

**Run all these codes in separate .cpp files**

```
/////////////////////////////////First.cpp////////////////////////////////
```

```
// This is single line comment
```

```
/*
```

```
    This is multiple
```

```
line
```

```
comment
```

```
*/
```

```
#include<iostream>
```

```
using namespace std;
```

```
int main (void)
```

```
{
```

```
    cout<<"hello Every one"<<endl;
```

```
    cout<<"C++ is a powerful Language"<<endl;
```

```
return 0;
```

```
}
```

```
/////////////////////////////////Second.cpp////////////////////////////////
```

```
#include <iostream>
```

```
#include <typeinfo>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
    int a;
```

```
    a=10;
```

```
    cout<<a<<endl;
```

```
    cout<<sizeof(a)<<endl;
```

```
    cout<< typeid(a).name()<<endl;
```

```
    return 0;
```

```
}
```

```
/////////////////////////////////address.cpp////////////////////////////////
```

```
#include <iostream>
```

```
#include <typeinfo>
```

```
using namespace std;
```

```

int main ()
{
    int a; // Declaration of Variable a as integer
    a=10; //Assigning value as 10
    bool b;
    b=true;

    cout<<"Print value of integer a "<<a<<endl;
    cout<<"Print Size of integer a "<<sizeof(a)<<endl;
    cout<<"Print Type of integer a "<<typeid(a).name()<<endl;
    cout<<"Print Address of integer a "<<&a<<endl;

    cout<<"Print value of Boolean b "<<b<<endl;
    cout<<"Print Size of Boolean b "<<sizeof(b)<<endl;
    cout<<"Print Type of Boolean b "<< typeid(b).name()<<endl;
    cout<<"Print Address of Boolean b "<<&b<<endl;

    return 0;
}
//////////////////////////////////////////////////////////////////Size.cpp//////////////////////////////////////////////////////////////////
#include <iostream>
#include <typeinfo>

```

```

using namespace std;

```

```

int main ()
{
    int a=10;

    short b=10;
    long c=10;
    float d=10.0;
    double e=10.0;
    long double f=10.0;
    bool g=true;

    cout<<"value of Integer a is "<<a<<" size is "<<sizeof(a)<<endl;
    cout<<"value of short c is "<<b<<" size is "<<sizeof(b)<<endl;

```

```

cout<<"value of long c is "<<c<<" size is "<<sizeof(c)<<endl;
cout<<"size of integer Literal is 10 and its size is "<<sizeof(10)<<endl;

cout<<"value of Float d is "<<d<<" size is "<<sizeof(d)<<endl;
cout<<"value of double e is "<<e<<" size is "<<sizeof(e)<<endl;
cout<<"value of long double f is "<<f<<" size is "<<sizeof(f)<<endl;
cout<<"size of Float Literal is 10.0 and its size is "<<sizeof(10.0)<<endl;

cout<<"value of boolean g is "<<g<<" size is "<<sizeof(g)<<endl;
cout<<"size of boolean literal \"true\" is "<<sizeof(true)<<endl;

cout<<"size of literal character \'A\' is "<<sizeof('A')<<endl;
cout<<"size of string literal \"A\" is "<<sizeof("A")<<endl;
return 0;
}

```

/////////////////////////////////Input.cpp////////////////////////////////////

```

#include <iostream>
#include <string>

```

```

using namespace std;

```

```

int main ()
{

    int value1,
    value2;

    float fvalue;

    char ch;

    string str1;

    cout<<"Enter two integer values";
    cin>>value1>>value2;

    cout<<"Enter a Float values";
    cin>>fvalue;

```

```

        cout<<"Enter a character values";
        cin>>ch;

        cout<<"Enter a String";
        cin>>str1;

        cout<<value1<<endl
        <<value2<<endl
        <<fvalue<<endl
        <<ch<<endl<<str1<<endl
        ;

    return 0;
}

//////////Check_it.cpp//////////
#include <iostream>
#include <string>

using namespace std;

int main ()
{

    cout<<5+2;
    cout<<5-2;
    cout<<5*2;
    cout<<5/2;
    cout<<5%2;
    cout<<5.0+2;
    cout<<5.0-2;
    cout<<5.0*2;
    cout<<5.0/2;
    //cout<<5.0%2;//remainder or modulus operator cannot be used with double value

    return 0;
}

```

```
/////////////////////////////////Expression.cpp/////////////////////////////////
```

```
#include <iostream>
```

```
using namespace std;
```

```
int main ()
```

```
{
```

```
    // Constants
```

```
    const double PI = 3.14159;
```

```
    const double DIAMETER = 10.0;
```

```
    // Variable to hold the circumference
```

```
    double circumference;
```

```
    // Calculate the circumference.
```

```
    circumference = PI * DIAMETER;
```

```
    // Display the circumference.
```

```
    cout << "The circumference is: " << circumference << endl;
```

```
    return 0;
```

```
}
```

```
/////////////////////////////////
```

## Chapter 2 Exercises questions of CPP book-1

### 1. Sum of Two Numbers

Write a program that stores the integers 62 and 99 in variables, and stores the sum of these two in a variable named total.

### 2. Sales Prediction

The East Coast sales division of a company generates 62 percent of total sales. Based on that percentage, write a program that will predict how much the East Coast division will generate if the company has \$4.6 million in sales this year.

### 3. Sales Tax

Write a program that will compute the total sales tax on a \$52 purchase. Assume the state sales tax is 4 percent and the county sales tax is 2 percent.

### 4. Restaurant Bill

Write a program that computes the tax and tip on a restaurant bill for a patron with a \$44.50 meal charge. The tax should be 6.75 percent of the meal cost. The tip should be 15 percent of the total after adding the tax. Display the meal cost, tax amount, tip amount, and total bill on the screen.

### 5. Average of Values

To get the average of a series of values, you add the values up and then divide the sum by

the number of values. Write a program that stores the following values in five different variables: 28, 32, 37, 24, and 33. The program should first calculate the sum of these five variables and store the result in a separate variable named sum. Then, the program should divide the sum variable by 5 to get the average. Display the average on the screen.

### **6. Annual Pay**

Suppose an employee gets paid every two weeks and earns \$1700.00 each pay period. In a year the employee gets paid 26 times. Write a program that defines the following variables:

1. payAmount: This variable will hold the amount of pay the employee earns each pay period. Initialize the variable with 1700.0.
2. payPeriods This variable will hold the number of pay periods in a year. Initialize the variable with 26.
3. annualPay This variable will hold the employee's total annual pay, which will be calculated.

The program should calculate the employee's total annual pay by multiplying the employee's pay amount by the number of pay periods in a year, and store the result in the annualPay variable. Display the total annual pay on the screen.

### **7. Distance per Tank of Gas**

A car with a 20-gallon gas tank averages 21.5 miles per gallon when driven in town and 26.8 miles per gallon when driven on the highway. Write a program that calculates and displays the distance the car can travel on one tank of gas when driven in town and when driven on the highway.

Hint: The following formula can be used to calculate the distance:

Distance = Number of Gallons \* Average Miles per Gallon

### **8. Land Calculation**

One acre of land is equivalent to 43,560 square feet. Write a program that calculates the number of acres in a tract of land with 389,767 square feet.

### **9. Circuit Board Price**

An electronics company sells circuit boards at a 40 percent profit. Write a program that will calculate the selling price of a circuit board that costs \$12.67. Display the result on the screen.

### **10. Personal Information**

Write a program that displays the following pieces of information, each on a separate line:

*Your name*

*Your address, with city, state, and ZIP code*

*Your telephone number*

*Your college major*

Use only a single cout statement to display all of this information.