

Lab Assignment 5 B

Programming Projects with Java1

1	Write a function to calculate the factorial values of any integer entered through the keyboard.	CO6
2	Write a function power (a, b), to calculate the value of a raised to b.	CO6
3	Any year is entered through the keyboard. Write a function to determine and return whether the year is a leap year or not.	CO6
4	If a function fun() is to receive an int, a float and a double and it is to return a decimal then how will you define this function?	CO6
5	Define an overloaded max() function which returns maximum of two integers / floats / doubles.	CO6
6	Define an overloaded Area() that can find out the area of circle, rectangle, triangle and return the area.	CO6
7	A 5-digit positive integer is entered through the keyboard, write a recursive function to calculate sum of digits of the 5-digit number.	CO6
8	A positive integer is entered through the keyboard, write a program to obtain the prime factors of the number using a recursive function.	CO6
9	Write a recursive function to obtain the first 25 numbers of a Fibonacci sequence. In a Fibonacci sequence the sum of two successive terms gives the third term. Following are the first few terms of the Fibonacci sequence: 1 1 2 3 5 8 13 21 34 55 89 ...	CO6
10	A positive integer is entered through the keyboard, write a function to find the binary equivalent of this number using recursion.	CO6
11	Write a recursive function to obtain the running sum of first 25 natural numbers.	CO6
12	Write the function fun() which finds the minimum number from the variable arguments list passed to it.	CO6
13	Write a Java program to define a function that accepts an integer array as an argument and returns the sum of all elements in the array. Demonstrate the function using appropriate input.	CO6
14	<p>Design and implement a Banking Management System using Java. The program should be menu-driven and perform the following operations:</p> <ol style="list-style-type: none"> 1. Create a new bank account 2. Deposit amount 3. Withdraw amount 4. Display account details 5. Check account balance <p>The program should use:</p> <ul style="list-style-type: none"> • Methods • Conditional statements • Loops 	CO1-CO6

	Assume suitable data members for the bank account such as <i>account number</i> , <i>account holder name</i> , and <i>balance</i> . The program should continue execution until the user chooses to exit.	
15	Write a Java program to store and display employee details using an array of objects .	CO6

CO1	To remember and comprehend the fundamental concepts of Java programming by reading, writing, executing, and debugging Java applications within the Eclipse framework. This includes the ability to understand and explain variables, constants, primitive data types, and core libraries along with their functionalities	L1,L2
CO2	To apply operators and type casting mechanisms proficiently to manipulate and transform data within Java programs, ensuring accurate and efficient computation	L3,L4
CO3	To critically analyze and systematically implement conditional statements to effectively govern program flow based on diverse logical conditions	L3,L4
CO4	To design and critically evaluate iterative solutions utilizing loops to efficiently address repetitive computational problems	L5,L6
CO5	To design and proficiently manipulate arrays for systematic storage and management of data collections	L3,L6
CO6	Develop and implement modular programs using methods, and demonstrate object-oriented principles through classes, objects, and enumerations	L2,L3,L6