// 3. write a program to calculate the compound interest.

```c
#include <stdio.h>
int main(){
    printf("Name - Aryan kamboj\nSAP ID - 590025526\ncourse - BCA\nBatch - 6");
    printf("\n---------------------\n");

    float principal, rate, time, amount;
    int n;

    // Input
    printf("Enter the principal amount: ");
    scanf("%f", &principal);

    printf("Enter the annual interest rate (in %%): ");
    scanf("%f", &rate);

    printf("Enter the time (in years): ");
    scanf("%f", &time);

    printf("Enter the number of times interest is compounded per year: ");
    scanf("%d", &n);

    // Convert rate from percentage to decimal
    rate = rate / 100;

    // Compound Interest Calculation
    amount = principal * ((1 + rate / n), n * time);

    // Output
    printf("Compound Interest = %.2lf\n", amount - principal);
    printf("Total Amount = %.2lf\n", amount);

    return 0;
}
```

Output :

```
aryankamboj@users-MacBook-Air lab_submission_2 % cd "/Users/aryankamboj/Desktop/c_programming_theory/untitled folder/lab_submission_2/
" && gcc CI.c -o CI && "/Users/aryankamboj/Desktop/c_programming_theory/untitled folder/lab_submission_2/"CI
CI.c:28:30: warning: left operand of comma operator has no effect [-Wunused-value]
    amount = principal * ((1 + rate / n), n * time);
                         ~ ^ ~~~~~~~~
1 warning generated.
Name — Aryan kamboj
SAP ID — 590025526
course — BCA
Batch — 6
------------------------
Enter the principal amount: 4000
Enter the annual interest rate (in %): 50
Enter the time (in years): 5
Enter the number of times interest is compounded per year: 5
Compound Interest = 96000.00
Total Amount = 100000.00
```