CS 125 - Lecture 2

Objectives: (Activity sheets)

- Algorithms and Pseudo code Motivation and Examples
- Binary representation

To Do:

- Reading assignment before next lecture (see Lecture page).
- Sign up for Turing's Craft: (See CS125 website resources)
- Laptop setup issues? Post screenshot on Piazza, office hours next week.
- 3. Binary representation is an abstraction

0101102

 Computer Science Terminology - did your neighbor do the readings 	l. C	Computer	Science	Terminology	- did	vour neig	hbor	do the	readings'	?
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Discuss with your neighbor what a Computer Scientist means by the following terms and give an example of each:

- algorithms:
- primitives:
- composition:
- abstraction:
- 2. Describe a linear search

4. Representing algorithms?

(http://userpages.wittenberg.edu/bshelburne/Comp150/Algorithms.htm)

- Use natural languages
- Use formal programming languages
- Pseudo-Code natural language constructs modeled to look like statements available in many programming languages

Pseudo-Code is a numbered list of instructions to perform some task.

- 1. ordered sequence of operations
- 2. each instruction is computable
- 3. complete

Three Categories of Algorithmic Operations:

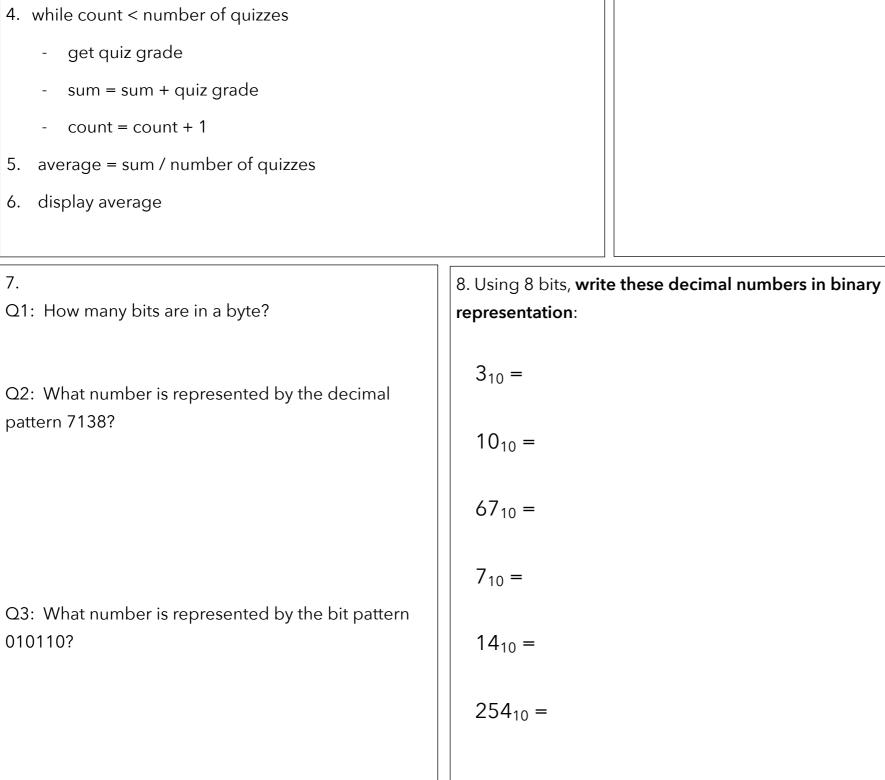
- 1. sequential operations instructions executed in order
- 2. conditional "question asking" operations select from alternatives
- 3. iterative operations (loops) repeating a block of instructions

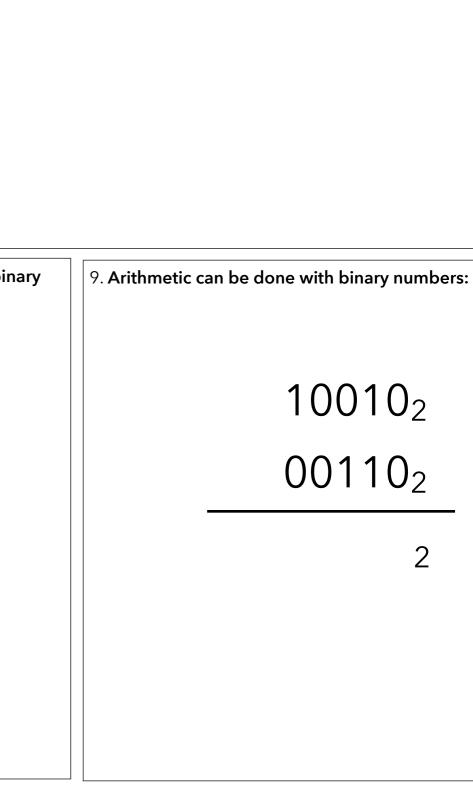
CS 125 - Lecture 2	6. Write pseudo-code to print the highest quiz score:
5. Computing a Quiz Average: Pseudo-code to calculate a quiz average	
1. get number of quizzes	
2. sum := 0	

2. sum	n := 0				
3. cou	3. count := 0				
4. while count < number of quizzes					
-	get quiz grade				
-	sum = sum + quiz grade				
-	count = count + 1				
l _					

3.	count := 0		
4.	while count < number of quizzes		
	- get quiz grade		
	- sum = sum + quiz grade		
	- count = count + 1		
5.	average = sum / number of quizzes		
6.	display average		

- get quiz grade	
- sum = sum + quiz grade	
- count = count + 1	
5. average = sum / number of quizzes	
6. display average	





Q3: What number is represented by the bit pattern 010110?