**End Semester Assessment (ESA) Experiments**

**Course: System Software Lab Course code: 19ECSP302 Sem: V**

1. Implement the pass 1 of a two-pass SIC assembler to process all the Standard SIC instructions, addressing modes and assembler directives.

Also handle the appropriate errors with suitable messages.

1. Implement the pass 2 of a two-pass Standard SIC assembler to process to process all the Standard SIC instructions, addressing modes and assembler directives. Also handle the appropriate errors with suitable messages.
2. Implement Pass1 of the two-pass linking loader.

Also handle the appropriate errors with suitable messages.

1. Implement Pass2 of the two-pass linking loader.

Also handle the appropriate errors with suitable messages.

1. Implement the relocating loader for standard SIC machines.

Also handle the appropriate errors with suitable messages.

Note:

* Write-up (problem analysis parameter) includes algorithm, all legitimate inputs, and expected Output
* In modification the independent features will be asked.

**Parameters and Rubrics for End Semester Assessment (ESA) Max Marks: 20**

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| **Parameter** | **Excellent (8-10)** | **Good (5-7)** | **Scope for improvement (0-4)** |
| **Problem Analysis**  PI Code:1.4.1  **(5 marks)** | Student is able to solve the given problem and prepare the test cases for all the functionalities. | Student is able to solve the given problem and prepare the test cases for few functionalities. | Student is unable to solve the given problem and prepare the test cases. |
| **Implementation**  PI Code:1.3.1  **(10 marks)** | Student is able to implement all the functionalities using C/C++ and validate all the test cases. | Student is able to implement all the functionalities using C/C++ and validate few test cases. | Student is able to implement partial functionalities using C/C++. |
| **Code modification**  PI Code:1.4.4  **(5 marks)** | Student is able to modify the code for additional functionalities. | Student is able to partially modify the code for additional functionalities. | Student is unable to modify the code. |

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