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Mrs. DiGiovanna
AP CSP
17 March 2020

C++ Using Header Files Tutorial: Source Code

TUTORIAL:

Tutorial.cpp

```
/**  
* Name: Humna Sultan  
* Program Name: C++ Headers Tutorial  
* Date: 17 March 2020  
* Extra Thing: N/A  
*/  
  
#include <iostream>  
#include "Add.h"  
//includes  
  
int main()  
{  
    std::cout << "The sum of 3 and 4 is: " << add(3, 4) << '\n';  
    //prints value using function call "add"  
    return 0;  
}  
//main function
```

Add.cpp

```
/**  
* Name: Humna Sultan  
* Program Name: C++ Headers Tutorial  
* Date: 17 March 2020  
* Extra Thing: N/A  
*/  
  
int add(int x, int y)  
{  
    return x + y;  
    //adds and returns values
```

```
}
```

Add.h

```
/**  
* Name: Humna Sultan  
* Program Name: C++ Headers Tutorial  
* Date: 17 March 2020  
* Extra Thing: N/A  
*/  
  
#ifndef ADD_H  
#define ADD_H  
//header guards  
  
int add(int x, int y);  
//function in "Add.cpp"  
  
#endif
```

Output:

```
The sum of 3 and 4 is: 7
```

```
C:\Users\Humna\source\repos\Tutorial\Debug\Tutorial.exe (process  
5324) exited with code 0.  
Press any key to close this window . . .
```

QUIZ:

Chap_2_QuizProg.cpp

```
/**  
* Name: Humna Sultan  
* Program Name: C++ Headers Tutorial - Chapter 2 Quiz  
* Date: 17 March 2020  
* Extra Thing: uses "writeAnswer" to print product of values  
*/  
  
#include "io.h"  
//includes header  
  
int main()
```

```

{
    int x = readNumber();
    int y = readNumber();
    //gets values from function
    writeAnswer(x+y);
    writeAnswer(x * y);
    //calls functions to print sum/product
    //product = extra
    return 0;
}

```

io.cpp

```

/***
 * Name: Humna Sultan
 * Program Name: C++ Headers Tutorial - Chapter 2 Quiz
 * Date: 17 March 2020
 * Extra Thing: uses "writeAnswer" to print product of values
 */

#include "io.h"
//includes header
#include <iostream>

int readNumber()
//function to get user input
{
    int num = 0;
    //initializes value
    std::cout << "Enter a number - ";
    std::cin >> num;
    //gets input
    return num;
    //returns user input
}

void writeAnswer(int n)
//function to print value
{
    std::cout << "The answer is " << n << std::endl;
    //print statement
}

```

io.h

```
/**  
 * Name: Humna Sultan  
 * Program Name: C++ Headers Tutorial - Chapter 2 Quiz  
 * Date: 17 March 2020  
 * Extra Thing: uses "writeAnswer" to print product of values  
 */  
  
#ifndef IO_H  
#define IO_H  
//header guards  
  
int readNumber();  
void writeAnswer(int n);  
//functions in cpp file "io.cpp"  
  
#endif
```

Output:

```
Enter a number - 4  
Enter a number - 5  
The answer is 9  
The answer is 20
```

```
C:\Users\Humna\source\repos\Chap_2_QuizProg\Debug\Chap_2_QuizProg.exe  
(process 10300) exited with code 0.  
Press any key to close this window . . .
```