

MAT 335E Programming Algorithms

Lab-2 / CRN : 10611

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1 Question 1

Let k be non-negative integer number. Numbers that can be written as $4k+1$ are called the Hilbert number. Write a java source code that determines whether a number is Hilbert number or not.

Example Scenario:

> Enter a number to be tested: 9
> 9 is a Hilbert number.

2 Question 2

Read three letters in lexical order using scanner class. Then create a Java program that determines whether or not the letter read in the second place is exactly in the middle of the other two letters.

Sample Output:

> Enter the first character: a > Enter the second character: c > Enter the third character: e > c is exactly middle character of letters a and e	> Enter the first character: a > Enter the second character: c > Enter the third character: f > c is not exactly middle character of letters a and f
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3 Question 3

There are three qualities of parquet in a company. The square meter price of these parquet type is as follows:

Type-A: $42.5 \text{ TL}/m^2$
Type-B: $28.5 \text{ TL}/m^2$
Type-C: $19.0 \text{ TL}/m^2$

In addition, $25.4 \text{ TL}/m^2$ labor fee is required. This company offers 10% discount for purchases of 1000 TL and above. Write a Java code that reads m^2 and the parquet type information and calculates the invoice total for related user input. (m^2 and parquet type information are read from user and parquet type defined as character type.)