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| **Name of the Student** | | **Roll No.** | |
| **Lab Program No.** | | **Date** | |
| **Program Title** | | | |

**Rubrics for assessment of Experiment:**

| **Sr. No.** | | **Exceed Expectation (EE)** | **Meet Expectation (ME)** | **Below Expectation (BE)** |
|---|---|---|---|---|
| 1. | On time submission<br>Or completion (2) | Early or on time (2) | One session late<br>(1) | More than one session late (0) |
| 2. | Preparedness(2) | Awareness about experiment to be performed, Knows the basic theory related to the experiment very well. (2) | Managed to explain the theory related to the experiment.<br>(1) | Not aware of the theory to the point.<br>(0) |
| 3. | Skill (4) | Structured and optimum performance<br>(4) | Few steps are not appropriate<br>(2) | Just managed<br>(1) |
| 4. | Documentation (2) | Lab experiment is documented in proper format and maintained neatly.<br>(2) | Most of the report is documented in proper format but some formatting guidelines are missed.<br>(1) | Experiments not written in proper format (0.5) |

**Assessment:**

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| On time submission(2) | |
| Preparedness(2) | |
| Skill (4) | |
| Documentation (2) | |
| Total(10) | |

| Name of the Student | | Roll No. | |
|---|---|---|---|
| Lab Program No. | 1a | Date | |
| Program Title | 8 bit addition | | |

**Aim**: To add two 8 bit numbers using immediate addressing mode.

**Objective:** a) Development of logic of program for addition of the numbers.

b) Debugging of logic of program for addition of two numbers ,assembly language program for above logic.

**Pre-requisites**: Instruction set of 8085,Addressing mode of 8085.

**References**: Microprocessor, Architecture, Programming and Applications with 8085-Ramesh Gaonkar.

**Algorithm:**

1) Start
2) Load the accumulator (A) with the first number.
3) Add the second number to A.
4) Store the sum.
5) Store the carry if any.
6) Stop.

**Observations:** 1) Fill the table of registers with its contents before and after execution of instructions.

2) Fill the table of memory with the address and data of the numbers on which operation is performed and final results obtained.

**Register contents:**

| **Register** | **A** | **B** | **C** | **D** | **E** | **PCH** | **PCL** | **F** |
|---|---|---|---|---|---|---|---|---|
| **Value** | | | | | | | | |

**Program:**

**Memory contents:**

| Memory address | Hex value |
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| **Name of the Student** | | **Roll No.** | |
|---|---|---|---|
| **Lab Program No.** | 1b | **Date** | |
| **Program Title** | 8 bit addition | | |

**Aim**: To add two 8 bit numbers using direct addressing mode.

**Objective:** a) Development of logic of program for addition of the numbers.

b) Debugging of logic of program for addition of two numbers ,assembly language program for above logic.

**Pre-requisites**: Instruction set of 8085,Addressing mode of 8085.

**References**: Microprocessor, Architecture, Programming and Applications with 8085-Ramesh Gaonkar.

**Algorithm:**

1) Start
2) Load the accumulator (A) with the first number.
3) Add the second number to A.
4) Store the sum.
5) Store the carry if any.
6) Stop.

**Observations:** 1) Fill the table of registers with its contents before and after execution of instructions.

2) Fill the table of memory with the address and data of the numbers on which operation is performed and final results obtained.

**Register contents:**

| **Register** | **A** | **B** | **C** | **D** | **E** | **PCH** | **PCL** | **F** |
|---|---|---|---|---|---|---|---|---|
| **Value** | | | | | | | | |

**Memory contents:**

| Memory address | Hex value |
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| Memory address | Data |
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| **Name of the Student** | | **Roll No.** | |
|---|---|---|---|
| **Lab Program No.** | 1c | **Date** | |
| **Program Title** | 8 bit multiplication | | |

**Aim**: To multiply two 8 bit numbers using immediate addressing mode.

**Objective:** a) Development of logic of program for addition of the numbers.

b) Debugging of logic of program for addition of two numbers , assembly language program for above logic.

**Pre-requisites**: Instruction set of 8085, Addressing mode of 8085.

**References**: Microprocessor, Architecture, Programming and Applications with 8085-Ramesh Gaonkar.

**Algorithm:**

1) Start
2) Load the accumulator (A) with the first number.
3) Add the second number to A.
4) Store the sum.
5) Store the carry if any.
6) Stop.

**Observations:** 1) Fill the table of registers with its contents before and after execution of instructions.

2) Fill the table of memory with the address and data of the numbers on which operation is performed and final results obtained.

**Register contents:**

| **Register** | **A** | **B** | **C** | **D** | **E** | **PCH** | **PCL** | **F** |
|---|---|---|---|---|---|---|---|---|
| **Value** | | | | | | | | |

**Memory contents:**

| Memory address | Hex value |
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**Post lab:** Difference between Machine and assembly language programming.