Q1

CODE

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

class arithmetic{
    private:
        float a,b,result1,result2,result3,result4;

    public:
        arithmetic(float x,float y){
            a=x;
            b=y;
            result1=a+b;
            result2=a-b;
            result3=a*b;
            result4=a/b;
        }
        void addition(){
            cout<<a<<"+"<<b<<" = "<<result1;
        }
        void substraction(){
            cout<<a<<"-"<<b<<" = "<<result2;
        }
        void multiplication(){
            cout<<a<<"*"<<b<<" = "<<result3;
        }
        void division(){
            cout<<a<<"/"<<b<<" = "<<result4;
        }

};
int main(){
    float a,b;
    char ch;
    cout<<"input the two numbers: ";
    cin>>a>>b;
    arithmetic obj(a,b);
    cout<<"\n\t\tOperator Menu";
    cout<<"\n\t1. Addition (+)";
    cout<<"\n\t2. Subtraction (-)";
    cout<<"\n\t3. Multiplication (*)";
    cout<<"\n\t4. Division (/)";
    cout<<"\n\t5. Exit (E)";
    cout<<"\nEnter Option number or operator: ";
    cin>>ch;
    switch(ch)
```

```
    {
        case '1' :
        case '+' : obj.addition();
            break;
        case '2' :
        case '-' : obj.substraction();
            break;
        case '3' :
        case '*' : obj.multiplication();
            break;
        case '4' :
        case '/' : obj.division();
            break;
        case '5' :
        case 'E' :
        case 'e' : cout<<"program terminated!!";
            break;
        default : cout<<"Invalid Choice!!";
    }
    return 0;

}
```

OUTPUT

```
PS D:\C++> cd "d:\C++\" ; if ($?) { g++ class1.cpp -o class1 } ; if ($?) { .\class1 }
input the two numbers: 7 8

               Operator Menu
        1. Addition (+)
        2. Subtraction (-)
        3. Multiplication (*)
        4. Division (/)
        5. Exit (E)
Enter Option number or operator: 4
7/8 = 0.875
PS D:\C++>
```

Q2

CODE

```
#include<iostream>
#include<conio.h>
using namespace std;
class prime {
    private:
        int a, k, i;
    public:
        prime(int x) {
            a = x;
        }
        void calculate() {
            k = 1;
            {
                for (i = 2; i <= a / 2; i++)
                    if (a % i == 0) {
                        k = 0;
                        break;
                    } else {
                        k = 1;
                    }
            }
        }
        void show() {
            if (k == 1)
                cout << "\n" << a << " is Prime Number.";
            else
                cout << "\n" << a << " is Not Prime Numbers.";
        }
};
int main() {
    int a;
    cout << "Enter the Number:";
    cin>>a;
    prime obj(a);
    obj.calculate();
    obj.show();
    getch();
    return 0;
}
```

OUTPUT

```
PS D:\C++> cd "d:\C++\" ; if ($?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; if ($?) { .\tempCodeRunnerFile }
Enter the Number:7

7 is Prime Number.
```