Lab Report 00

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**Problem**

Implement bubble sort for an array of integers by following the instructions.

**Solution**

In order to do bubble sort, we need declare an array and set the size 10. Set up input and prompt for 10 values with for-loop and ready to sort. Then use while to determine if the bubble sort is completed, so that can isolate extra loop. In while-loop, do bubble sort with a temporary variable to switch. Finally, print out the result.

**Implementation Problems Encountered**

I haven't written a program for a long time, so I review many my previous works to recall. Follow the lecture and no specific encounter.

**Lab Report Questions**

1.Describe Machine Code.

 It is a computer program written in machine language, lowest level of language.

2. Describe (Intermediate) Byte Code.

An intermediate code between the source code and machine code, the result of the compilation of a source code which is written in a high-level language.

3. In Java, when a source code is compiled using the Java Compiler, is it compile to machine code or byte code?

The Java compiler converts the source code into bytecode. At compilation time before executing.

Bubble sort example

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 3 | 4 | 2 |
| 1 | 3 | 4 | 2 |
| 1 | 3 | 4 | 2 |
| 1 | 3 | 2 | 4 |

First while-loop

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 3 | 2 | 4 |
| 1 | 3 | 2 | 4 |
| 1 | 2 | 3 | 4 |
| 1 | 2 | 3 | 4 |

Second while-loop.