D3 1TS F1RST FL1GHT 0N 4PR1L 19, 2021, TH3 F1RST P0W3R3D, C0NTR0LL3D 3XTR4T3RR3STR14L FL1GHT BY 4NY 41RCR4FT. [7][8][9][10][11] 0R1G1N4LLY 1NT3ND3D T0

M4K3 F1V3 FL1GHTS, TH3 R0T0RCR4FT GR34TLY 3XC33D3D 3XP3CT4T10NS 4ND M4D3 4 T0T4L 0F 7
2 FL1GHTS 0V3R 4 P3R10D 0F 4B02T 3 Y34RS 2NT1L R0T0R D4M4G3 S2ST41N3D 1N J4N24RY 2024
F0RC3D 4N 3ND T0 TH3 M1SS10N.[4][12]

4. Create a report that contains information about five movies you like:

4.1. Create a header using string formatting, concatenation, and multiplication.

```
=====
Genre          Title          Director      Studio          Cost
=====
```

4.2. Extend the header to include specific details about your movie (e.g., title, director, year).

```
=====
Genre          Title          Director      Studio          Cost
=====
Science Fiction The Matrix      Lana Wachowski Warner Bros. Pictures 63000000
=====
```

5. Expand the report to include more movies, formatting their costs as demonstrated:

```
=====
Genre          Title          Director      Studio          Cost
=====
Science Fiction *****THE MATRIX***** Lana Wachowski, Warner Bros. Pictures $__63.0__
Science Fiction Inception          Christopher Nol Warner Bros. Pictures $__160.0__
Drama          Forrest Gump      Robert Zemeckis Paramount Pictures $__55.0__
Animation      Shrek            Andrew Adamson, DreamWorks Animation $__60.0__
Science Fiction Star Wars: The Empir Irvin Kershner Lucasfilm $__33.0__
=====
```

Remember, practice makes perfect!