26-01-2017

MECE101 Resit Exam

Name:

Surname:

Number:

**Q1)** Write a MATLAB function that computes the Fibonacci square of size n. Your function declaration would be as:

output1=function\_exam\_q1(n)

where n is the input (size of the Fibonacci matrix) and output1 is the output (obtained Fibonacci matrix)

Sample result of calling this function:

output1=function\_exam\_q1(2) will give the matrix

$$output1=\left[\begin{matrix}1&1\\1&0\end{matrix}\right]$$

output1=function\_exam\_q1(3) will give the matrix

$$output1=\left[\begin{matrix}1&1&1\\1&2&0\\1&0&0\end{matrix}\right]$$

output1=function\_exam\_q1(4) will give the matrix

$$output1=\left[\begin{matrix}\begin{matrix}1&1\\1&2\end{matrix}&\begin{matrix}1&1\\3&0\end{matrix}\\\begin{matrix}1&3\\1&0\end{matrix}&\begin{matrix}0&0\\0&0\end{matrix}\end{matrix}\right]$$

output1=function\_exam\_q1(5) will give the matrix

$$output1=\left[\begin{matrix}\begin{matrix}1&1\\1&2\end{matrix}&\begin{matrix}1&1&1\\3&4&0\end{matrix}\\\begin{matrix}1&3\\1&4\\1&0\end{matrix}&\begin{matrix}6&0&0\\0&0&0\\0&0&0\end{matrix}\end{matrix}\right]$$