

Q1:

Write a program that gets word size input from users to make two matrixes of 3 X 4 dimensions. Then, subtract the both matrixes element by element and store the result in the any one of the two matrixes.

Q2:

Given $x = 1000$ and $y = 1001$
compute the product $p = x * y$ with Booth's Algorithm.

Q3:

The time stamp of a MS-DOS file directory entry uses bits 0 through 4 for the number of 2-second increments, bits 5 through 10 for the minutes, and bits 11 through 15 for the hours (24-hour clock).

For example, the following binary value indicates a time of 03:16:14, in *hh:mm:ss* format:

00011 010000 00111

Write a procedure named **ShowFileTime** that receives a binary file time value in the AX register and displays the time in *hh:mm:ss* format.

Q4:

The RandomRange procedure from the Irvine32 library generates a pseudorandom integer between 0 and $N-1$. Your task is to create an improved version that generates an integer between M and $N-1$. Let the caller pass M in EBX and N in EAX. If we call the procedure *BetterRandomRange*, the following code is a sample test:

```
mov ebx,-300 ; lower bound
mov eax,100 ; upper bound
call BetterRandomRange
```

Write a short test program that calls BetterRandomRange from a loop that repeats 50 times. Store each randomly generated number in array. Also Display each randomly generated value.