

MIDTERM PROJECT 2020-1

Deadline: 2th May 2020: 23:00:00 hrs.

Implement the following in C program

without using MATH.h

you can use **Taylor-Maclaurin series**

1. $\cos(\theta)$
2. $\sin(\theta)$
3. $\tan(\theta)$
4. $\text{acos}(x)$
5. $\text{asin}(x)$
6. $\text{atan}(x)$

And also implement following:

7. x^y
8. $x^{\frac{1}{y}}$
9. e^x
10. $\log_e x$

Rules

- Make one C file for all code.
- Make as much functions as possible, multi-function program have extra score.
- In user interface, ask the user to choose between the above 10 functions.
- Have the inputs according to the user choice, and check for error conditions.
- The angles can have any format for input (Radians, Degrees and Gradient), check accordingly and convert from one form to another.
- The angles must be displayed in all formats (Radians, Degrees and Gradient).

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Score distribution

Details	Score
25 score for each (above) formulas implementation	$25 \times 10 = 250$
User interface	$10 \times 10 = 100$
Comments/Documentation in the whole program	$15 \times 10 = 150$
Bonus score: multi-function program:	$10 \times 10 = 100$
GRAND TOTAL	$500 + 100 = 600$

- **Use of math.h will result in NO Score.**
- Copying code from each other or from internet will be considered cheating, and may result in serious consciences.
- There is no submission after the deadline
- Make you cod compatible with 2015, 2017 or 2019 version of **MS Visual Studio**.
- Upload only C file to the icampus.