Quiz 1 Review: Loops, Arrays, Function, Two-Dim Arrays

1. What is printed by the following program segment?

int loopVar;

 for (loopVar = 0; loopVar < 6; loopVar++)

 {

 if (loopVar < 3)

 cout << '\*';

 else

 cout << '%';

}

1. A function checkFactor accepts two integer parameters. It returns true if the second parameter is a factor of the first (that is, the second number multiplied by some other number is equal to the first number. In other words, the second parameter divides the first evenly), and false otherwise.

Write the function prototype, definition (header and body), and a sample call from the main program. You do not have to write the entire main program.

1. A function listFactors accepts one integer parameter. It prints out all factors of the parameter (that is all integers that divide the parameter with no remainder). For example, if the parameter is equal 6, the function prints out:

 1, 2, 3, 6

Write the function prototype, definition (header and body), and a sample call from the main program. You do not have to write the entire main program.

1. **EXTRA CREDIT:** A function fillArrayFactors accepts three parameters: an integer number, and an array of integers, and an integer number representing the size of the array. The function fills the array with the factors of the first parameter, and the last parameter holds the size of the array (i.e. the number of factors). For example, if the first parameter is a 6, the array would be:

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 2 | 3 | 6 |

and the last parameter would be equal to 4. You may assume that the maximum number of factors is 100.

1. Two Dimensional Arrays:
	1. Given the following array: int twice[3][2];

Write the C++ code that sets all elements of the array to zero.

* 1. Show a drawn picture of the array filled in after the following code executes.

for (i = 0; i < 3; i++)

 for (j = 0; j < 2; j++)

 twice[i][j] = i + j + 1;