**שיעורי בית מודלים חישוביים משימת פתיחה – אופיר הופמן יא3**

public static bool IsDigit(char ch)

{

return ch == '0' || ch == '1' || ch == '2' || ch == '3' || ch == '4' || ch == '5' || ch == '6' || ch == '7' || ch == '8' || ch == '9';

}

public static bool IsNumber()

{

bool is\_number = true;

ConsoleKeyInfo key = Console.ReadKey();

int cnt = 0;

bool start\_with\_zero = false, last\_is\_zero = false;

bool plusMinus = false, last\_plus\_minus = false;

bool decimalPoint = false, last\_is\_decimal\_point = false;

while(key.Key != ConsoleKey.Enter)

{

char ch = Convert.ToChar(key.Key);

if (ch == '0')

{

if (cnt == 0)

start\_with\_zero = true;

// Check 2 zeros at the beggining

else if (cnt == 1 && start\_with\_zero)

is\_number = false;

// Check 2 zeros after +/-

else if (cnt == 2 && plusMinus && last\_is\_zero)

is\_number = false;

last\_is\_zero = true;

last\_plus\_minus = false; // reset last char = +/=

}

// '+' / '-'

else if (key.Key == ConsoleKey.OemPlus || key.Key == ConsoleKey.OemMinus)

{

// Check for +/- not in the beggining (1st)

if (cnt > 0)

is\_number = false;

else if (cnt == 0)

{

plusMinus = true;

last\_plus\_minus = true;

}

}

// '.'

else if (key.Key == ConsoleKey.OemPeriod)

{

// Check if period not in right spot

if (cnt == 0 || decimalPoint || last\_plus\_minus)

is\_number = false;

else

{

decimalPoint = true;

last\_is\_decimal\_point = true;

}

}

else

{

// Check if input is digit

if (!IsDigit(ch))

is\_number = false;

// Check for beggining zero with digit after (e.g. "05.2")

if (cnt == 1 && last\_is\_zero)

is\_number = false;

last\_plus\_minus = false;

last\_is\_decimal\_point = false;

last\_is\_zero = false;

}

key = Console.ReadKey();

cnt++;

}

// Check if last input was a period

if (last\_is\_decimal\_point)

is\_number = false;

return is\_number;

}