



भारतीय सूचना प्रौद्योगिकी संस्थान गुवाहाटी
Indian Institute of Information Technology Guwahati
COMPUTER PROGRAMMING LAB (CS110)
ASSIGNMENTS-01

1. Write a program to print the message "Hello, world!", which needs to be followed by a newline character.
2. Try to declare variables of type int with the following variable names:
 - i. my_first_variable
 - ii. mySecondVariable
 - iii. char
 - iv. n
 - v. _
 - vi. _number_
 - vii. 2months
 - viii. months2
 - ix. months_2
 - x. months 2
 - xi. months?

Hint: Cases iii, x, xi do not work.

3. Consider five variables initialized as follows:
`int a = 7, b = 5, c = 0, d = 5, result = 0;`
Print the value of result after each of the following statements:
 - i. `result = a + b;`
 - ii. `result = a - b;`
 - iii. `result = a / b;`
 - iv. `result = a * b;`
 - v. `result = a % b;`

```
vi. result++;  
vii. result--;  
viii. ++result;  
ix. result = (a < b);  
x. result = (a <= b);  
xi. result = (d > b);  
xii. result = (d >= b);
```

4. Write a program in C to find the average of five numbers.
5. Write a program in C to compute the area of a circle. The circumference of the circle is input. Consider $\pi = 3.14$.
6. Write a program in C to find the area of a rectangle. The length and width of the rectangle are inputs.
7. Write a C program to find the area of a triangle. The lengths of the sides of the triangle are inputs.
8. Write a program in C to calculate simple interest.
9. Write a program in C to convert temperature in $^{\circ}F$ to $^{\circ}C$.
10. Write a program in C to extract the individual digits of a given number (a positive integer) and add them. Assume the number has at most 3 digits. Do not use any loop construct.
11. Write a program in C to reverse a three-digit positive integer. For instance, if the number is 132, the output needs to be 231. Do not use any loop construct.
12. Write a C program to swap two int variables using a third variable.
13. Write a program in C to swap two int variables without using a third variable.