

Assignment 1

Subject: Basics of C

Professor: Dr. D. S. Patnaik

Part 1: Theory Questions (8 × 3 = 24 Marks)

1. What is a variable? Explain with an example.
 2. List and explain the rules for naming variables in C.
 3. What is a constant? How does it differ from a variable?
 4. Explain the types of constants in C with examples.
 5. What are keywords in C? List any 10 keywords.
 6. What is the basic structure of a C program?
 7. What are comments in C? Explain the types of comments with examples.
 8. What are library functions? Give an example.
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Part 2: Programming Questions (4 × 4 = 16 Marks)

1. Write a C program to calculate the area of a rectangle.
 - (a) Using hardcoded values
2. Write a program to calculate the area of a circle.
 - Modify the program to also calculate the volume of a cylinder when given radius and height as input.
3. Write a program to convert a temperature given in Celsius (Centigrade) to Fahrenheit.
4. Write a program to calculate simple interest.
 - The program should take principal, number of years, and rate of interest as inputs and calculate the simple interest using the formula:

Submission Guidelines

- **Write your answers in a notebook, then scan and convert them into a PDF.**
- **Upload the PDF to Google Drive and share the link.**
- **Submit the Google Drive link in the Google Form provided.**

Deadline

- **Submit by: April 2, 2025, before 5 PM**
- **In-time Submission Bonus: 10 Marks**
- **Total Marks: 50**
- **Late Submissions: Accepted until 10 PM on April 2, 2025 (No bonus marks)**

Best of Luck!