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| *1* | ENGG 680 – Introduction to Digital Engineering |
| *Introduction to Git and GitHub*  Group 0 – Fall 2024  Saurav Uprety  100099988  Ananya Vishwanath  100099989  Rhea Zambra  100099990  Zelin Zhou  100099991 |

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| |  |  | | --- | --- | | *Title of Lab Assignment* | Introduction to Git and GitHub | | *Group Number* | 1 |   We, the undersigned, certify that this is our own work, which has been done expressly for this course, either without the assistance of any other party or where appropriate we have acknowledged the work of others. Further, we have read and understood the section in the university calendar on plagiarism/cheating/other academic misconduct and we are aware of the implications thereof. We request that the total mark for this assignment be distributed as follows among group members:   |  |  | | --- | --- | | *Your Name* | Saurav Uprety | | *Student ID* | 100099988 | | *Contribution (%) and Hours* | 25%, 5 | | *Signature and Date* |  |  |  |  | | --- | --- | | *Your Name* | Ananya Vishwanath | | *Student ID* | 100099989 | | *Contribution (%) and Hours* | 25%, 5 | | *Signature and Date* |  |  |  |  | | --- | --- | | *Your Name* | Rhea Zambra | | *Student ID* | 100099990 | | *Contribution (%) and Hours* | 25%, 5 | | *Signature and Date* |  |  |  |  | | --- | --- | | *Your Name* | Zelin Zhou | | *Student ID* | 100099991 | | *Contribution (%) and Hours* | 25%, 5 | | *Signature and Date* |  |   *\***Contribution total should be 100%.* |

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# Introduction (*Heading 1*)

Differential equations are …

# Methodology

Briefly describe the problem *…*

## Question 1 – Differential Equations (Heading 2 - *Use predefined header for consistency and autogenerating Table of Contents*)

“The following differential equation was investigated: *(typeset and number your equations!)*

With the initial conditions, , and (*notice inline equations)*. The initial value problem (IVP) has a known exact solution presented in (2).

## Question 2 – Topic Name..

*Then present the methodology for the second question here.*

## Question 3 – Topic Name..

*Finally, question number 3.*

# Results

*Present the results required for each question.*

## Question 1 – Differential Equations

“The Euler’s method solutions to the differential equation for the three different step sizes () are presented in figure 1, along with the exact solution.”

A graph of a solution

Description automatically generated with medium confidence

Figure 1 - Comparison of Euler's method to exact solution and integration step size of 0.2

# Discussion

As expected, and can be seen in figure 1, the accuracy of the numerical integration improves when integration step size is reduced.

# Conclusion

Briefly describe your work and results.

# Appendix

*Present your code (****must also submit .ipynb files)****! You can copy and paste from Colab (looks best)*

## Code – Question 1

# prompt: Hello World!

print("Hello World!")