Sheet No.2

Due Date: One week after your lab session- Complete by yourself.

Exercise 1:

Write a C++ program that accepts two numbers and gives one of the following:

Enter two integers: 22 8

22 is larger

Enter two integers: 12 50

50 is larger

Enter two integers: 14 14

These numbers are equal

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Exercise 2:

Write a C++ program that accepts two numbers and gives one of the following messages:

Enter two integers: 22 8

22 is larger than 8

Enter two integers: 22 22

22 is equal to 22

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Exercise 3:

Write a program that inputs three integers from the keyboard and prints the sum, the product, the average, the smallest, and the largest of these numbers.

Exercise 4:

Write a program that reads a number and prints if it is odd or even.

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Exercise 5:

Write a program that reads a number and prints if it is positive or negative.

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Exercise 6:

The nested conditional statement shown below has been written by an inexperienced C/C++ programmer.

The behavior of the statement is not correctly represented by the formatting.

```
if (n < 10)
if (n > 0)
cout << "The number is positive." << endl;
else
cout << "The number is _____." << endl;
```

a. What is the output of the statement if the variable n has the value 7 ? If n has the value 15 ? If n has the value -3 ?

b. Correct the syntax of the statement so that the logic of the corrected statement corresponds to the formatting of the original statement. Also, replace the blank with an appropriate word or phrase.

c. Correct the formatting of the (original) statement so that the new format reflects the logical behavior of the original statement. Also, replace the blank with an appropriate word or phrase.

Exercise 7:

Remove all the unnecessary tests from the nested conditional statement below.

```
float income;
cout << "Enter your monthly income: ";
cin >> income;
if (income < 0.0)
cout << "You are going farther into debt every month." << endl;
else if (income >= 0.0 && income < 1200.00)
cout << "You are living below the poverty line." << endl;
else if (income >= 1200.00 && income < 2500.00)
cout << "You are living in moderate comfort." << endl;
else if (income >= 2500.00)
cout << "You are well off." << endl;
```

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Exercise 8:

Write the exact output for the following programs:

`#include<iostream.h>`
`main( )`
`{ int n = 4;`
`switch(n)`
`{case 2: cout << "ZZZ\n";`
`case 3: n=n*5; cout<<"AAA\n";`
`break;`
`case 4: n=n/2; cout<<"BBB\n";`
`case 5: n=n%2; cout<<"CCC\n";`
`default: cout<<"DDD\n";} }`	

`#include<iostream.h>`
`main()`
`{ int n = 2;`
`switch(n)`
`{case 2: cout << "ZZZ\n";`
`case 3: n=n*5; cout<<"AAA\n";`
`break;`
`case 4: n=n/2; cout<<"BBB\n";`	

case 5: n=n%2; cout<<"CCC\n"; default: cout<<"DDD\n"; } }	

#include<iostream.h>
main( )
{ int n = 3;
switch(n)
{case 2: cout << "ZZZ\n";
case 3: n=n*5; cout<<"AAA\n";
case 4: n=n/2;
cout<<"BBB\n"<<n<<endl;
case 5: n=n%2;
cout<<"CCC\n";
default: cout<<"DDD\n";
break;} }	

#include<iostream.h>
main()
{ int n=2; char x = 'A';
switch(x)
{case 2: cout << "ZZZ\n";
case 'A': n=n*5;
cout<<"AAA\n"<<n<<"\n";
case 'B': n=n/2; cout<<"BBB\n";
case 5: n=n%2;
cout<<"CCC\n"<<n<<endl;
default: cout<<"DDD\n"; } }	

#include<iostream.h>
main()
{ char n = 'A';
switch(n)
{case 2: cout << "ZZZ\n";
case 3: n=n*5;
cout<<"AAA\n";
case '3': n=n/2;
cout<<"BBB\n"<<endl;
case 5: n=n%2;
cout<<"CCC\n"<<endl;
default: cout<<"DDD\n"; } }	

Exercise 9:

What is the output when the following code fragment is executed?

```
int found = 0, count = 5;
if (!found || --count == 0)
cout << "danger" << endl;
cout << "count = " << count << endl;
```

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Exercise 10:

Write the exact output for the following code fragments:

main( ) **{ cout<<16/5+12%9-8*5 <<endl; }**	
main ( ) **{ cout<<19/3%2+12%10/5+2*2 <<endl; }**	
main( ) **{ cout<<20/3%2+12%5+2*3 <<endl; }**	
main ( ) **{ cout<<11/3%3+15%7+2*4 <<endl; }**	
main ( ) **{ int d = 10 , c = 1 ;** **d%=c; cout<<d; }**	
main ( ) **{ int d = 10 , c = 3 ;** **d/=c; cout<<d; }**	