

MATH609-601

*Programming Assignment #1*

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# 1 Problem Specifications

In this section you should describe the problems in this particular assignment. I would use a separate subsection for describing each problem.

## 1.1 Problem 1 (Hilbert Matrix System)

Here we describe what the first problem in this assignment asks us to do.

## 1.2 Problem 2 (...)

Here we describe what the second problem in this assignment asks us to do.

# 2 Preliminaries

In this section you should describe your approach to solving the problems in this example. You do NOT need to include the source code for your programs in your report. If you feel that you should include some small parts of the code in order to explain things better, you may do it like this:

```
//This function calculates the factorial (n!) of an integer n>=0
//using a 'for' cycle
unsigned int factorial(unsigned int n)
{
    unsigned int i, result = 1;

    for(i=1; i<=n; i++)
        result *= i;

    return result;
}
```

### 3 Problem 1 (Hilbert Matrix System)

Here we give the test results from Problem 1. We may include tables, graphs and figures to present our results in reasonably good way.

Here, as an example, I've created a small table:

Column 1	Column 2	Column 3
1.000000e+00	2.00000e+00	3.000000e+00
1.000000e+00	2.00000e+00	3.000000e+00
1.000000e+00	2.00000e+00	3.000000e+00
1.000000e+00	2.00000e+00	3.000000e+00
4.000000e+00	8.00000e+00	12.000000e+00
Some text	A formula: $\frac{e^{f(x)}}{5}$	etc ...

Table 1: The caption of this table

**NOTE:** Do not forget to include a small discussion of the results that you obtained. If you prefer, you may do so in a separate subsection for each particular problem.

### 4 Problem 2 (...)

In this section we present and discuss the results we obtained for the second problem. Here, as an example, I've included a graph. *In order to compile this part you will need the file 'graph.eps' in your working directory.*

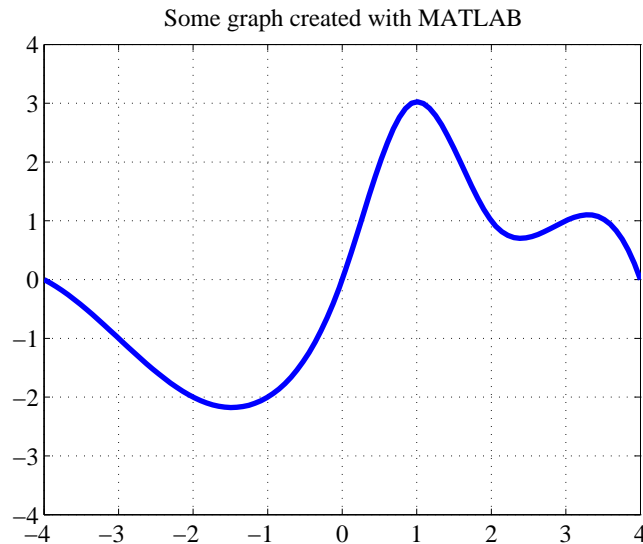


Figure 1: Title of this graph.