

Q2.1)

Code segment below is an implementation of the matrix multiplication algorithm. It is safe to assume that matrix multiplication is used in almost any math library.

Cited from:

Kittitornkun, S., & Hu, Y. H. (2001). Efficient implementation of nested-loop multimedia algorithms. *EURASIP Journal on Advances in Signal Processing*, 2001(3), 269324.

Listing 1. Matrix-matrix multiplication multiple times

```
Do  $i = 1$  to 3
  Do  $j = 1$  to 3
     $c[i, j] = 0$ 
    Do  $k = 1$  to 3
       $c[i, j] = c[i, j] + a[i, k] \times b[k, j]$ 
    EndDo  $k$ 
  EndDo  $j$ 
EndDo  $i$ 
```