Betinvent

Introduction to programming

Practice 4

Krešimir Hećimović
kresimir.hecimovic@betinvent.com

Assignment 1

Write a function that takes a natural number and returns 1 if the number is a square of some number, otherwise returns 0. Test the function by enabling the user to input numbers in the main program and calling the function for that number, until a zero is input.

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Assignment 2

Fibonacci numbers calculation function is defined like:

fib(0) = 0

fib(1) = 1

for all (n > 1): fib(n) = fib(n - 1) + fib(n - 2)

a) write a function that calculates n-th Fibonacci number iteratively

b) write a function that calculates n-th Fibonacci number recursively

c) compare the execution speed of both functions

Assignment 3

Write a function that takes natural number and returns a number that would be the result o removing all odd digits from input number, i.e.: for argument 235809 function should return 280.

function prototype:

```
unsigned kick_the_odds(unsigned number);
```

Note: Function shoud not write out a thing!