Faculty of Engineering
Cairo University

Microprocessors project report

Submitted to: DR. Khaled Mohamed

Group number: 4

Member Name	Section	BN
Abdelrahman Mohamed Hamza Othman	1	37
Beshoy Morad Attia	1	20
Zeyad Tarek Khairy Aly Mousa	1	28
Zeyad Sherif Mohamed Ibrahim	1	27

Addressing Mode

All Addressing Mode is Working without bug and Not Copied

MOV, ADD, ADC, SUB, SBB, XOR, AND, NOP, SHR, SHL, CLC, ROR, ROL, RCR, RCL, INC, DEC

(17 Commands)

Feature	Working	Known bug	Copied or not
Mov with register addressing Mode	Yes	None	Not Copied
Mov with Immediate addressing Mode	Yes	None	Not Copied
Mov with Direct addressing Mode	Yes	None	Not Copied
Mov with Register indirect addressing Mode	Yes	None	Not Copied
Add with register addressing Mode	Yes	None	Not Copied
Add with Immediate addressing Mode	Yes	None	Not Copied
Add with Direct addressing Mode	Yes	None	Not Copied
Add with Register indirect addressing Mode	Yes	None	Not Copied
Sub with register addressing Mode	Yes	None	Not Copied
Sub with Immediate addressing Mode	Yes	None	Not Copied
Sub with Direct addressing Mode	Yes	None	Not Copied

Sub with Register indirect addressing Mode	Yes	None	Not Copied
ADC register addressing Mode	Yes	None	Not Copied
ADC with Immediate addressing Mode	Yes	None	Not Copied
ADC with Direct addressing Mode	Yes	None	Not Copied
ADC with Register indirect addressing Mode	Yes	None	Not Copied
SBB with register addressing Mode	Yes	None	Not Copied
SBB with Immediate addressing Mode	Yes	None	Not Copied
SBB with Direct addressing Mode	Yes	None	Not Copied
SBB with Register indirect addressing Mode	Yes	None	Not Copied
XOR with register addressing Mode	Yes	None	Not Copied
XOR with Immediate addressing Mode	Yes	None	Not Copied
XOR with Direct addressing Mode	Yes	None	Not Copied
XOR with Register indirect addressing Mode	Yes	None	Not Copied
AND with register addressing Mode	Yes	None	Not Copied
AND with Immediate addressing Mode	Yes	None	Not Copied
AND with Direct addressing Mode	Yes	None	Not Copied
AND with Register indirect addressing Mode	Yes	None	Not Copied
NOP command	Yes	None	Not Copied
SHR with register addressing Mode	Yes	None	Not Copied

SHR with Immediate addressing Mode	Yes	None	Not Copied
SHR with Direct addressing Mode	Yes	None	Not Copied
SHR with Register indirect addressing Mode	Yes	None	Not Copied
SHL register addressing Mode	Yes	None	Not Copied
SHL with Immediate addressing Mode	Yes	None	Not Copied
SHL with Direct addressing Mode	Yes	None	Not Copied
SHL with Register indirect addressing Mode	Yes	None	Not Copied
CLC	Yes	None	Not Copied
ROR with register addressing Mode	Yes	None	Not Copied
ROR with Immediate addressing Mode	Yes	None	Not Copied
ROR with Direct addressing Mode	Yes	None	Not Copied
ROR with Register indirect addressing Mode	Yes	None	Not Copied
ROL with register addressing Mode	Yes	None	Not Copied
ROL with Immediate addressing Mode	Yes	None	Not Copied
ROL with Direct addressing Mode	Yes	None	Not Copied
ROL with Register indirect addressing Mode	Yes	None	Not Copied
RCR with register addressing Mode	Yes	None	Not Copied
RCR with Immediate addressing Mode	Yes	None	Not Copied

RCR with Direct addressing Mode	Yes	None	Not Copied
RCR with Register indirect addressing Mode	Yes	None	Not Copied
RCL with register addressing Mode	Yes	None	Not Copied
RCL with Immediate addressing Mode	Yes	None	Not Copied
RCL with Direct addressing Mode	Yes	None	Not Copied
RCL with Register indirect addressing Mode	Yes	None	Not Copied
INC register addressing Mode	Yes	None	Not Copied
INC with Immediate addressing Mode	Yes	None	Not Copied
INC with Direct addressing Mode	Yes	None	Not Copied
INC with Register indirect addressing Mode	Yes	None	Not Copied
DEC with register addressing Mode	Yes	None	Not Copied
DEC with Immediate addressing Mode	Yes	None	Not Copied
DEC with Direct addressing Mode	Yes	None	Not Copied
DEC with Register indirect addressing Mode	Yes	None	Not Copied

Types of Errors Detected

All Type of Error is Working without bug and Not Copied

Type of Error	Working	Known bug	Copied or not
Size Mismatch	Yes	None	Not Copied

Memory to memory operation	Yes	None	Not Copied
Incorrect addressing mode	Yes	None	Not Copied
Invalid register name	Yes	None	Not Copied

Type of Power Ups

All Type of Powerups is Working without bug and Not Copied

Type of Power	Working	Known bug	Copied or not
Executing a command on your own processor	Yes	None	Not Copied
Executing a command on your processor and your opponent processor at the same time	Yes	None	Not Copied
Changing the forbidden character only once	Yes	None	Not Copied
Clearing all registers at once.	Yes	None	Not Copied
An extra power up is introduced, letting each player be able to change the target value only once to any value other than	Yes	None	Not Copied

values currently existing in any register for the two players (For Level 2)			

Levels

All Levels is Working without bug and Not Copied

Level Number	Working	Known bug	Copied or not
1	Yes	None	Not Copied
2	Yes	None	Not Copied

Defining Usernames screen

Screen Window is Working without bug and Not Copied

Screen	Working	Known bug	Copied or not
initial point	Yes	None	Not Copied
The username should not exceed 15 characters and start with a letter (No digits or special characters).	Yes	None	Not Copied

Main screen

Screen Window is Working without bug and Not Copied

Screen	Working	Known bug	Copied or not
Start Chatting Key	Yes	None	Not Copied
Start Game Key	Yes	None	Not Copied
End Game Key	Yes	None	Not Copied

Game Screen

All Features in Main Screen is Working without bug and Not Copied

Screen	Working	Known bug	Copied or not
registers names	Yes	None	Not Copied
registers values	Yes	None	Not Copied
memory values	Yes	None	Not Copied
player name	Yes	None	Not Copied
memory offsets	Yes	None	Not Copied
player points	Yes	None	Not Copied
forbidden character for level 1	Yes	None	Not Copied
wanted value	Yes	None	Not Copied
chat bar	Yes	None	Not Copied
flying object	Yes	None	Not Copied
gun	Yes	None	Not Copied
bullet	Yes	None	Not Copied
command bar	Yes	None	Not Copied
number of targets hit of each color	Yes	None	Not Copied

Flying Object Game

Flying Object Game is Working without bug and Not Copied

Screen	Working	Known bug	Copied or not
objects appear randomly at both screens at the same time	Yes	None	Not Copied
flying objects has colors and each color has a value	Yes	None	Not Copied

Level 2 Special Operation

Level 2 Special Operation is Working without bug and Not Copied

Screen	Working	Known bug	Copied or not
The forbidden character is hidden	Yes	None	Not Copied
command including the forbidden character will not be executed.	Yes	None	Not Copied
player is able to decide whether to execute it on his/her processor or the opponent processor.	Yes	None	Not Copied
player is able to put initial values for any register at the beginning of the level	Yes	None	Not Copied

An extra power up is introduced, letting each player be able to change the target value only once to any value other than values currently existing in any register for the two players (For Level 2)	Yes	None	Not Copied