

Compilation instructions:

1. Writing Code: Open an editor and write your code in it. Save the file with a proper name such as "area.cpp"

2. Compiling: To compile the code call the g++ command with -c flag and input file as arguments, i.e.

```
g++ -c area.cpp
```

If there are no errors, compiler will generate an object file names 'area.o'.

3. Linking: Finally you will call the linker to link the missing definitions with the object file and output exe names as arguments.

```
g++ -o exe area.o
```

4. Running the code: Simply call the exe file with './', i.e.
./exe

Exercise

Question 1: Assume there are 7.481 gallons in a cubic foot. Write a C++ program that asks a user to enter a number of gallons. Then display the equivalence in c=cubic foot.

Question 2: Write a program that generate the following table

1990	135
1991	7290
1992	11300
1993	16200

Question 3: On a certain day the British Pound was equivalence to \$ 1.487 U.S. The French franc was \$0.172. The German Deutschemark was \$0.584, and the Japanese yen was \$0.00955. Write a program that allows user to enter the amount in dollars and then displays its converted value in above four units.

Question 4: Many people keep time using a 24 hour clock (11 is 11am and 23 is 11pm, 0 is midnight). If it is currently 13 and you set your alarm to go off in 50 hours, it will be 15 (3pm). Write a C++ program to solve the general version of the above problem. Ask the user for the time now (in hours), and then ask for the number of hours to wait for the alarm. Your program should output what the time will be on the clock when the alarm goes off.

Question 5: It is possible to name the days 0 through 6 where day 0 is Sunday and day 6 is Saturday. If you go on a wonderful holiday leaving on day number 3 (a Wednesday) and you return home after 10 nights. Write a general version of the program which asks for the starting day number, and the length of your stay, and it will tell you the number of day of the week you will return on.

Question 6: Take the sentence: "All work and no play make Ahmad a dull boy". Store each word in a separate variable, and then print out the sentence on one line using cout.

Question 7: The formula for computing the final amount if one is earning compound interest is given on Wikipedia

As:

$$A = A_0 \left(1 + \frac{r}{n}\right)^{nt}$$

Where, A_0 = Principal Amount (Initial Investment) r = annual nominal interest rate (as a decimal) n = number of times interest compounded per year t = number of years. Write a C++ program that assigns the principal amount of 10000 to variable A_0 , assign to n the value 12, and assign to r the interest rate of 8% (0.08). Then have the program prompt the user for the number of years, t , that the money will be compounded for. Calculate and print the final amount after t years.