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Week		Problems with descriptions	Page No.	Signature of the Teacher
1	1.	Write a short report (1–2 pages) on "Resources for Learning and Practicing Java Programming". Your report should include: 1. Official Documentations and Websites 2. Books and E-Books 3. Online Learning Platforms 4. Coding Practice Websites 5. Community and Discussion Forums 6. Your Preferred Resources		
2	1.	What are the software programs that helps to run Java programs?		
	2.	What is JDK and JRE?		
	3.	What is Eclipse IDE?		
	4.	How to run the Java programs in Eclipse/NetBeans IDE?		
3	1.	Write a Java program to add two numbers.		
	2.	Write a Java program to multiply two floating numbers.		
	3.	Write a Java program to display a cube of a number.		
	4.	Write a Java program that takes three numbers as input to calculate and print the average of the numbers.		
	5.	Write a Java program to compute the distance between two points.		
		Optional		
	6.	Write a Java program to swap two numbers using a temporary variable.		
	7.	Write a Java program to calculate the area of a rectangle given its length and breadth.		
	8.	Write a Java program to convert temperature from Celsius to Fahrenheit.		
	9.	Write a Java program that takes two integer inputs and computes their remainder and quotient.		
	10.	Write a Java program to convert temperature from Celsius to Fahrenheit.		
4	1.	Write a java program to check whether the given number is odd or even.		
	2.	Write a java program to find the largest number among the three numbers.		
	3.	Write a Java program that takes a number as input and prints its multiplication table up to 10		
	4.	Write a Java program to calculate the sum of following series: 1 + 2 + 3 + 4 + ... + N		
	5.	Write a Java program to take a number, divide it by 2 and print the result until the number becomes less than 10.		

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4		Optional		
	6.	Write a Java program to check whether a given character is vowel or consonant		
	7.	Write a Java program to find the smallest number among four given numbers.		
	8.	Write a Java program to calculate the sum of all even numbers from 1 up to a given number N.		
	9.	Write a Java program to check whether a given year is a leap year or not.		
	10.	Write a Java program that takes a number as input and prints all its factors.		
5	1.	Write a Java program to insert 10, 20, 30 ....in an array and display them.		
	2.	Write a Java program to calculate the sum of all the array elements.		
	3.	Write a java program to print the following pattern: 1 12 123 1234 12345		
	4.	Write a java program to find the sum of following series where n is input by the user. 1+1/2+1/3+1/4+.....+1/n.		
	5.	Write a Java program and compute the sum of the digits of an integer.		
	6.	Write a Java program to calculate the factorial of a number.		
		Optional		
	7.	Write a Java program to find the largest element in a given integer array.		
	8.	Write a Java program to reverse the digits of a given integer.		
	9.	Write a Java program to check if a given number is a palindrome or not.		
	10.	Write a Java program to convert a decimal number into Hexadecimal number and vice-versa.		
	11.	Write a Java program to print the following pattern: * ** *** ** *		
6	1.	Write a Java program to print the odd numbers from 1 to 99.		
	2.	Write a Java program to check whether a number is prime or not.		
	3.	Write a Java program to swap the first and last elements of an array.		
	4.	Write a Java program to find the maximum and minimum among array elements.		
	5.	Write a Java program to print all prime numbers between 0 to 100.		
	6.	Write a Java program to implement linear search.		
		Optional		
	7.	Write a Java program to print all prime numbers between 0 to 100.		
	8.	Write a Java program to find the second largest element in an array.		
	9.	Write a program to implement Fibonacci series up to N terms (0,1,1,2,3,5....).		
	10	Write a Java program to reverse all elements of an array.		
	11.	Write a Java program to find the frequency of each character in a given string.		

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7	1.	Write a Java function to implement binary search.		
	2.	Write a Java function to arrange the elements of an array in ascending order (Sorting).		
	3.	Write a program to reverse a given string.		
	4.	Write a program to check whether a given string is palindrome or not.		
	5.	Write a program to implement factorial of a number through recursion.		
	6.	Write a program to implement Fibonacci series of a number with and without recursion.		
		Optional		
	7.	Write a Java function to find the greatest common divisor (GCD) of two numbers with and without using recursion.		
	8.	Write a program to check whether two strings are anagrams of each other ("listen" and "silent" are anagrams).		
	9.	Implement quick sort using recursion.		
8	1.	Create a class FRUIT which has data members colour, taste and price. Also create...		
	2.	Create a class FRUIT which has data members colour, taste and price. It has a...		
	3.	In previous question, set the values of colour, taste and price using Constructor.		
	4.	Add one-argument constructor and two-argument constructor in addition to default constructor in FRUIT class.		
	5.	Use the concept of constructor-chaining in the previous question using this().		
		Optional		
	6.	Create a class CAR with the following details: Data members: model, colour, price....		
9	1.	Create a class Vehicle, write a method cost() in this class. Create two...		
	2.	Create class University which has data member-name and ranking. Create...		
	3.	Create class Account (Data members – Id, Account ..... and implement them.		
	4.	Create class Account (Data ..... (Create a constructor in Account as well).		
	5.	Create two children of Account- Saving (Data Members- Min_balance...		
		Optional		
	6.	Create a class Shape with a method area(). Create two derived classes...		
	7.	Create a class Employee with data members: name, salary, and a method...		
	8.	Create an abstract class Appliance with data members brand, power and...		
	9.	Create a class MathOperations with two static methods: findGCD(int a,int b)...		
	10.	Create a class Student with data members rollNo, name, marks. Add...		
10	1.	Create class Person (Data Member- name, phone). Create two members...		
	2.	Create class Edible. Within that define two static classes Fruit and ...		
	3.	Create three different minMaxAdd() methods to calculate minimum ...		

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10	4.	Create a class ObjectOriented which has methods- abstraction() ...		
	5.	In previous question, create a new class C++ which also inherits from ...		
	6.	Create class University which has data members- name and ranking ...		
		Optional		
	7.	Create a class Employee (Data Members – empName, empId). Create two...		
	8.	Create a class Shape with overloaded methods area() ...		
	9.	Create a class Vehicle with a method run(). Create subclasses Bike and ...		
11	1.	Create an interface Account having methods- deposit(), withdraw() and...		
	2.	In the previous question, create a new method in Account interface...		
	3.	Create interfaces Bike and Scooty, both of which have two methods...		
		Optional		
	4.	Create two interfaces Printer and Scanner, both having methods connect()...		
	5.	Create an interface Device with a method powerOn(). Create another...		
12	1.	Write a program that calls a method that throws an exception of type...		
	2.	Write a program of your choice where a Checked Exception occurs at...		
	3.	You are developing an online banking system where users can transfer...		
	4.	Create a user-defined exception InvalidAgeException when the age of a person is below 18 years. Use this exception at appropriate place.		
13	1.	Write a Java Program to create a new file.		
	2.	Write a Java Program to write into a file.		
	3.	Write a Java Program to copy one file into another file.		
	4.	Write a java program to find total no. of characters in a file.		
	5.	Write a java program to find total no. of lines in a file.		
14	1.	Write a Java program to: a) Connect with a database of your choice using JDBC API. b) Create an Employee table having employee id, age, name and salary. c) Insert five records in to Employee table. d) Delete any two records.		

GitHub: https://github.com/coder-yaan