

1. WAP including the logical operators & mixed data expressions:

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

int main(){

    int x;
    double y;
    char ch='A';
    double z;
    bool b=true;

    cout<<"\t* USING static_cast<int>(...)*"<<endl;
    cout<<"ASCII value of "<<ch<<" is "<<static_cast<int>(ch)<<endl;

    cout<<"Enter the value of x and y: ";
    cin>>x>>y;
    cout<<showpoint;

    cout<<setw(30)<<"\n * EVALUATING EXPRESSIONS *"<<endl;

    z=x++%4;
    cout<<"\nz=x++%4"<<endl;
    cout<<"\t -> NEW VALUE of z="<<z<<endl;

    z=x*y+ch;
    cout<<"\nz=x*y+ch"<<endl;
    cout<<"\t -> z="<<z<<endl;

    z=x/y+b;
    cout<<"- BOOL b="<<b<<endl;
    cout<<"- z=x/y+b"<<endl;
    cout<<"\t -> NEW VALUE of z="<<z<<endl;

    cout<<setw(30)<<"\n * EVALUATING LOGIC EXPRESSIONS *"<<endl;

    b=(x>y) || ++x;
    cout<<"-(x>y) || ++x"<<endl;
    cout<<"\t -> new value b="<<b<<" x="<<x<<endl;

    b=(x<y) || x++;
```

```

cout<<"-(x<y) && x++"<<endl;
cout<<"\t-> new value b="<<b<<" x= "<<x<<endl;

b=(x<y) && ++x;
cout<<"-(x<y) && ++x"<<endl;
cout<<"\t-> new value b="<<b<<" x= "<<x<<endl;

return 0;
}

```

```

Quincy 2005
    * USING static_cast<int>(...) *
ASCII value of A is 65
Enter the value of x and y: 12 14.5

    * EVALUATING EXPRESSIONS *

z=x++%4
    -> NEW VALUE of z=0.000000

z=x*y+ch
    -> z=253.500
- BOOL b=1
- z=x/y+b
    -> NEW VALUE of z=1.89655

    * EVALUATING LOGIC EXPRESSIONS *
-(x>y) || ++x
    -> new value b=1 x= 14
-(x<y) && x++
    -> new value b=1 x= 14
-(x<y) && ++x
    -> new value b=1 x= 15

Press Enter to return to Quincy...

```

2. WAP that shows if number is greater than or smaller than 20, also show if the number is divisible by 5 (nested if else statements):

```

#include<iostream>
using namespace std;

int main(){
    cout<<"\t__ NESTED IF-ELSE STATEMENTS: __"<<endl;

    for (int i=0; i<5; i++) {

```

```

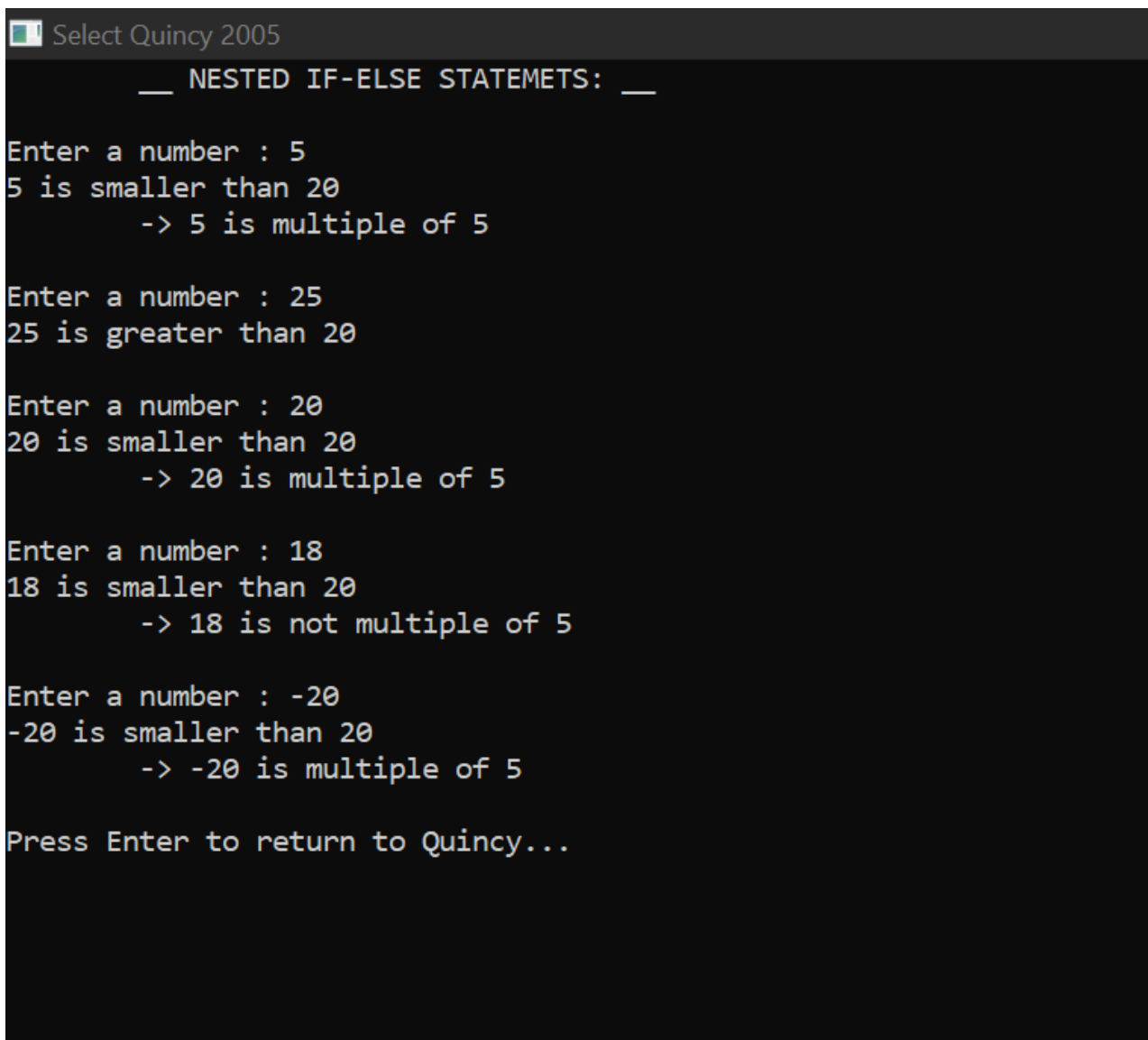
int x;
cout<<"\nEnter a number : ";
cin>>x;

if (x<=20){
    cout<<x<<" is smaller than 20"<<endl;
    if (x%5==0)    cout<<"\t-> "<<x<<" is multiple of 5"<<endl;
    else cout<<"\t-> "<<x<<" is not multiple of 5"<<endl;
}

else cout<<x<<" is greater than 20"<<endl;
}

return 0;
}

```



```

Select Quincy 2005
__ NESTED IF-ELSE STATEMENTS: __

Enter a number : 5
5 is smaller than 20
    -> 5 is multiple of 5

Enter a number : 25
25 is greater than 20

Enter a number : 20
20 is smaller than 20
    -> 20 is multiple of 5

Enter a number : 18
18 is smaller than 20
    -> 18 is not multiple of 5

Enter a number : -20
-20 is smaller than 20
    -> -20 is multiple of 5

Press Enter to return to Quincy...

```

3. WAP that compares two numbers input by the user and prints the greatest number:

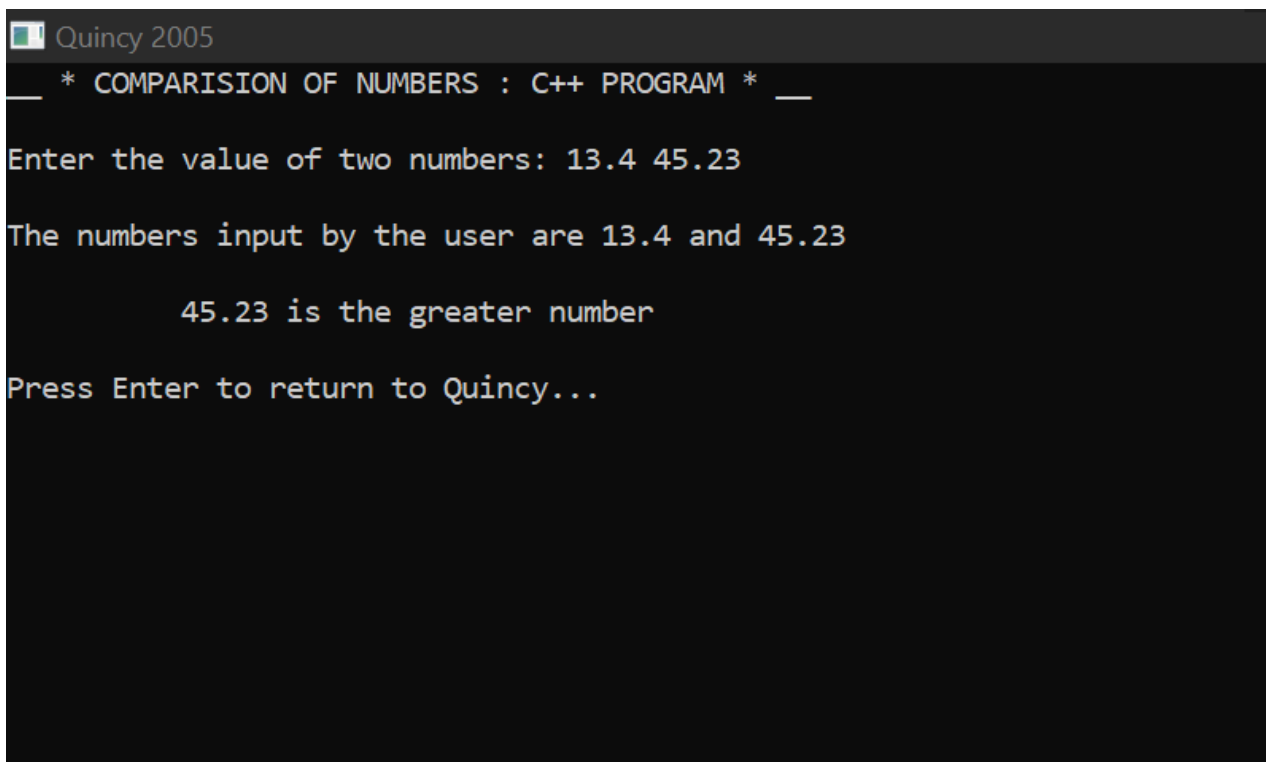
```
#include<iostream>
#include<iomanip>
using namespace std;

int main(){
    cout<<setw(40)<<"__ * COMPARISION OF NUMBERS : C++ PROGRAM * __"<<endl;

    float a,b;
    cout<<"\nEnter the value of two numbers: ";
    cin>>a>>b;

    cout<<"\nThe numbers input by the user are "<<a<<" and "<<b<<endl;
    cout<<setw(15)<<endl;

    if (a<b){
        cout<<b<<" is the greater number"<<endl;
    }
    else{
        cout<<a<<" is the greater number"<<endl;}
    }
    return 0;
}
```



```
Quincy 2005
__ * COMPARISION OF NUMBERS : C++ PROGRAM * __

Enter the value of two numbers: 13.4 45.23

The numbers input by the user are 13.4 and 45.23

    45.23 is the greater number

Press Enter to return to Quincy...
```

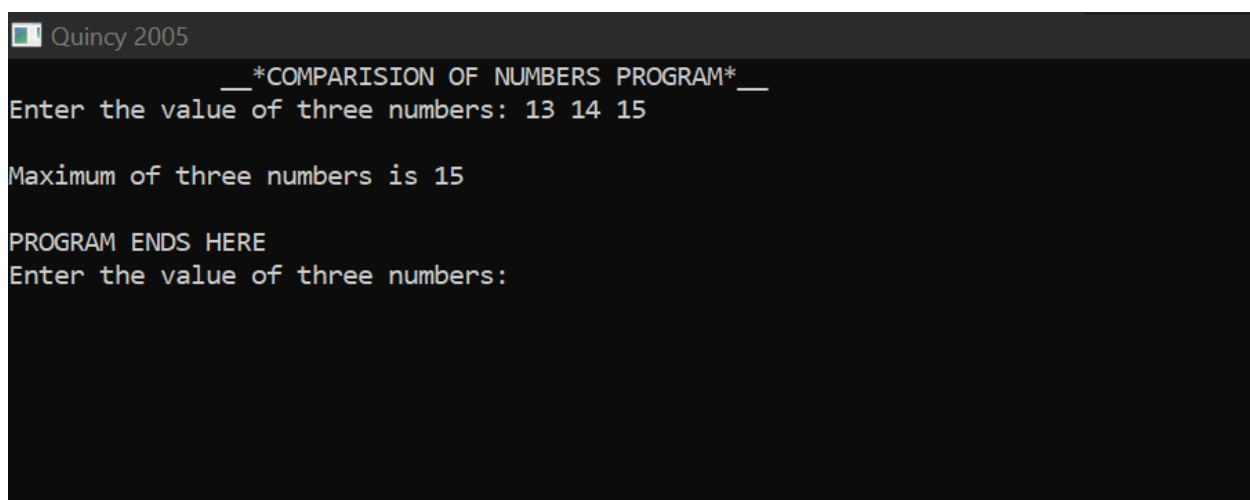
4. WAP that compares 3 input integers and prints the greatest integer:

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

int main(){
    cout<<setw(50)<< " __*COMPARISION OF NUMBERS PROGRAM* __"<<endl;

    char ch='p';
    while (ch=='p'){
        int a,b,c;
        cout<<"Enter the value of three numbers: ";
        cin>>a>>b>>c;
        cout<<endl;
        cout<<setw(25)<<"Maximum of three numbers is ";

        if (a>b){
            if (a>c) cout<<a;
            else cout <<c;
        }
        else{
            if (b>c) cout<< b;
            else cout<<c;
        }
        cout<<"\n"<<endl<<"PROGRAM ENDS HERE"<<endl;
    }
}
```



```
Quincy 2005
    __*COMPARISION OF NUMBERS PROGRAM* __
Enter the value of three numbers: 13 14 15

Maximum of three numbers is 15

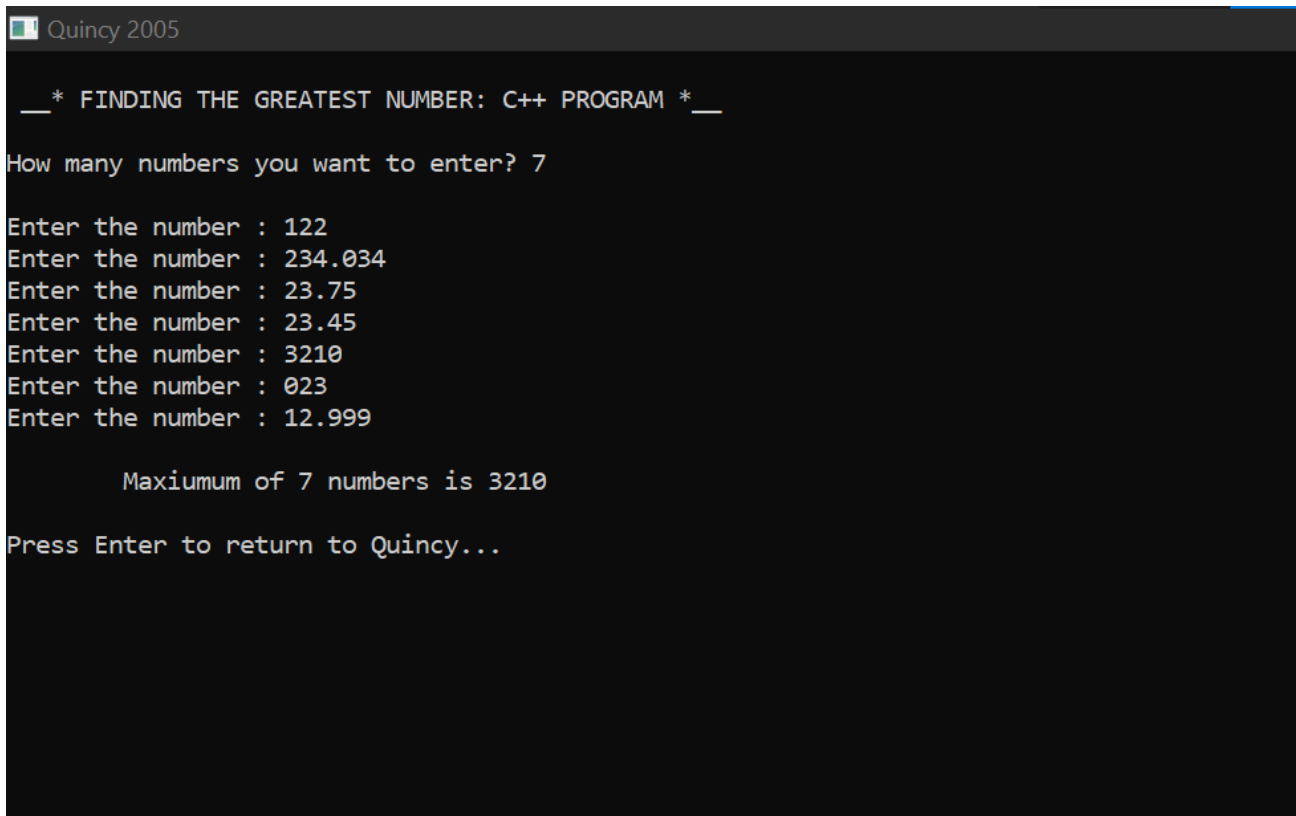
PROGRAM ENDS HERE
Enter the value of three numbers:
```

5. Write a program that displays the greatest number out of n numbers entered by the user:

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

int main(){
    cout<<setw(40)<<"\n __ * FINDING THE GREATEST NUMBER: C++ PROGRAM * __"<<endl;

    float x;
    int i,n,max;
    cout<<"\nHow many numbers you want to enter? ";
    cin>>n;
    cout<<endl;
    i=1;
    max=-1;
    while (i<=n){
        cout<<"Enter the number : ";
        cin>>x;
        if (x>max) max=x;
        i++;
    }
    cout<<"\n\tMaxiumum of "<<n<<" numbers is "<<max<<endl;
    return 0;
}
```



```
Quincy 2005

__ * FINDING THE GREATEST NUMBER: C++ PROGRAM * __

How many numbers you want to enter? 7

Enter the number : 122
Enter the number : 234.034
Enter the number : 23.75
Enter the number : 23.45
Enter the number : 3210
Enter the number : 023
Enter the number : 12.999

        Maxiumum of 7 numbers is 3210

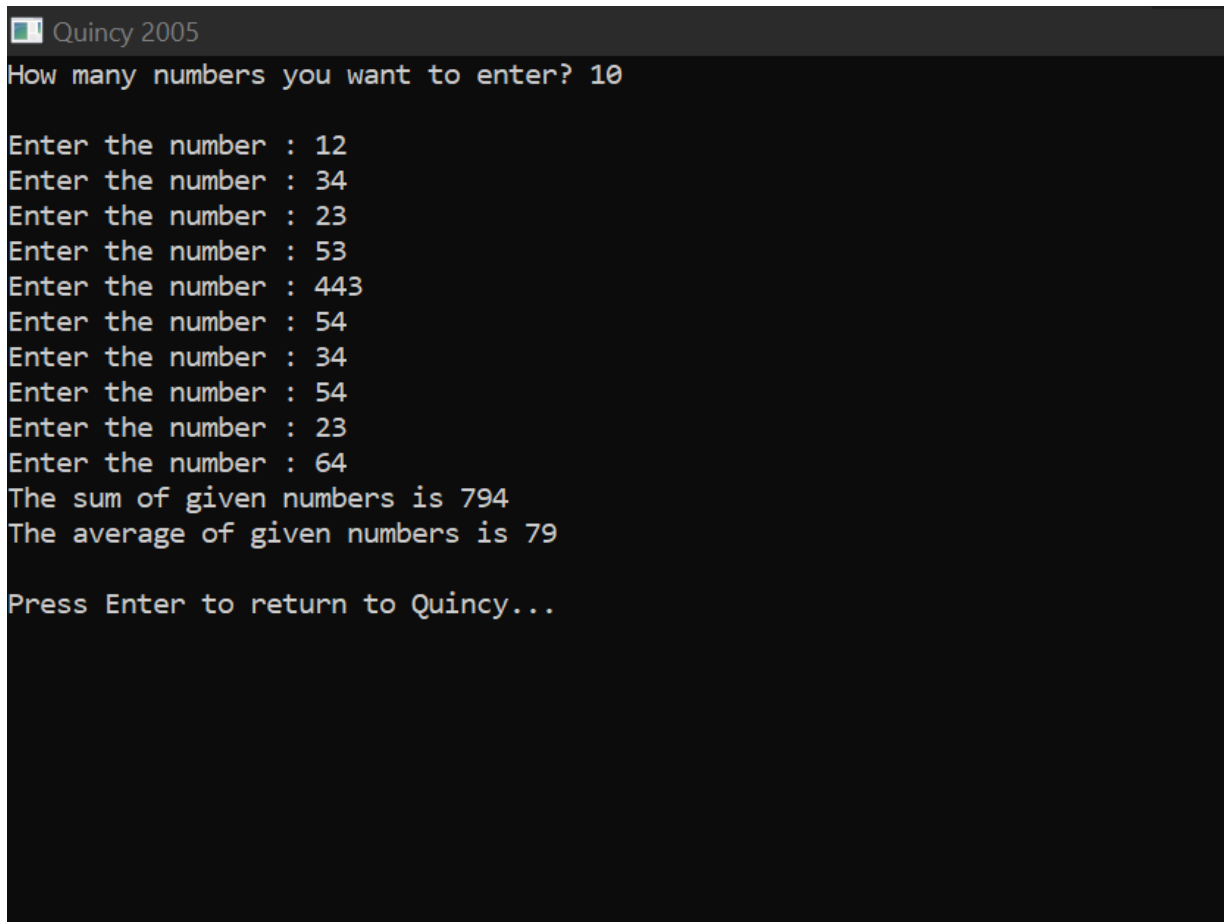
Press Enter to return to Quincy...
```

6. WAP that shows the average of the numbers input by the user:

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

int main(){
    int i,nums,x,sum,avg;
    cout<<"How many numbers you want to enter? ";
    cin>>nums;
    cout<<endl;
    i=1;
    sum=0;
    while (i<=nums){
        cout<<"Enter the number : ";
        cin>>x;
        sum+=x;
        i++;
    }
    avg=sum/nums;
    cout<<"The sum of given numbers is "<<sum<<endl;
    cout<<"The average of given numbers is "<<avg<<endl;

    return 0;
}
```



```
Quincy 2005
How many numbers you want to enter? 10

Enter the number : 12
Enter the number : 34
Enter the number : 23
Enter the number : 53
Enter the number : 443
Enter the number : 54
Enter the number : 34
Enter the number : 54
Enter the number : 23
Enter the number : 64
The sum of given numbers is 794
The average of given numbers is 79

Press Enter to return to Quincy...
```

7. WAP that only displays the even numbers entered by the user:

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

int main(){

    cout<<setw(50)<< " __ * DISPLAY THE EVEN NUMBERS ENTERED BY USER: C++ PROGRAM
    * __"<<endl;

        int i,n,x;
        cout<<"\nHow many numbers you want to enter? ";
        cin>>n;
        cout<<endl;
        i=1;
        while (i<=n){
            cout<<"\nEnter the number : ";
            cin>>x;

            if (x%2==0) cout<<"\t -> Even number is "<<x<<endl;
            i++;
        }

        return 0;
    }
```



```
Quincy 2005
__ * DISPLAY THE EVEN NUMBERS ENTERED BY USER: C++ PROGRAM* __

How many numbers you want to enter? 10

Enter the number : 12
    -> Even number is 12

Enter the number : 32
    -> Even number is 32

Enter the number : 45

Enter the number : 342
    -> Even number is 342

Enter the number : 79

Enter the number : 77

Enter the number : 213

Enter the number : 234
    -> Even number is 234

Enter the number : 0220
    -> Even number is 220

Enter the number : 56530
    -> Even number is 56530

Press Enter to return to Quincy...
```

8. WAP that only displays the odd numbers entered by the user:

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

int main(){

    cout<<setw(50)<< " __ * DISPLAY THE ODD NUMBERS ENTERED BY USER: C++
PROGRAM* __ "<<endl;

    int i,n,x;
    cout<<"\nHow many numbers you want to enter? ";
    cin>>n;
    cout<<endl;
    i=1;
    while (i<=n){
        cout<<"\nEnter the number : ";
        cin>>x;
```

```

    if (x%2!=0) cout<<"\t ->Odd number is "<<x<<endl;
    i++;
}

return 0;
}

```

```

Quincy 2005
* DISPLAY THE ODD NUMBERS ENTERED BY USER: C++ PROGRAM*

How many numbers you want to enter? 7

Enter the number : 123
    ->Odd number is 123

Enter the number : 23031
    ->Odd number is 23031

Enter the number : 324

Enter the number : 233
    ->Odd number is 233

Enter the number : 799
    ->Odd number is 799

Enter the number : 77
    ->Odd number is 77

Enter the number : 80

Press Enter to return to Quincy...

```

9. **WAP that only displays the sum of all the odd & even numbers entered by the user:**

```

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

int main() {
    cout<<setw(60)<< "\n__ * DISPLAY THE SUM OF ALL THE ODD & EVEN NUMBERS ENTERED
BY USER: C++ PROGRAM* __"<<endl;

    int i,n,x, sumOdd, sumEven;
    sumOdd=sumEven=0;

    cout<<"\nHow many numbers you want to enter? ";
    cin>>n;

```

```

cout<<endl;

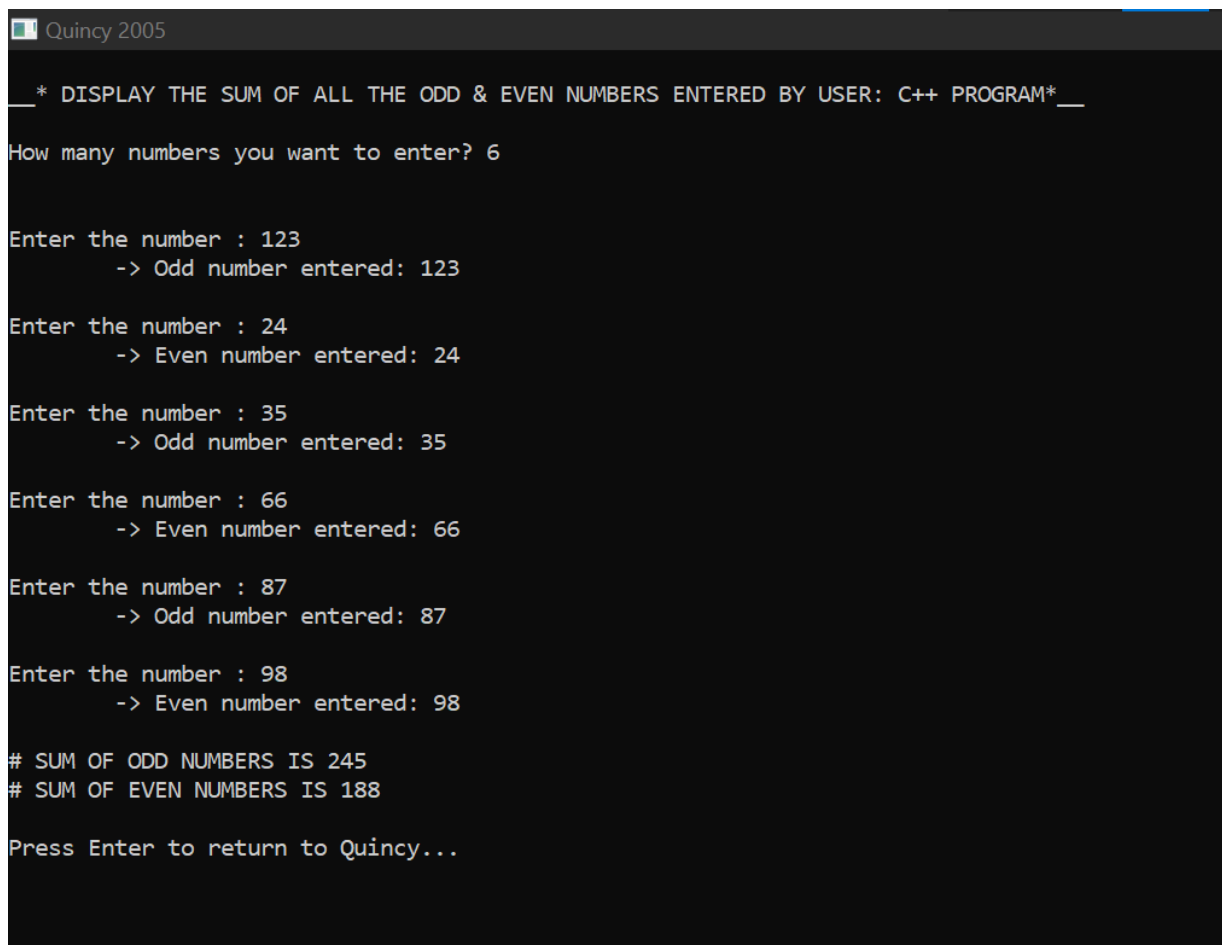
i=1;
while (i<=n){
    cout<<"\nEnter the number : ";
    cin>>x;

    if (x%2!=0) {
        cout<<"\t-> Odd number entered: "<<x<<endl;
        sumOdd=sumOdd+x;
    }

    else{
        cout<<"\t-> Even number entered: "<<x<<endl;
        sumEven=sumEven+x;
    }
    i++;
}

cout<<"\n# SUM OF ODD NUMBERS IS "<<sumOdd<<endl;
cout<<"# SUM OF EVEN NUMBERS IS "<<sumEven<<endl;
return 0;
}

```



```

Quincy 2005

_ * DISPLAY THE SUM OF ALL THE ODD & EVEN NUMBERS ENTERED BY USER: C++ PROGRAM* _

How many numbers you want to enter? 6

Enter the number : 123
    -> Odd number entered: 123

Enter the number : 24
    -> Even number entered: 24

Enter the number : 35
    -> Odd number entered: 35

Enter the number : 66
    -> Even number entered: 66

Enter the number : 87
    -> Odd number entered: 87

Enter the number : 98
    -> Even number entered: 98

# SUM OF ODD NUMBERS IS 245
# SUM OF EVEN NUMBERS IS 188

Press Enter to return to Quincy...

```

10. **Write a program that only displays the prime numbers out of the list of number entered by the user:**

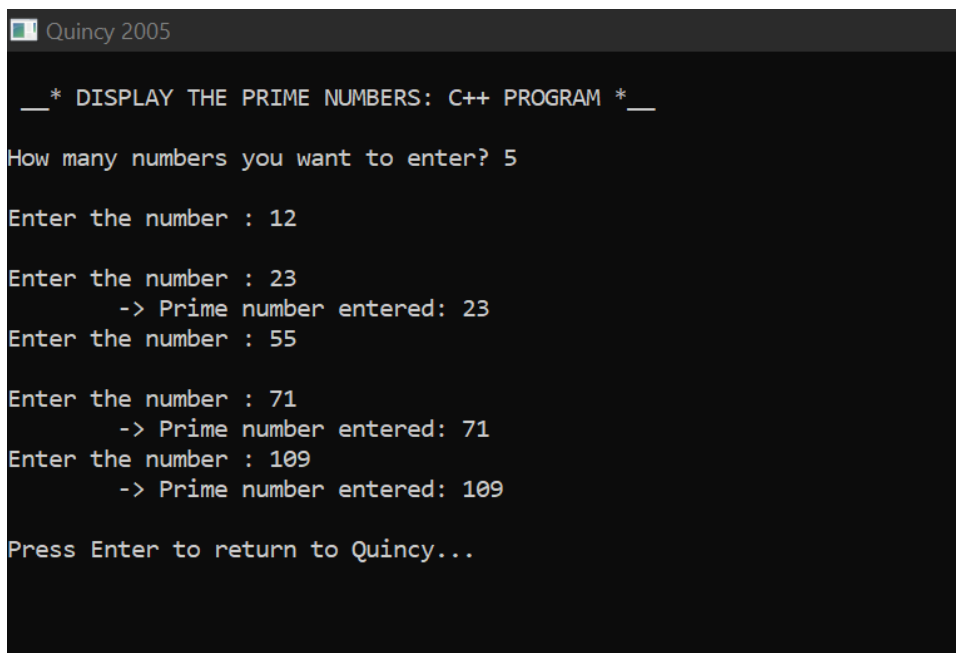
```
#include<iostream>
#include<iomanip>
using namespace std;

int main(){

    cout<<setw(40)<<"\n __ * DISPLAY THE PRIME NUMBERS: C++ PROGRAM * __"<<endl;

    int i,n,x,max;
    cout<<"\nHow many numbers you want to enter? ";
    cin>>n;
    cout<<endl;
    i=1;
    while (i<=n){
        cout<<"Enter the number : ";
        cin>>x;

        int k=2;
        int flag=0;
        while(k<x){
            if (x%k==0) flag=1;
            k++;
        }
        if (flag!=1) cout<<"\t-> Prime number entered: "<<x<<endl;
        else cout<<endl;
        i++;
    }
    return 0;
}
```



```
Quincy 2005

__ * DISPLAY THE PRIME NUMBERS: C++ PROGRAM * __

How many numbers you want to enter? 5

Enter the number : 12

Enter the number : 23
    -> Prime number entered: 23
Enter the number : 55

Enter the number : 71
    -> Prime number entered: 71
Enter the number : 109
    -> Prime number entered: 109

Press Enter to return to Quincy...
```