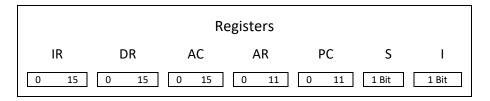
SET I

1. Create a machine based on the following architecture:



Memory	Instruction format		
4096 words	0 2 3	A alabas a a	1 4 15
16 bits per word	Opcode	Address	I

Basic Computer Instructions

Memory Reference		Register Reference		Input-Output	
Symbol	Decimal code	Symbol	Hex	Symbol	Hex
LDA	0	CMA	7800	INP	F801
ADD	1	CLA	7400	OUT	F401
STA	2	HLT	7200		

- Design the register set, memory and the instruction set.
- Create a Fetch routine of the instruction cycle. Use I bit of instruction to determine whether its direct or indirect memory reference instruction.
- Write an assembly language program to add two numbers.