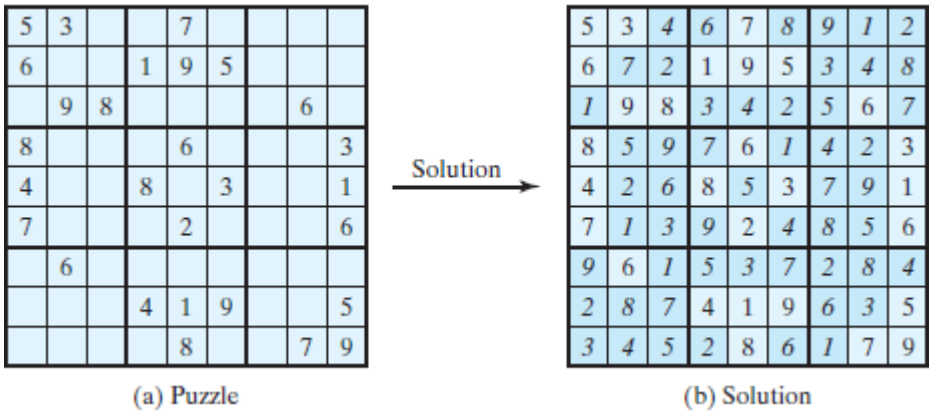
CE 251: Java Programming

	PART-I Data Types, Variables, Arrays, Operators, Control Statements, String	LO	PO	PEO
1.	Introduction to Object Oriented Concepts, comparison of Java with other object oriented programming languages. Introduction to JDK, JRE, JVM, javadoc, command line argument	1	1,3, 4,5	1,7
2.	Given a string, return a string made of the first 2 chars (if present), however include first char only if it is 'o' and include the second only if it is 'z', so "ozymandias" yields "oz". startOz("ozymandias") → "oz" startOz("bzoo") → "z" startOz("oxx") → "o"	1	1,3, 4,5	7
3.	Given two non-negative int values, return true if they have the same last digit, such as with 27 and 57. Note that the % "mod" operator computes remainders, so 17 % 10 is 7. lastDigit(7, 17) → true lastDigit(6, 17) → false lastDigit(3, 113) → true	1	1,3, 4,5	7
4.	Given an array of ints, return true if the sequence of numbers 1, 2, 3 appears in the array somewhere. array123([1, 1, 2, 3, 1]) → true array123([1, 1, 2, 4, 1]) → false array123([1, 1, 2, 1, 2, 3]) → true	1	1,3, 4,5	7
5.	Given 2 strings, a and b, return the number of the positions where they contain the same length 2 substring. So "xxcaazz" and "xxbaaz" yields 3, since the "xx", "aa", and "az" substrings appear in the same place in both strings. stringMatch("xxcaazz", "xxbaaz") → 3 stringMatch("abc", "abc") → 2 stringMatch("abc", "axc") → 0	1	1,3, 4,5	7
6.	Given an array of strings, return a new array without the strings that are equal to the target string. One approach is to count the occurrences of the target string, make a new array of the correct length, and then copy over the correct strings. wordsWithout(["a", "b", "c", "a"], "a") → ["b", "c"] wordsWithout(["a", "b", "c", "a"], "b") → ["a", "c", "a"] wordsWithout(["a", "b", "c", "a"], "c") → ["a", "b", "a"]	1	1,3, 4,5	7
7.	Display numbers in a pyramid pattern. 1 1 2 1 1 2 4 2 1 1 2 4 8 4 2 1 1 2 4 8 16 8 4 2 1 1 2 4 8 16 32 16 8 4 2 1 1 2 4 8 16 32 64 32 16 8 4 2 1	1	1,3, 4,5	7

	1 2 4 8 16 32 64 128 64 32 16 8 4 2 1			
8.	The problem is to write a program that will grade multiple-choice tests. Assume there are eight students and ten questions, and the answers are stored in a two-dimensional array. Each row records a student's answers to the questions, as shown in the following array. Students' Answers to the Questions: 0 1 2 3 4 5 6 7 8 9 Student 0 A B A C C D E E A D Student 1 D B A B C A E E A D Student 2 E D D A C B E E A D Student 3 C B A E D C E E A D Student 4 A B D C C D E E A D Student 5 B B E C C D E E A D Student 6 B B A C C D E E A D Student 7 E B E C C D E E A D The key is stored in a one-dimensional array: Key to the Questions: 0 1 2 3 4 5 6 7 8 9 Key D B D C C D A E A D Your program grades the test and displays the result. It compares each student's answers with the key, counts the number of correct answers, and displays it.	1	1,3, 4,5	7
9.	**The problem is to check whether a given Sudoku solution is correct.**  (a) Puzzle (b) Solution	1	1,3, 4,5	7
10.	Implement Caesar Cipher.	1	1,3, 4,5	7