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| **Course Name:** | **Microprocessors and Peripherals (2UXC404)** | **Semester:** | **IV** |
| **Date of Performance:** | 3/3/2021 | **Batch No:** | B2 |
| **Faculty Name:** | KCS | **Roll No:** | 1912052 |
| **Faculty Sign & Date:** |  | **Grade/Marks:** | \_\_\_/25 |

**Experiment No: 4**

**Title:** Generation of Fibonacci series

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| **Aim and Objective of the Experiment:** |
| **Aim:** Write an 8086 based ALP to   1. Find first 20 fibonacci series numbers and store them in the data segment.   **Objectives:**  To study basic instructions and addressing modes of 8086. Understand assembler directives and concept of data and code segment  This experiment covers following instructions groups.   1. Data transfer 2. Arithmetic ( Multiply instructions) 3. Branch instructions |

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| **COs to be achieved:** |
| **CO 2.** Develop 8086 based assembly language programs for various applications. |

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| **Useful links** |
| NASM Assembler  <https://www.tutorialspoint.com/compile_assembly_online.php>  TASM |

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| **Work to be done** |
| 1. Upload image of handwritten algorithm/flowchart and lst file of the program and output screenshots . Also upload results for post lab questions. |

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| **Post Lab Subjective/Objective type Questions:** |
| Q.1 Which of the following combination of segment register and offset is not calculating address 23410H   * 1. DS : 2000 H and SI : 3410 H   2. DS : 2300 H and SI : 0410 H   3. DS: 2341 H and SI : 0010 H   4. DS : 2241 H and SI : 1000 H   **ANS: c. DS: 2341 H and SI : 0010 H**  Q.2 What addresses will be generated in following instruction execution?  If DS = 3200H , SI = 12C3H, DI = 1200H, ES = 2190H  MOVSB  **For Source-33C23**  **For Destination-22100H**  Q.3 What is LOOP instruction ? explain use of CX register in the same.  The **LOOP instruction** assumes that the CX register contains the **loop** count. When the **loop instruction** is executed, the CX register is decremented and the control jumps to the target label, until the CX register value, i.e., the counter reaches the value zero. |
| **Conclusion: We implemented Fibonacci series using 8086 assembly language programming**  **on emulator 8086** |

