Lab-2. EE3401, Jan-Apr2024

You can use the cpu emulator https://cpulator.01xz.net/?sys=arm.

1. Write ARM assembly using ldm and stm instructions for the following function:

```
1  while (n--) *to++ = *from++;
```

Use 4 registers at a time and consider cases when n=30 and n=32. It copies data to one memory location (pointed by “to”) from another (pointed by “from”).
Use location “to” = 0x1000, “from”= 0x2000.

2. Write a **function** to add n numbers stored at some given location in memory. Assume that n is passed in register r0 and the location address is passed in register r1. When the function returns the output should be register r0.
“Inline” this function. How does it improve the performance?

3. Write a recursive function to calculate fibonacci numbers for n<10. Is “linking” part of bl instruction of any use here? Can you think of some way to make it faster? Read about “tail call optimization” and “memoization”.