

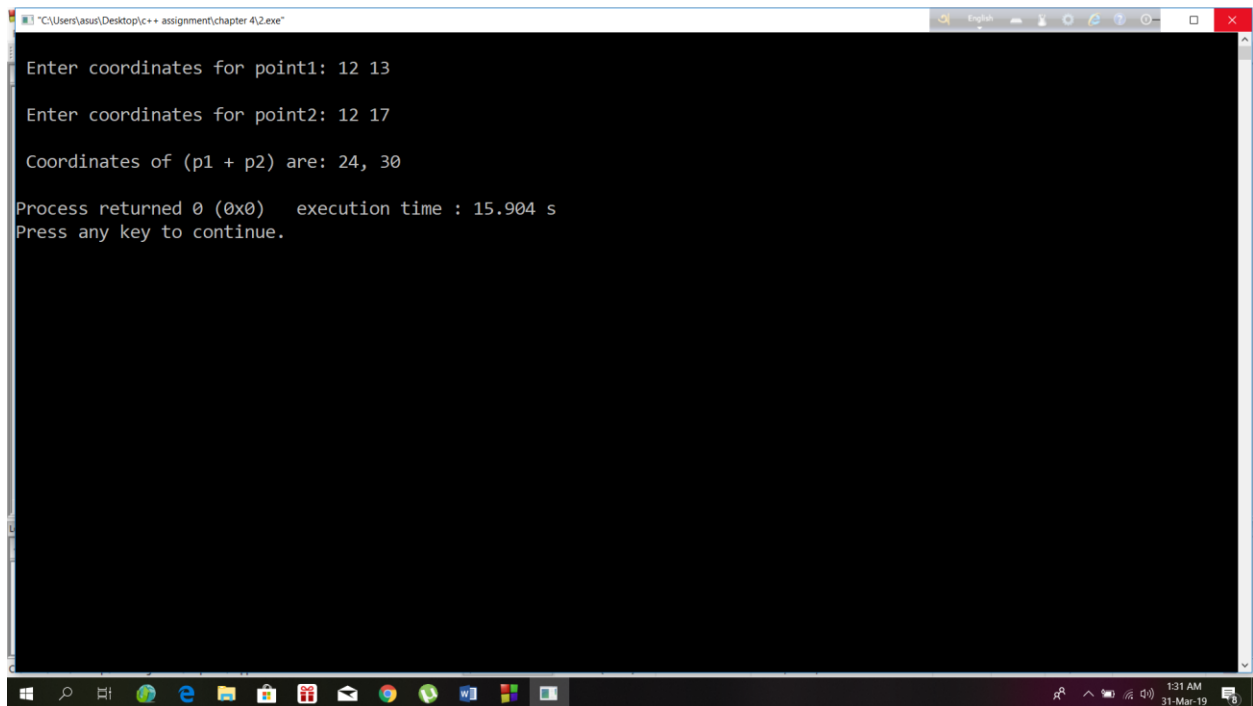
Chapter 4

Exercise 2:

```
#include <iostream>
#include<iomanip>
using namespace std;
struct point
{
    int xCo;
    int yCo;
};

int main()
{
    point p1, p2, p3;
    cout << " \n Enter coordinates for point1: ";
    cin >> p1.xCo >> p1.yCo;
    cout << "\n Enter coordinates for point2: ";
    cin >> p2.xCo >> p2.yCo;
    p3.xCo = p1.xCo + p2.xCo;
    p3.yCo = p1.yCo + p2.yCo;
    cout << "\n Coordinates of (p1 + p2) are: "
        << p3.xCo << ", " << p3.yCo << endl;
    return 0;
```

}



```
"C:\Users\asut\Desktop\c++ assignment\chapter 4\2.exe"
Enter coordinates for point1: 12 13
Enter coordinates for point2: 12 17
Coordinates of (p1 + p2) are: 24, 30
Process returned 0 (0x0)   execution time : 15.904 s
Press any key to continue.
```

Exercise 4:

```
#include<iostream>

#include<iomanip>

struct employee
{
    int employee_number;
    float compensation;
};

using namespace std;

int main()
{
    employee employee1,employee2,employee3;

    cout<< "\n Employee Number:";
```

```

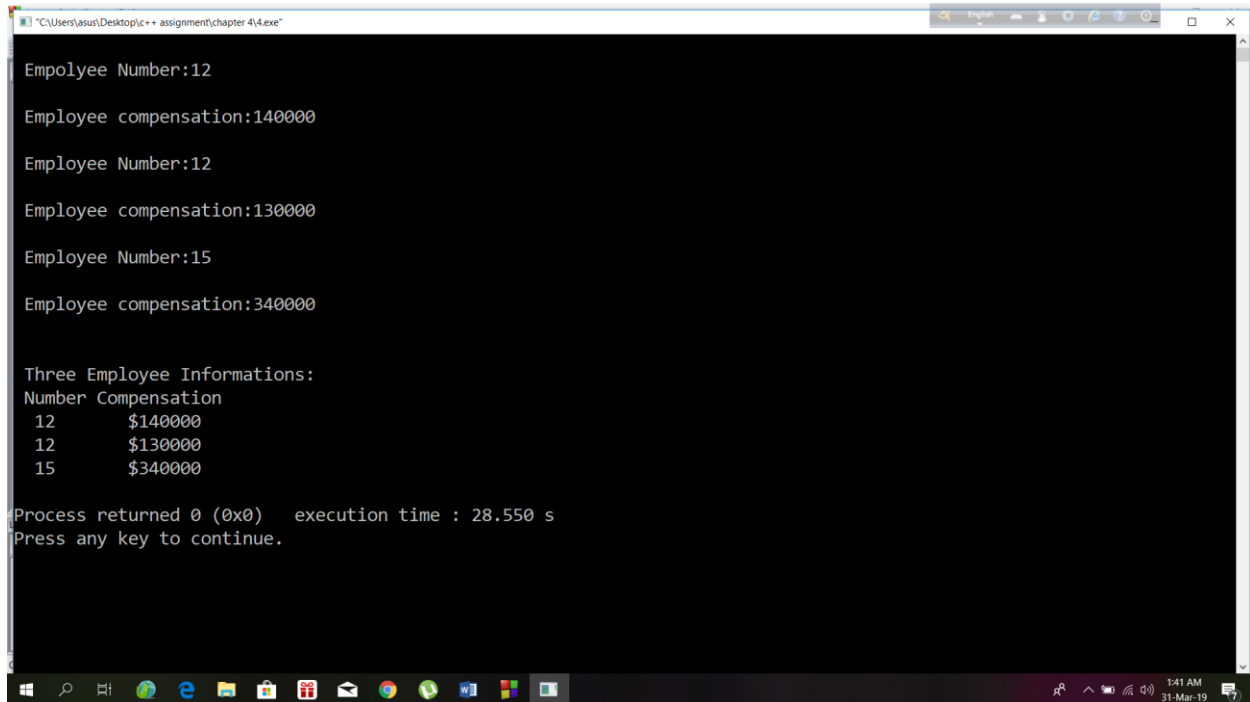
cin>>employee1.employee_number;
cout<< "\n Employee compensation:";
cin>>employee1.compensation;
cout<< "\n Employee Number:";
cin>>employee2.employee_number;
cout<< "\n Employee compensation:";
cin>>employee2.compensation;
cout<< "\n Employee Number:";
cin>>employee3.employee_number;
cout<< "\n Employee compensation:";
cin>>employee3.compensation;

cout<<setw(6)<< "\n\n Three Employee Informations:"<<endl;
cout<<setw(4)<< " Number"<<" "<<setw(4)<< "Compensation"<<endl;

cout<<setw(4)<<employee1.employee_number<< " "
    <<setw(7)<< "$"<<employee1.compensation<<endl;
cout<<setw(4)<<employee2.employee_number<< " "
    <<setw(7)<< "$"<<employee2.compensation<<endl;
cout<<setw(4)<<employee3.employee_number<< " "
    <<setw(7)<< "$"<<employee3.compensation<<endl;
return 0;

```

}



The screenshot shows a Windows command prompt window titled "C:\Users\asus\Desktop\c++ assignment\chapter 4\4.exe". The program has executed and displayed the following output:

```
Empolyee Number:12
Employee compensation:140000
Employee Number:12
Employee compensation:130000
Employee Number:15
Employee compensation:340000

Three Employee Informations:
Number Compensation
12      $140000
12      $130000
15      $340000

Process returned 0 (0x0)   execution time : 28.550 s
Press any key to continue.
```

The Windows taskbar at the bottom shows the time as 1:41 AM on 31-Mar-19.

Exercise 6:

```
#include<iostream>
```

```
#include<iomanip>
```

```
#include<conio.h>
```

```
enum etype {laborer, secretary, manager, accountant, executive, researcher};
```

```
using namespace std;
```

```
int main()
```

```
{
```

```
    etype x;
```

```
    char *ret;
```

```
    cout<<"\n Enter employee type (first letter only)"<<endl
```

```
<<"(laborer, secretary, manager, accountant, executive, researcher):: ";
```

```
switch(getche())
```

```
{
```

```
case 'l':
```

```
    x=laborer ;
```

```
    break;
```

```
case 's':
```

```
    x=secretary ;
```

```
    break;
```

```
case 'm':
```

```
    x=manager ;
```

```
    break;
```

```
case 'a':
```

```
    x=accountant;
```

```
    break;
```

```
case 'e':
```

```
    x=executive ;
```

```
    break;
```

```
case 'r':
```

```
    x=researcher;
```

```
}
```

```
switch(x)
```

```
{  
case 0:  
    ret = " laborer" ;  
    break;  
case 1:  
    ret = " secretary" ;  
    break;  
case 2:  
    ret = " manager" ;  
    break;  
case 3:  
    ret = " accountant";  
    break;  
case 4:  
    ret = " executive" ;  
    break;  
case 5:  
    ret = " researcher";  
}  
cout<<"\nEmployee type is "<<ret<<". "<<endl;  
  
return 0;  
}
```

```
"C:\Users\asus\Desktop\c++ assignment\chapter 4\6.exe"
Enter employee type (first letter only)
(laborer, secretary, manager, accountant, executive, researcher):: a
Employee type is  accountant.

Process returned 0 (0x0)   execution time : 4.140 s
Press any key to continue.
```

Exercise 8:

```
#include<iostream>

#include<conio.h>

struct fraction
{int numerator;
  int denominator;
};

using namespace std;

int main()
{

    fraction equation[2];
    char Operator;

    cout<<"\n Enter first fraction:: ";
    cin >>equation[0].numerator>>Operator>>equation[0].denominator;

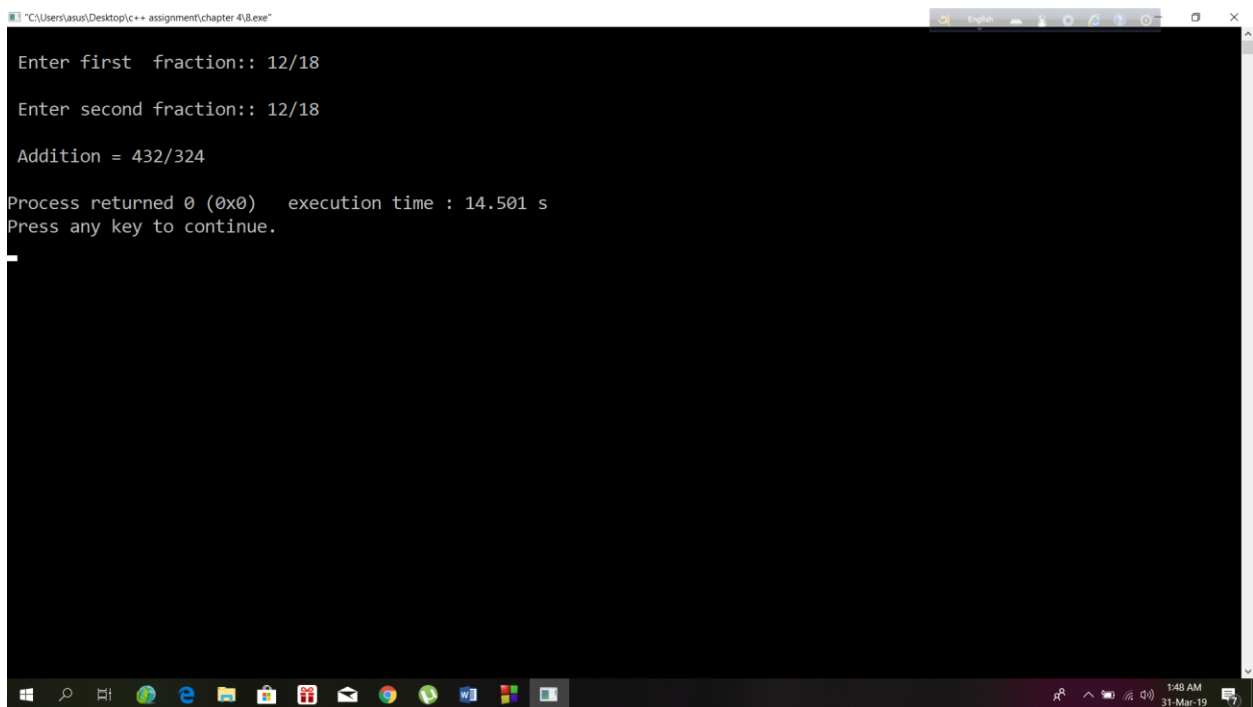
    cout<<"\n Enter second fraction:: ";
    cin >>equation[1].numerator>>Operator>>equation[1].denominator;

    cout<<"\n Addition = "
        <<(equation[0].numerator*equation[1].denominator +
equation[0].denominator*equation[1].numerator)
        <<Operator<<(equation[0].denominator*equation[1].denominator)<<endl;
```



```
return 0;
```

```
}
```



```
"C:\Users\asut\Desktop\c++ assignment\chapter 4\8.exe"
Enter first fraction:: 12/18
Enter second fraction:: 12/18
Addition = 432/324
Process returned 0 (0x0)   execution time : 14.501 s
Press any key to continue.
```

Exercise 10:

```
#include<iostream>
```

```
#include<iomanip>
```

```
struct sterling
```

```
{
```

```
    int pounds;
```

```

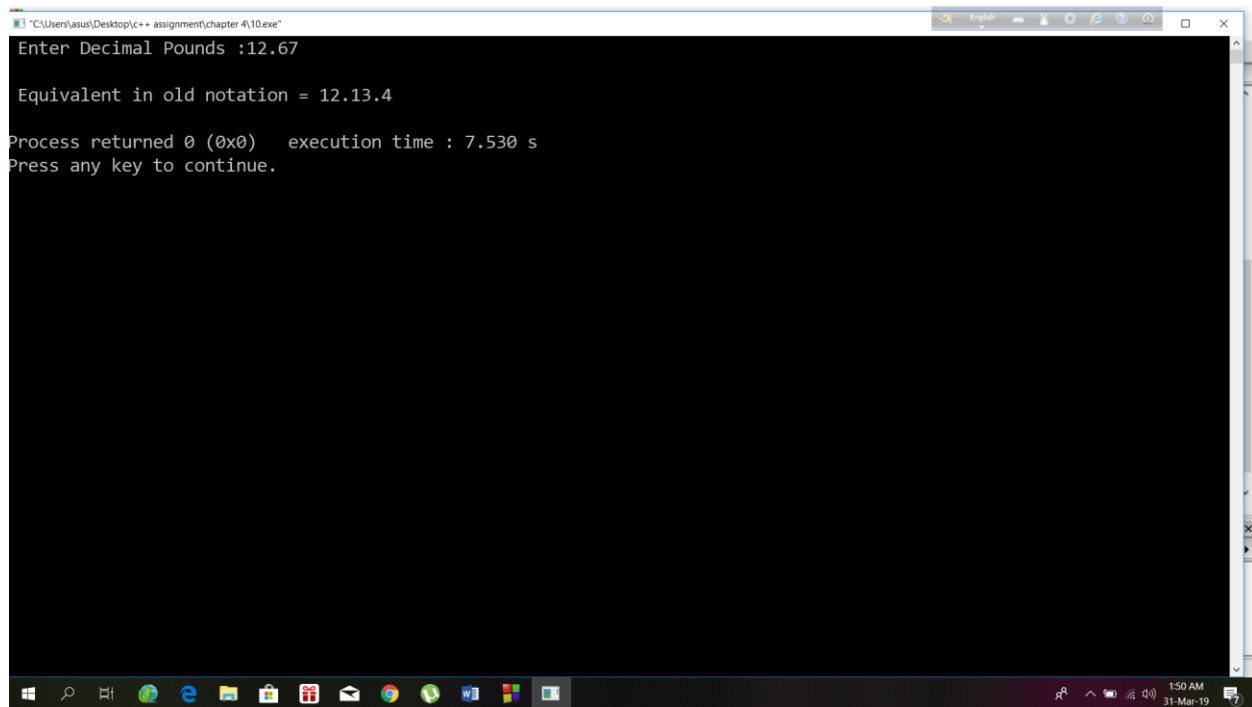
    int sillings;
    int pence;
};

using namespace std;

int main()
{
    sterling a;
    double decPounds,decFraction,temp;
    cout<< " Enter Decimal Pounds :";
    cin>> decPounds;
    cout<<endl;

    a.pounds = static_cast<int>(decPounds);
    decFraction = decPounds - a.pounds;
    temp =decFraction*20;
    a.sillings = decFraction*20;
    a.pence = (temp-a.sillings)*12;
    cout<< " Equivalent in old notation = "
        <<a.pounds<< "."<<a.sillings<< "."<<a.pence<<endl ;
    return 0;
}

```



```
C:\Users\asut\Desktop\c++ assignment\chapter 4\10.exe
Enter Decimal Pounds :12.67

Equivalent in old notation = 12.13.4

Process returned 0 (0x0)   execution time : 7.530 s
Press any key to continue.
```

Exercise 12:

```
#include<iostream>
```

```
#include<iomanip>
```

```
struct fraction
```

```
{
```

```
    int numerator;
```

```
    int denominator;
```

```
};
```

```
using namespace std;
```

```
int main()
```

```
{
```

```

fraction f[2];
char sign, Operator;
char ch='y';
cout<<endl;
cout<< " =====<<endl;
cout<< "      Enter The Inputs Like Below<<endl;
cout<< " =====<<endl;
cout<< "      Addition    : a/b + c/d  "<<endl;
cout<< "      Subtraction : a/b - c/d  "<<endl;
cout<< "      Multiplication: a/b * c/d  "<<endl;
cout<< "      Division    : a/b / c/d  "<<endl;
cout<< " =====<<endl;
cout<< " =====<<endl;
do
{

    cout<<" Write your Expression : ";

    cin
    >>f[0].numerator>>sign>>f[0].denominator>>Operator>>f[1].numerator>>sign>>f
    [1].denominator;

    if(Operator=='+')
    {

```

```
        cout<<"Addition = "<<(f[0].numerator*f[1].denominator +  
f[0].denominator*f[1].numerator)<<sign<<(f[0].denominator*f[1].denominator);  
    }
```

```
    if(Operator=='-')  
    {  
        cout<<"Subtraction = "<<(f[0].numerator*f[1].denominator -  
f[0].denominator*f[1].numerator)<<sign<<(f[0].denominator*f[1].denominator);  
    }
```

```
    if(Operator=='*')  
    {  
        cout<<"Multiplication =  
"<<(f[0].numerator*f[1].denominator)<<sign<<  
(f[0].denominator*f[1].denominator);  
    }
```

```
    if(Operator=='/')  
    {  
        if(f[0].denominator != 0 &&f[1].numerator!=0 )  
        {  
            cout<<"Division = "<<(f[0].numerator*f[1].denominator)<<sign<<  
(f[0].denominator*f[1].numerator);  
        }
```

```
    else  
    {
```

```

=====
Enter The Inputs Like Below<
=====
Addition      : a/b + c/d
Subtraction   : a/b - c/d
Multiplication: a/b * c/d
Division      : a/b / c/d
=====
=====
Write your Expression : 12/24+12/24
Addition = 576/576
Do you wish to continue y/n ::y
Write your Expression : 1/2-1/2
Subtraction = 0/4
Do you wish to continue y/n ::y
Write your Expression : 1/2*1/2
Multiplication = 2/4
Do you wish to continue y/n ::n

Process returned 0 (0x0)   execution time : 38.934 s
Press any key to continue.

```