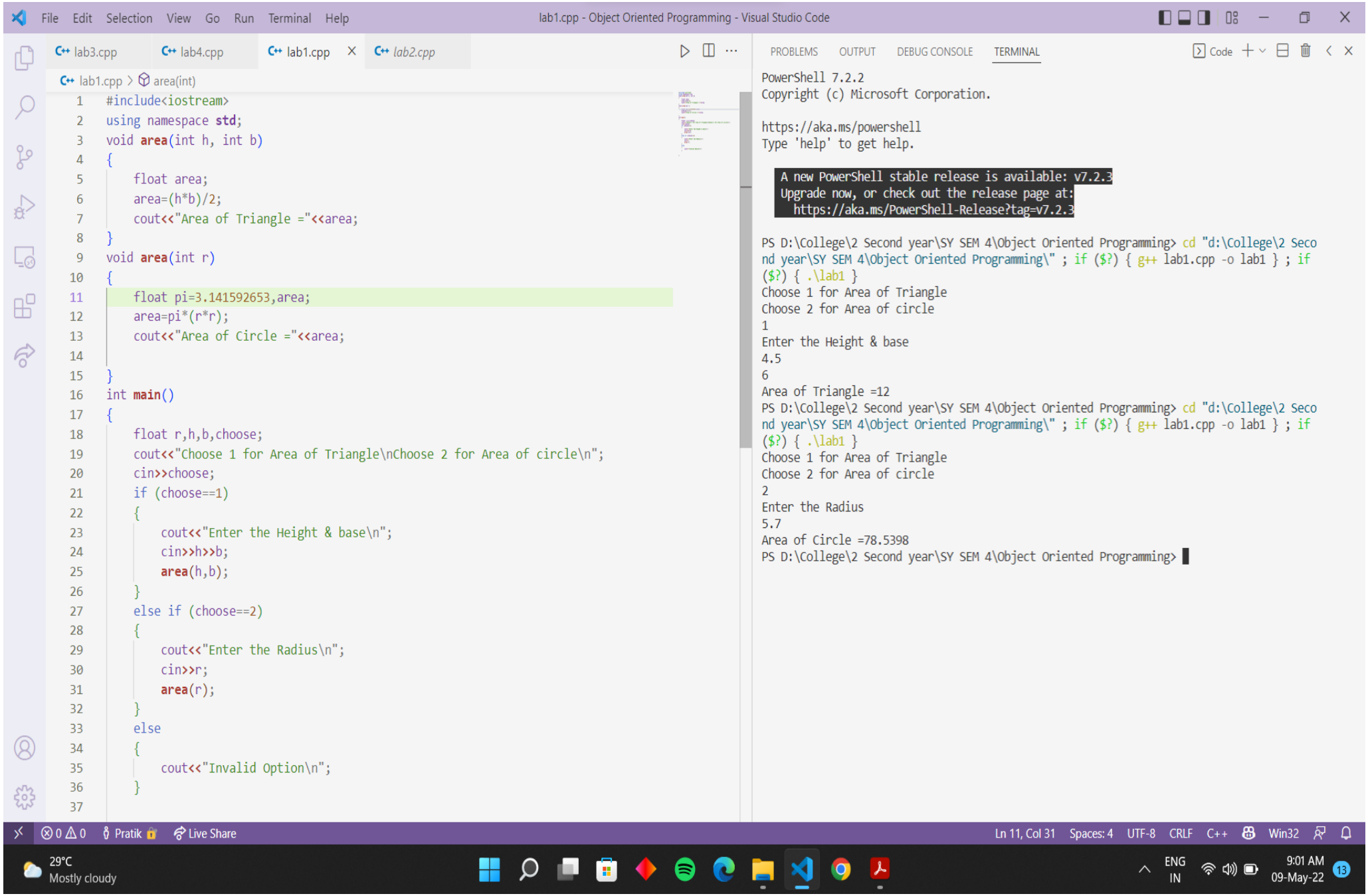
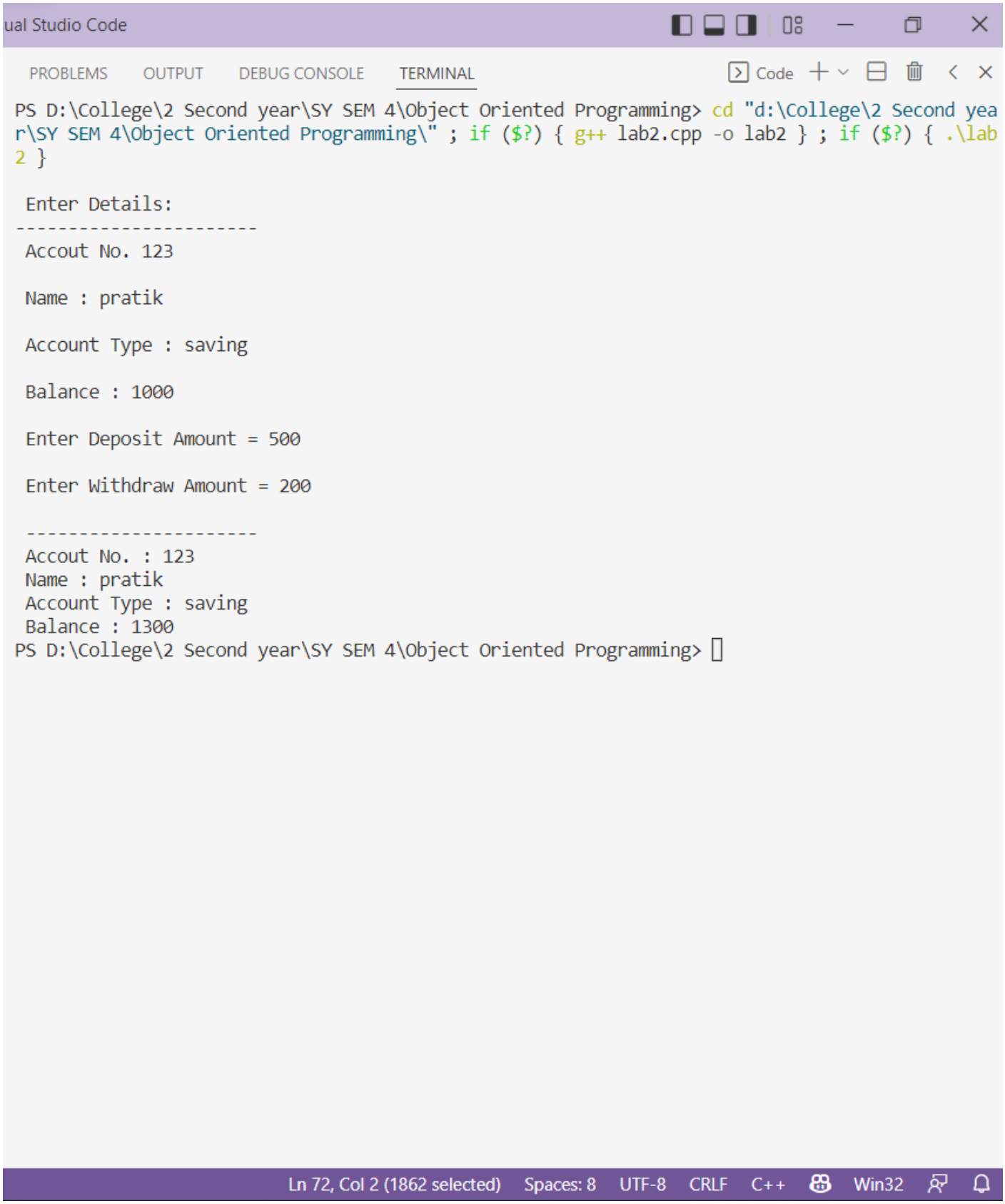
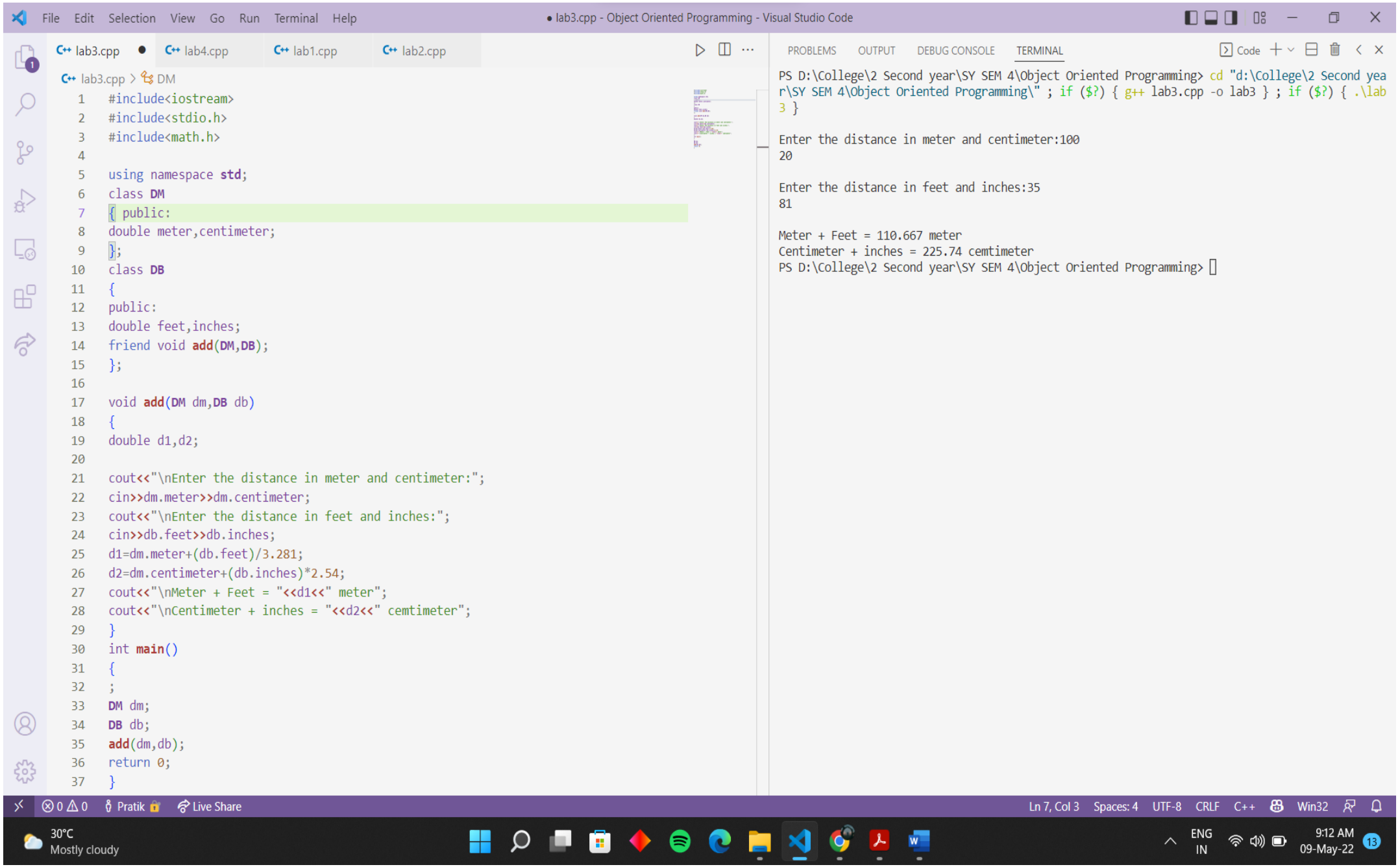

File Edit Selection View Go Run Terminal Help
lab1.cpp - Object Oriented Programming - Visual Studio Code
lab3.cpp
lab4.cpp
lab1.cpp
lab2.cpp
lab1.cpp > area(int)
#include<iostream>
using namespace std;
void area(int h, int b)
{
float area;
area=(h*b)/2;
cout<<"Area of Triangle ="<<area;
}
void area(int r)
{
float pi=3.141592653,area;
area=pi*(r*r);
cout<<"Area of Circle ="<<area;
}
int main()
{
float r,h,b,choose;
cout<<"Choose 1 for Area of Triangle\nChoose 2 for Area of circle\n";
cin>>choose;
if (choose==1)
{
cout<<"Enter the Height & base\n";
cin>>h>>b;
area(h,b);
}
else if (choose==2)
{
cout<<"Enter the Radius\n";
cin>>r;
area(r);
}
else
{
cout<<"Invalid Option\n";
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Code
PowerShell 7.2.2
Copyright (c) Microsoft Corporation.
https://aka.ms/powershell
Type 'help' to get help.
A new PowerShell stable release is available: v7.2.3
Upgrade now, or check out the release page at:
https://aka.ms/PowerShell-Release?tag=v7.2.3
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab1.cpp -o lab1 } ; if ($?) { .\lab1 }
Choose 1 for Area of Triangle
Choose 2 for Area of circle
1
Enter the Height & base
4.5
6
Area of Triangle =12
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab1.cpp -o lab1 } ; if ($?) { .\lab1 }
Choose 1 for Area of Triangle
Choose 2 for Area of circle
2
Enter the Radius
5.7
Area of Circle =78.5398
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Pratik
Live Share
Ln 11, Col 31 Spaces: 4 UTF-8 CRLF C++ Win32
29°C
Mostly cloudy
ENG
IN
9:01 AM
09-May-22

```
#include<iostream>
#include<stdio.h>
#include<string.h>

using namespace std;

class bank
{
        int account_no;
        char num[100], acctype[100];
        float bal;
   public:
        bank(int acc_no, char *name, char *acc_type, float
balance)  //Parameterized Constructor
        {
                account_no=acc_no;
                strcpy(num, name);
                strcpy(acctype, acc_type);
                bal=balance;
        }
        void deposit();
        void withdraw();
        void display();
};
void bank::deposit()   //depositing an amount
{
        int deamt1;
        cout<<"\n Enter Deposit Amount = ";
        cin>>deamt1;
        bal+=deamt1;
}
void bank::withdraw()  //withdrawing an amount
{
        int withdrawamt;
        cout<<"\n Enter Withdraw Amount = ";
        cin>>withdrawamt;
        if(withdrawamt>bal){
                cout<<"\n Cannot Withdraw Amount";
        }
        bal-=withdrawamt;
}
void bank::display()  //displaying the details
{
        cout<<"\n ----------------------";
        cout<<"\n Accout No. : "<<account_no;
        cout<<"\n Name : "<<num;
        cout<<"\n Account Type : "<<acctype;
        cout<<"\n Balance : "<<bal;
}
int main()
{
        int acc_no;
```

```
        char name[100], acc_type[100];
        float balance;
        cout<<"\n Enter Details: \n";
        cout<<"-----------------------";
        cout<<"\n Accout No. ";
        cin>>acc_no;
        cout<<"\n Name : ";
        cin>>name;
        cout<<"\n Account Type : ";
        cin>>acc_type;
        cout<<"\n Balance : ";
        cin>>balance;


        bank b1(acc_no, name, acc_type, balance);  //object is created
        b1.deposit(); //
        b1.withdraw(); // calling member functions
        b1.display();

        return 0;
}
```


ual Studio Code
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab2.cpp -o lab2 } ; if ($?) { .\lab2 }
Enter Details:
Accout No. 123
Name : pratik
Account Type : saving
Balance : 1000
Enter Deposit Amount = 500
Enter Withdraw Amount = 200
Accout No. : 123
Name : pratik
Account Type : saving
Balance : 1300
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Ln 72, Col 2 (1862 selected)
Spaces: 8
UTF-8
CRLF
C++
Win32

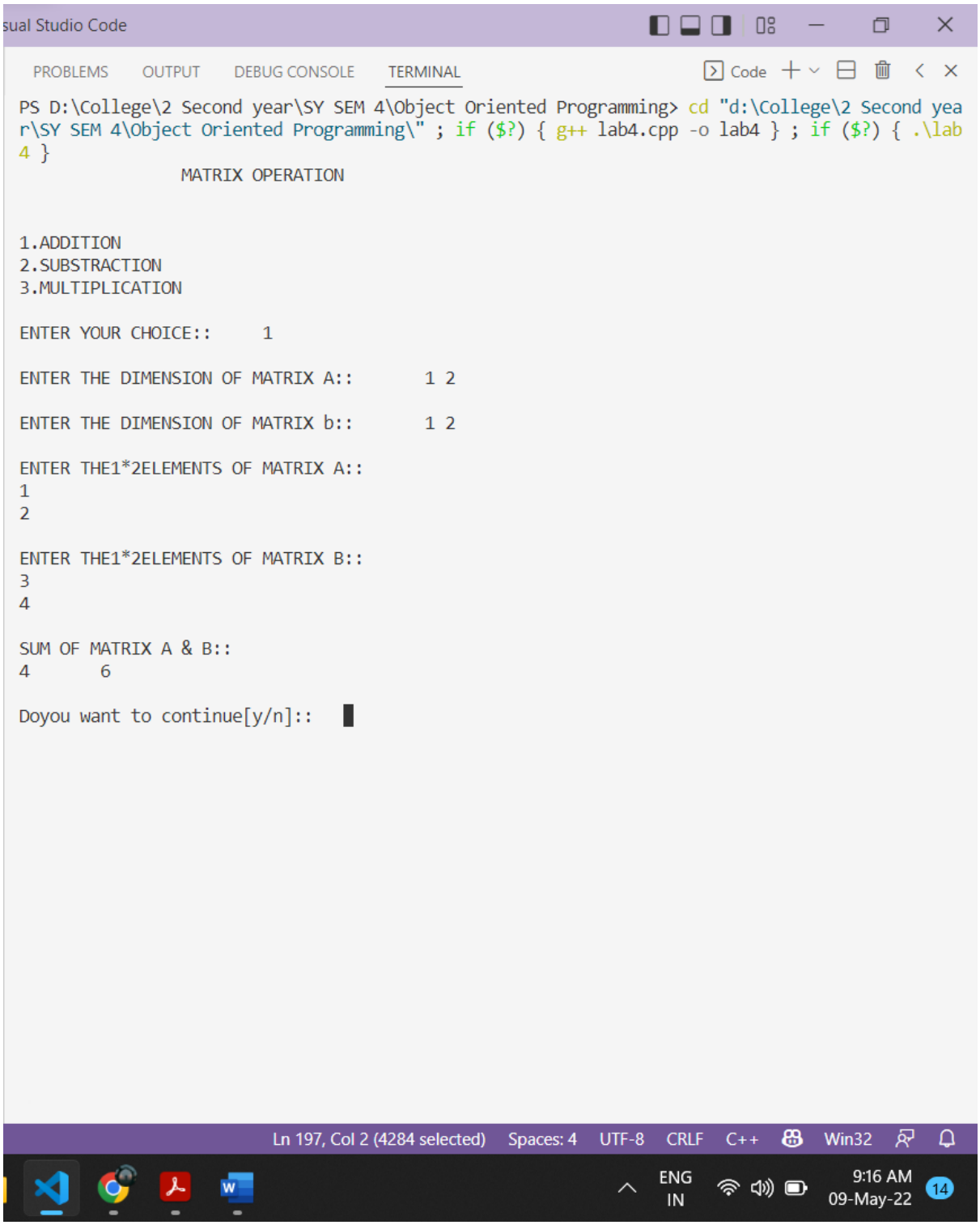

File Edit Selection View Go Run Terminal Help
• lab3.cpp - Object Oriented Programming - Visual Studio Code
lab3.cpp
lab4.cpp
lab1.cpp
lab2.cpp
lab3.cpp > DM
#include<iostream>
#include<stdio.h>
#include<math.h>
using namespace std;
class DM
{ public:
double meter,centimeter;
};
class DB
{
public:
double feet,inches;
friend void add(DM,DB);
};
void add(DM dm,DB db)
{
double d1,d2;
cout<<"\nEnter the distance in meter and centimeter:";
cin>>dm.meter>>dm.centimeter;
cout<<"\nEnter the distance in feet and inches:";
cin>>db.feet>>db.inches;
d1=dm.meter+(db.feet)/3.281;
d2=dm.centimeter+(db.inches)*2.54;
cout<<"\nMeter + Feet = "<<d1<<" meter";
cout<<"\nCentimeter + inches = "<<d2<<" cemtimeter";
}
int main()
{
;
DM dm;
DB db;
add(dm,db);
return 0;
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab3.cpp -o lab3 } ; if ($?) { .\lab3 }
Enter the distance in meter and centimeter:100
20
Enter the distance in feet and inches:35
81
Meter + Feet = 110.667 meter
Centimeter + inches = 225.74 cemtimeter
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
0 0 Pratik Live Share
Ln 7, Col 3 Spaces: 4 UTF-8 CRLF C++ Win32
30°C
Mostly cloudy
ENG
IN
9:12 AM
09-May-22

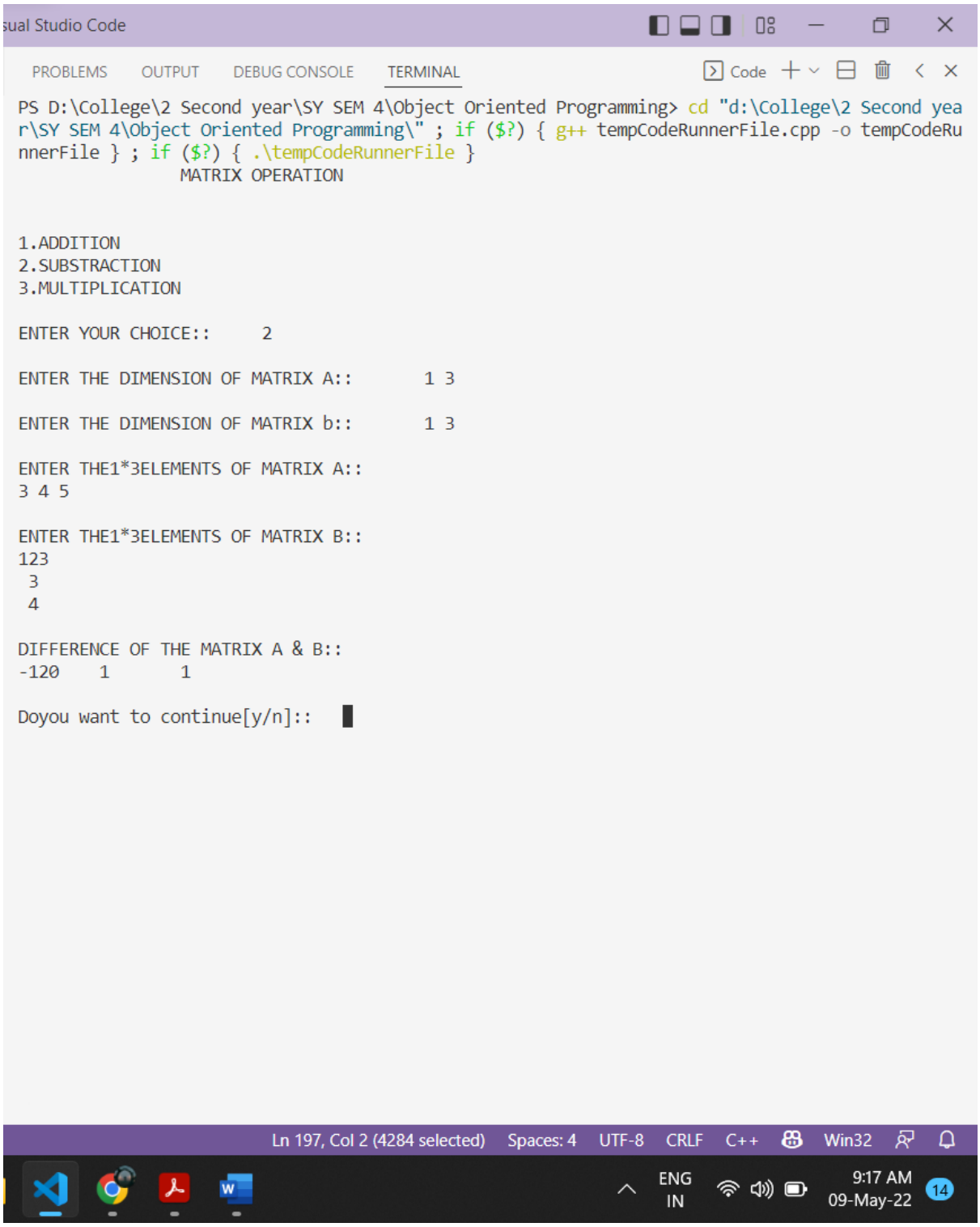
```
#include <iostream>
#include <conio.h>
#include <process.h>
using namespace std;

class mat
{
    int a[20][20], b[20][20],c[20][20];
    int i, j, k, p, q, x, y;

public:
    void addition(void);
    void substraction(void);
    void multiplication(void);
};

void mat::addition()
{
    cout << "\nENTER THE DIMENSION OF MATRIX A::\t";
    cin >> x >> y;
    cout << "\nENTER THE DIMENSION OF MATRIX b::\t";
    cin >> p >> q;
    if ((x == p) && (y == q))
    {
        cout << "\nENTER THE" << x << "*" << y << "ELEMENTS OF MATRIX A::\n";
        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)
                cin >> a[i][j];
        }

        cout << "\nENTER THE" << p << "*" << q << "ELEMENTS OF MATRIX B::\n";
        for (i = 0; i < p; i++)
        {
            for (j = 0; j < q; j++)
                cin >> b[i][j];
        }

        cout << "\nSUM OF MATRIX A & B::\n";

        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)
                c[i][j] = a[i][j] + b[i][j];
        }

        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)
                cout << c[i][j] << "\t";
            cout << "\n";
        }
```

```
    }

    else
        cout << "\nADDITION IS NOT POSSIBLE::";
}

void mat::substraction()
{
    cout << "\nENTER THE DIMENSION OF MATRIX A::\t";
    cin >> x >> y;
    cout << "\nENTER THE DIMENSION OF MATRIX b::\t";
    cin >> p >> q;
    if ((x == p) && (y == q))
    {
        cout << "\nENTER THE" << x << "*" << y << "ELEMENTS OF MATRIX A::\n";
        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)

                cin >> a[i][j];
        }
        cout << "\nENTER THE" << p << "*" << q << "ELEMENTS OF MATRIX B::\n";
        for (i = 0; i < p; i++)
        {
            for (j = 0; j < q; j++)
                cin >> b[i][j];
        }
        cout << "\nDIFFERENCE OF THE MATRIX A & B::\n";
        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)
                c[i][j] = a[i][j] - b[i][j];
        }

        for (i = 0; i < x; i++)
        {
            for (j = 0; j < y; j++)
                cout << c[i][j] << "\t";
            cout << "\n";
        }
    }

    else

        cout << "\nSUBSTRACTION IS NOT POSSIBLE::";
}

void mat::multiplication()

{
    cout << "\nENTER THE DIMENSION OF MATRIX A::\t";
    cin >> x >> y;
```

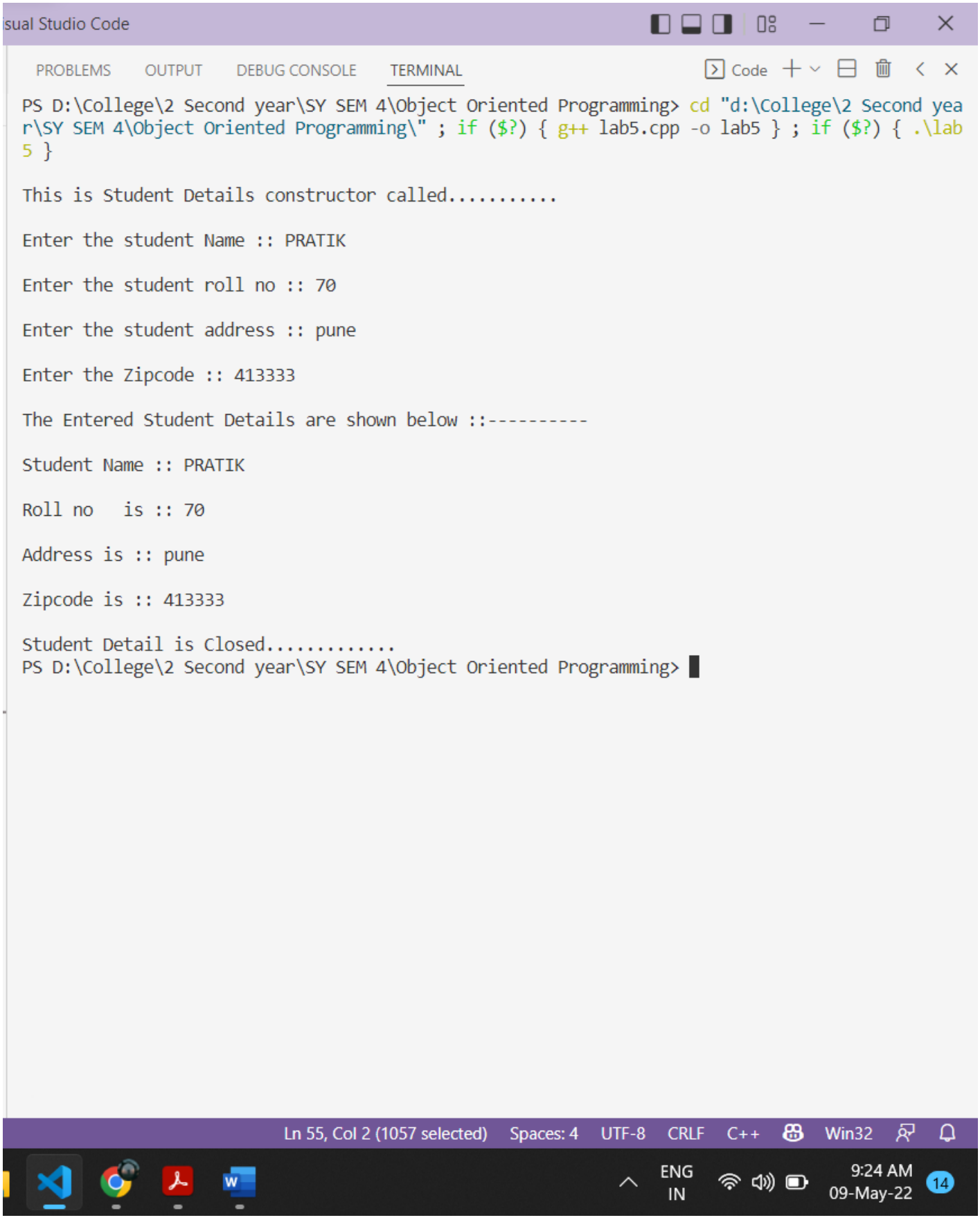
```
    cout << "\nENTER THE DIMENSION OF MATRIX b::\t";
    cin >> p >> q;
    if (y == q)
    {
        cout << "\nENTER THE" << x << "*" << y << "ELEMENTS OF MATRIX A::\n";
        for (i = 0; i < x; i++)
        {

            for (j = 0; j < y; j++)

                cin >> a[i][j];
        }
        cout << "\nENTER THE" << p << "*" << q << "ELEMENTS OF MATRIX B::\n";
        for (i = 0; i < p; i++)
        {
            for (j = 0; j < q; j++)
                cin >> b[i][j];
        }
        cout << "\nPROCUCT OF THE MATRIX A & B::\n";
        for (i = 0; i < x; i++)
        {
            for (j = 0; j < q; j++)
            {
                c[i][j] = 0;

                for (k = 0; k < y; k++)

                    c[i][j] = a[i][k] * b[k][i] + c[i][j];
            }
        }
        for (i = 0; i < x; i++)
        {

            for (j = 0; j < q; j++)

                cout << c[i][j] << "\t";

            cout << "\n";
        }
    }

    else

        cout << "\nMULTIPLICATION IS NOT POSSIBLE::";
}

int main()
{
    int c;
    char ch;
    mat M;
    do
```

```
    {

        cout << "\t\tMATRIX OPERATION\n\n";
        cout << "\n1.ADDITION\n2.SUBSTRACTION\n3.MULTIPLICATION\n";
        cout << "\nENTER YOUR CHOICE::\t";
        cin >> c;
        switch (c)
        {

        case 1:

            M.addition();
                break;

        case 2:

            M.substraction();

                break;

        case 3:

            M.multiplication();

                break;

            default:

            cout << "Wrong Choice";
        }

        cout << "\nDoyou want to continue[y/n]::\t";
        cin >> ch;

    }

    while (ch == 'y', ch == 'Y');

    return 0;
}
```


sual Studio Code
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second yea
r\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab4.cpp -o lab4 } ; if ($?) { .\lab
4 }
MATRIX OPERATION
1.ADDITION
2.SUBSTRACTION
3.MULTIPLICATION
ENTER YOUR CHOICE:: 1
ENTER THE DIMENSION OF MATRIX A:: 1 2
ENTER THE DIMENSION OF MATRIX b:: 1 2
ENTER THE1*2ELEMENTS OF MATRIX A::
1
2
ENTER THE1*2ELEMENTS OF MATRIX B::
3
4
SUM OF MATRIX A & B::
4 6
Doyou want to continue[y/n]::
Ln 197, Col 2 (4284 selected)
Spaces: 4
UTF-8
CRLF
C++
Win32
ENG
IN
9:16 AM
09-May-22
14


sual Studio Code
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second yea
r\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ tempCodeRunnerFile.cpp -o tempCodeRu
nnerFile } ; if ($?) { .\tempCodeRunnerFile }
MATRIX OPERATION
1.ADDITION
2.SUBSTRACTION
3.MULTIPLICATION
ENTER YOUR CHOICE:: 2
ENTER THE DIMENSION OF MATRIX A:: 1 3
ENTER THE DIMENSION OF MATRIX b:: 1 3
ENTER THE1*3ELEMENTS OF MATRIX A::
3 4 5
ENTER THE1*3ELEMENTS OF MATRIX B::
123
3
4
DIFFERENCE OF THE MATRIX A & B::
-120 1 1
Doyou want to continue[y/n]::
Ln 197, Col 2 (4284 selected)
Spaces: 4
UTF-8
CRLF
C++
Win32
ENG
IN
9:17 AM
09-May-22
14

```cpp
#include <iostream>
using namespace std;

class stu
{
private:
    char name[20], add[20];
    int roll, zip;

public:
    stu();  // Constructor
    ~stu(); // Destructor
    void read();
    void disp();
};

stu ::stu()
{
    cout << "\nThis is Student Details constructor called.........." << endl;
}

void stu ::read()
{
    cout << "\nEnter the student Name :: ";
    cin >> name;
    cout << "\nEnter the student roll no :: ";
    cin >> roll;
    cout << "\nEnter the student address :: ";
    cin >> add;
    cout << "\nEnter the Zipcode :: ";
    cin >> zip;
}
void stu ::disp()
{
    cout << "\nThe Entered Student Details are shown below ::---------- \n";
    cout << "\nStudent Name :: " << name << endl;
    cout << "\nRoll no   is :: " << roll << endl;
    cout << "\nAddress is :: " << add << endl;
    cout << "\nZipcode is :: " << zip;
}
stu ::~stu()
{
    cout << "\n\nStudent Detail is Closed.............\n";
}
int main()
{
    stu s;
    s.read();
    s.disp();

    return 0;
}
```


sual Studio Code
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second yea
r\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab5.cpp -o lab5 } ; if ($?) { .\lab
5 }
This is Student Details constructor called.....
Enter the student Name :: PRATIK
Enter the student roll no :: 70
Enter the student address :: pune
Enter the Zipcode :: 413333
The Entered Student Details are shown below ::----------
Student Name :: PRATIK
Roll no is :: 70
Address is :: pune
Zipcode is :: 413333
Student Detail is Closed.....
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Ln 55, Col 2 (1057 selected)
Spaces: 4
UTF-8
CRLF
C++
Win32
ENG
IN
9:24 AM
09-May-22
14

```cpp
#include <iostream>
#include <conio.h>
#include <string.h>
using namespace std;
class person
{
protected:
    char name[20];
    int code;

public:
    void get_per(int c, char *s)
    {
        code = c;
        strcpy(name, s);
    }
    void put_per()
    {
        cout << "\nCode : " << code;
        cout << "\nName : " << name;
    }
};

class account : public virtual person
{
protected:
    float pay;

public:
    void get_pay(float p)
    {
        pay = p;
    }
    void put_pay()
    {
        cout << "\nPay amount : " << pay;
    }
};

class admin : public virtual person
{
protected:
    int exp;

public:
    void get_exp(int e)
    {
        exp = e;
    }
    void put_exp()
    {
        cout << "\nExperiance : " << exp;
```

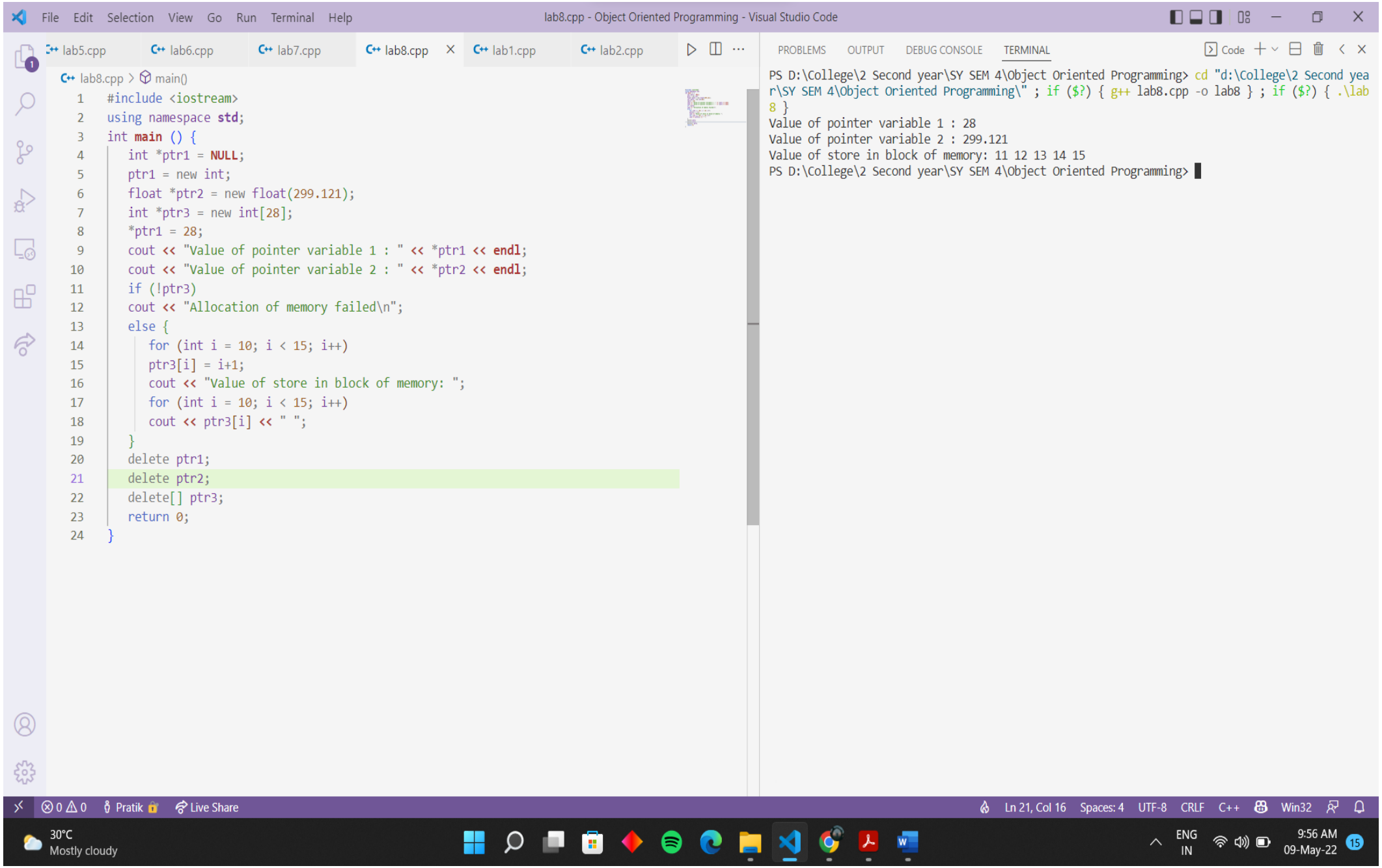
```
    }
};

class master : public account, public admin
{
    // private:
    // float pay;
    // int code,exp;
    // char name;

public:
    void display()
    {
        put_per();
        put_pay();
        put_exp();
    }
};

int main()
{
    master p1;
    p1.get_per(111, "Piyush");
    p1.get_pay(501.50);
    p1.get_exp(2);
    p1.display();
    return 0;
}
```

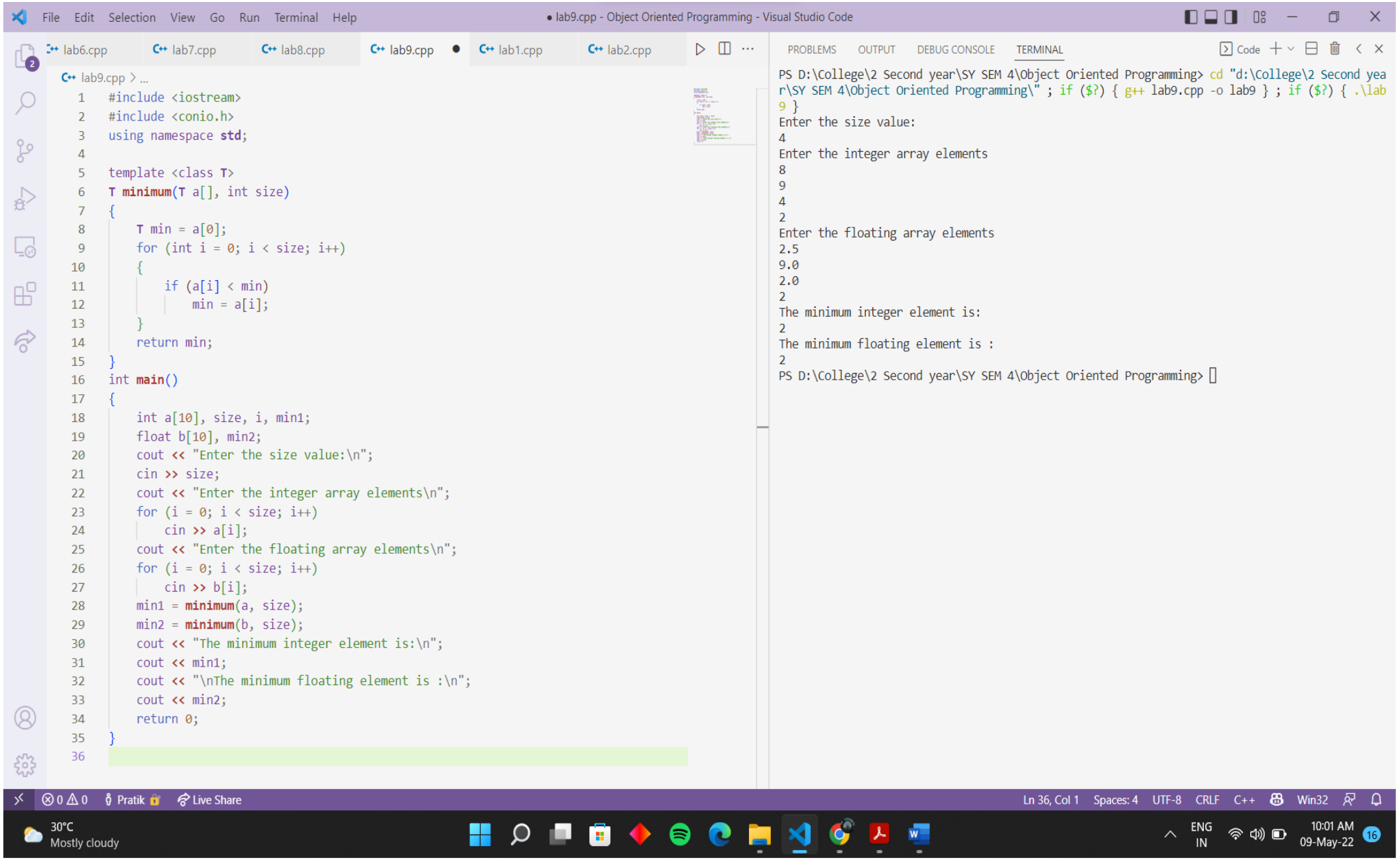
```
Code : 111
Name : Piyush
Pay amount : 501.5
Experiance : 2
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
```

```cpp
#include <iostream>
#include<string>
using namespace std;
class media
{
    protected:
    string title;
    float price;

    public:
    media()
    {
        title=" ";
        price=0.0;

        }
        media(string t,float P)
        {
            title=t;
            price=P;

            }
    };
    class book : public media
    {
        int P_count;
        public:
        book()
        {
            P_count=0;

        }
        book(string t,float P,int pc):media(t,P)
        {

            P_count=pc;

        }

     void display()
     {

          cout<<"title :"<<title<<endl;
                cout<<"Price: "<<price<<endl;

          cout<<"Pagecount :"<<P_count<<endl;

        }

    };
```

```
class CD : public media
   {
       float time;
       public:
       CD()
       {
           time=0.0;

       }
       CD(string t,float p,float tim):media(t,p)
       {

           time=tim;

       }

    void display()
    {
        cout<<"title :"<<title<<endl;
               cout<<"Price: "<<price<<endl;

         cout<<"time in minutes :"<<time<<endl;

       }

   };
int main()
{
    cout<<endl<<"Book information"<<endl;
    book Bo("programming in java",1000,500);
    Bo.display();
    cout<<endl<<"video information"<<endl;
    CD cd("programming in c++",100,125);
    cd.display();
    return 0;
       }
```

```
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second yea
r\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab7.cpp -o lab7 } ; if ($?) { .\lab
7 }

Book information
title :programming in java
Price: 1000
Pagecount :500

video information
title :programming in c++
Price: 100
time in minutes :125
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
```


File Edit Selection View Go Run Terminal Help
lab8.cpp - Object Oriented Programming - Visual Studio Code
lab5.cpp
lab6.cpp
lab7.cpp
lab8.cpp
lab1.cpp
lab2.cpp
lab8.cpp > main()
#include <iostream>
using namespace std;
int main () {
int *ptr1 = NULL;
ptr1 = new int;
float *ptr2 = new float(299.121);
int *ptr3 = new int[28];
*ptr1 = 28;
cout << "Value of pointer variable 1 : " << *ptr1 << endl;
cout << "Value of pointer variable 2 : " << *ptr2 << endl;
if (!ptr3)
cout << "Allocation of memory failed\n";
else {
for (int i = 10; i < 15; i++)
ptr3[i] = i+1;
cout << "Value of store in block of memory: ";
for (int i = 10; i < 15; i++)
cout << ptr3[i] << " ";
}
delete ptr1;
delete ptr2;
delete[] ptr3;
return 0;
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab8.cpp -o lab8 } ; if ($?) { .\lab8 }
Value of pointer variable 1 : 28
Value of pointer variable 2 : 299.121
Value of store in block of memory: 11 12 13 14 15
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Pratik
Live Share
Ln 21, Col 16
Spaces: 4
UTF-8
CRLF
C++
Win32
30°C
Mostly cloudy
ENG
IN
9:56 AM
09-May-22


File Edit Selection View Go Run Terminal Help
• lab9.cpp - Object Oriented Programming - Visual Studio Code
lab6.cpp
lab7.cpp
lab8.cpp
lab9.cpp
lab1.cpp
lab2.cpp
lab9.cpp > ...
#include <iostream>
#include <conio.h>
using namespace std;
template <class T>
T minimum(T a[], int size)
{
T min = a[0];
for (int i = 0; i < size; i++)
{
if (a[i] < min)
min = a[i];
}
return min;
}
int main()
{
int a[10], size, i, min1;
float b[10], min2;
cout << "Enter the size value:\n";
cin >> size;
cout << "Enter the integer array elements\n";
for (i = 0; i < size; i++)
cin >> a[i];
cout << "Enter the floating array elements\n";
for (i = 0; i < size; i++)
cin >> b[i];
min1 = minimum(a, size);
min2 = minimum(b, size);
cout << "The minimum integer element is:\n";
cout << min1;
cout << "\nThe minimum floating element is :\n";
cout << min2;
return 0;
}
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> cd "d:\College\2 Second year\SY SEM 4\Object Oriented Programming\" ; if ($?) { g++ lab9.cpp -o lab9 } ; if ($?) { .\lab9 }
Enter the size value:
4
Enter the integer array elements
8
9
4
2
Enter the floating array elements
2.5
9.0
2.0
2
The minimum integer element is:
2
The minimum floating element is :
2
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Pratik
Live Share
Ln 36, Col 1 Spaces: 4 UTF-8 CRLF C++ Win32
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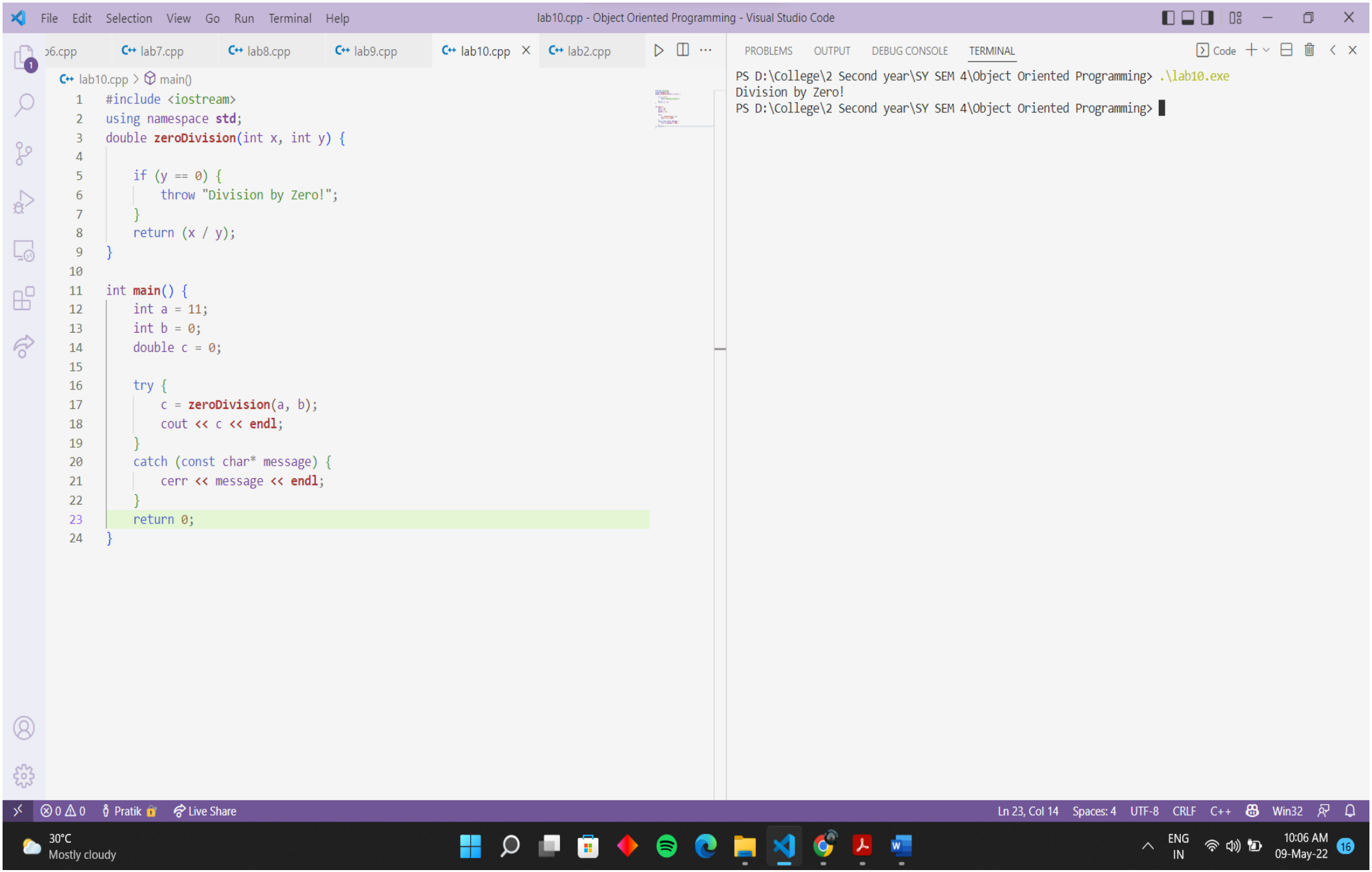
File Edit Selection View Go Run Terminal Help
lab10.cpp - Object Oriented Programming - Visual Studio Code
lab7.cpp
lab8.cpp
lab9.cpp
lab10.cpp
lab2.cpp
lab10.cpp > main()
#include <iostream>
using namespace std;
double zeroDivision(int x, int y) {
if (y == 0) {
throw "Division by Zero!";
}
return (x / y);
}
int main() {
int a = 11;
int b = 0;
double c = 0;
try {
c = zeroDivision(a, b);
cout << c << endl;
}
catch (const char* message) {
cerr << message << endl;
}
return 0;
}
PROBLEMS
OUTPUT
DEBUG CONSOLE
TERMINAL
Code
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming> .\lab10.exe
Division by Zero!
PS D:\College\2 Second year\SY SEM 4\Object Oriented Programming>
Pratik
Live Share
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C++
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