CSE 215L: Programming language II Lab
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Sec: 02
Lab - 05 [Methods], Spring-2021
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Objective:

- Defining a method
- Calling a method
- Passing arguments by values
- Overloading methods

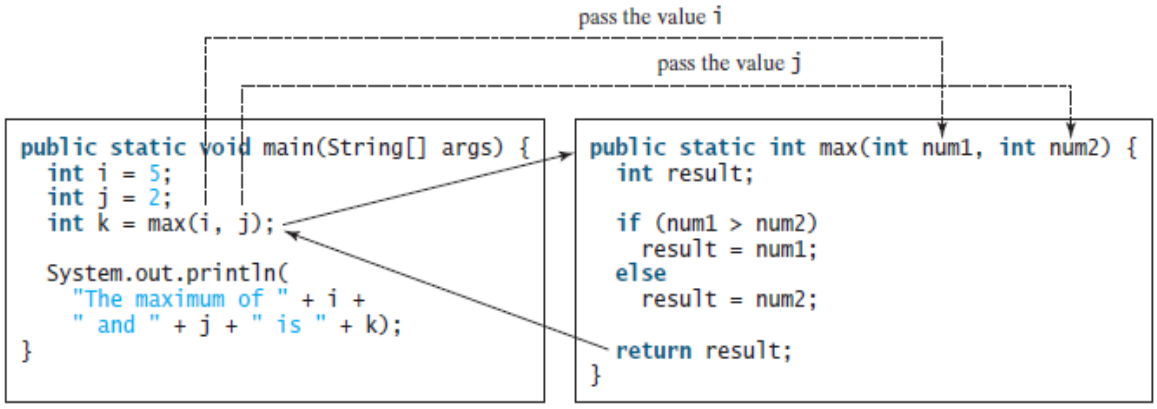

FIGURE : When the max method is invoked, the flow of control transfers to it. Once the max method is finished, it returns control back to the caller.

Tasks:

1. Write down a method that will take an integer as a parameter and will return 1 if the integer is a perfect number and return 0 otherwise. Using this method, write down a program that will print all perfect numbers between 2 to n where n will be input to your program. Recall that a perfect number is a positive integer that is equal to the sum of its proper positive divisors, that is, the sum of its positive divisors excluding the number itself. For example, 6 is a perfect number because its positive divisors are 1, 2, 3 and the summation of these positive numbers is 1+2+3 = 6, which is the number itself.

Sample Input	Sample Output
Enter n: 500	6 28 496

2. A 5-digit positive integer is entered through the keyboard, write a method to calculate and return the sum of digits of this 5-digit number passed as a parameter to the method. From the main method, take a 5-digit number as input and use this method to calculate and print the summation of all five digits.

Sample Input	Sample Output
Enter a number: 12345	Sum: 15

3. Write a method **isPrime(int N)** that takes an integer and returns true if it's a prime or false otherwise. Then using **isPrime(int N)** method write another method **generatePrime(int a, int b)** that takes two integers and prints all the prime numbers in that range.

Method Call in Main	Sample Output
generatePrime(0, 100)	Prime number between 0 to 100 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 37, 41, 43, 47, 53, 59, 61, 67, 71, 73, 79, 83, 89, 97,