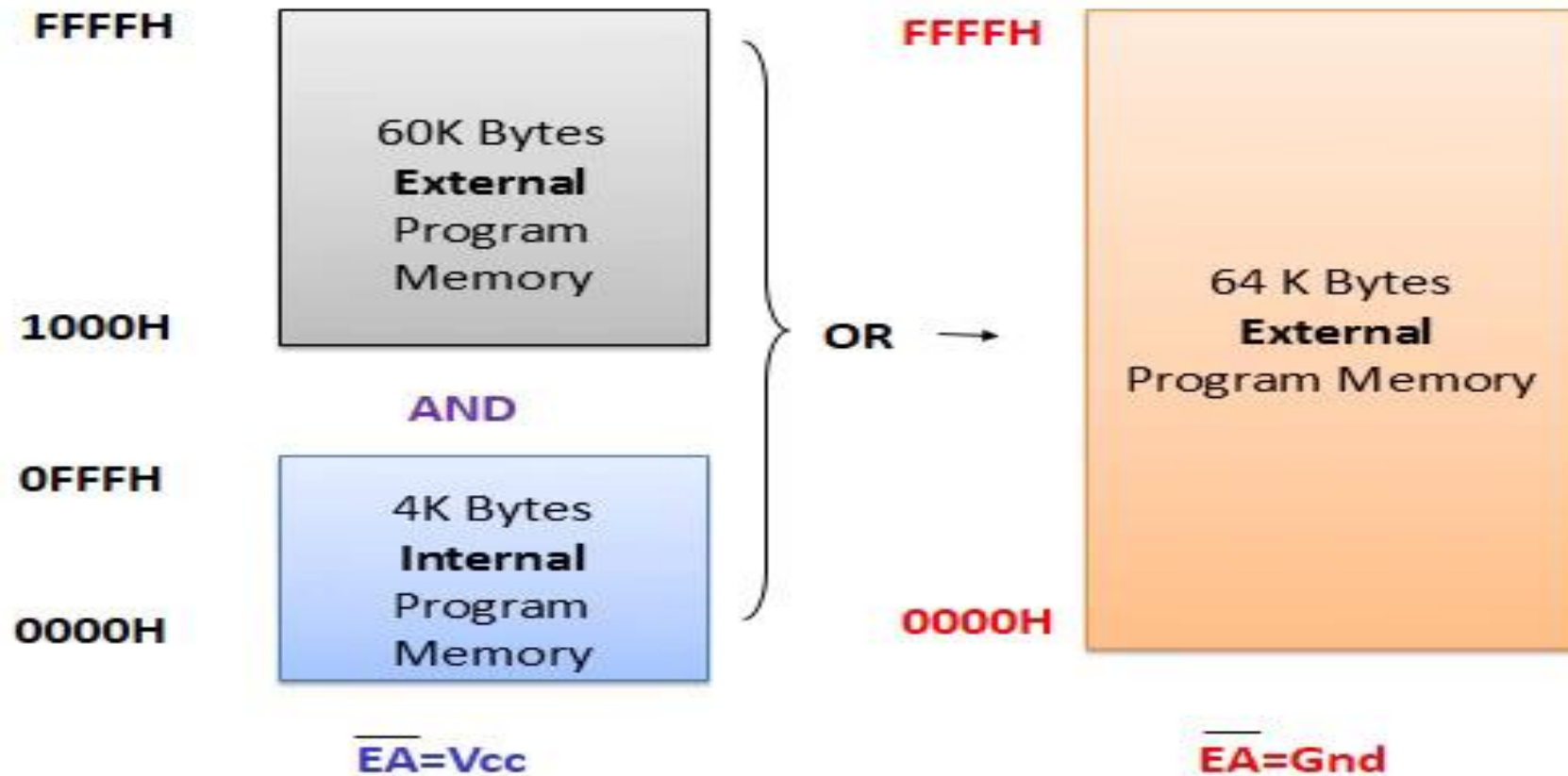


8051 – Memory Interfacing

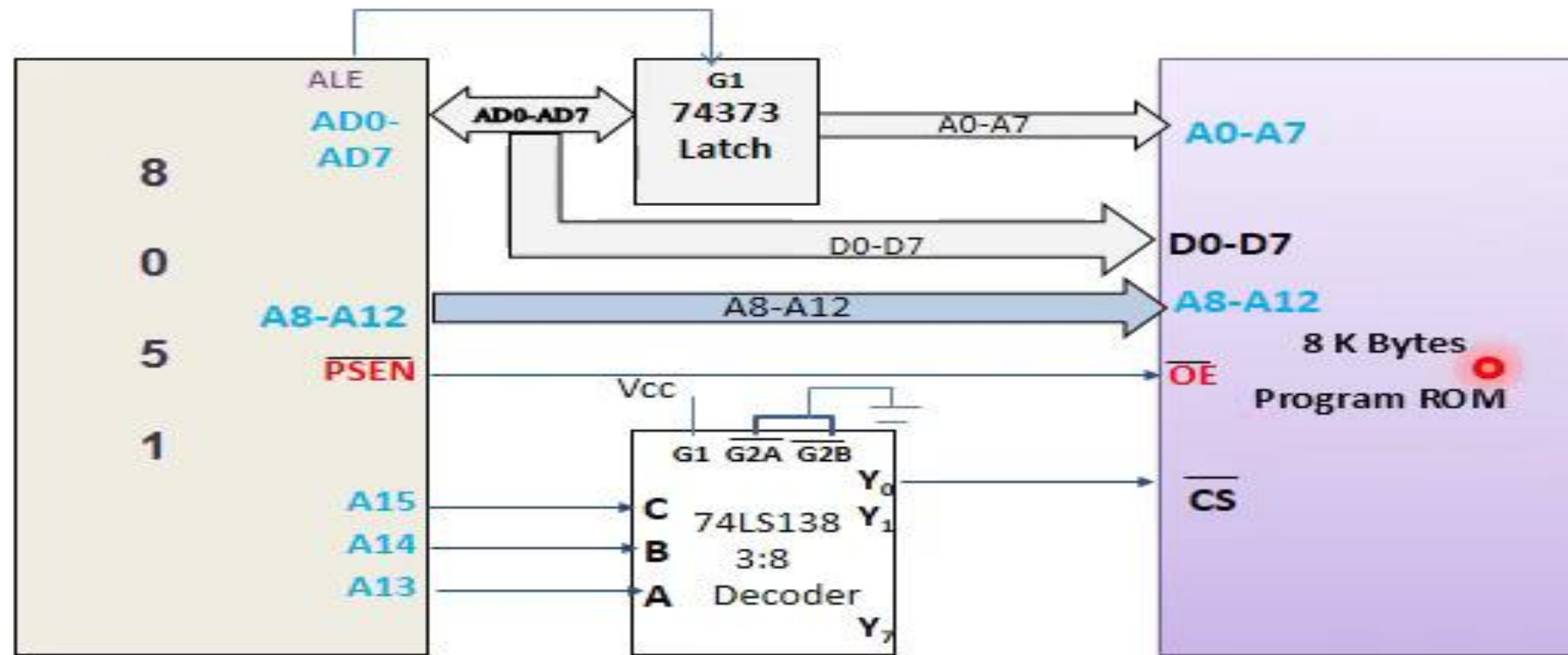
8051 Program Memory



Interfacing of External program Memory

Ex-1 Interface 8 KBytes of Program ROM to 8051 microcontroller.

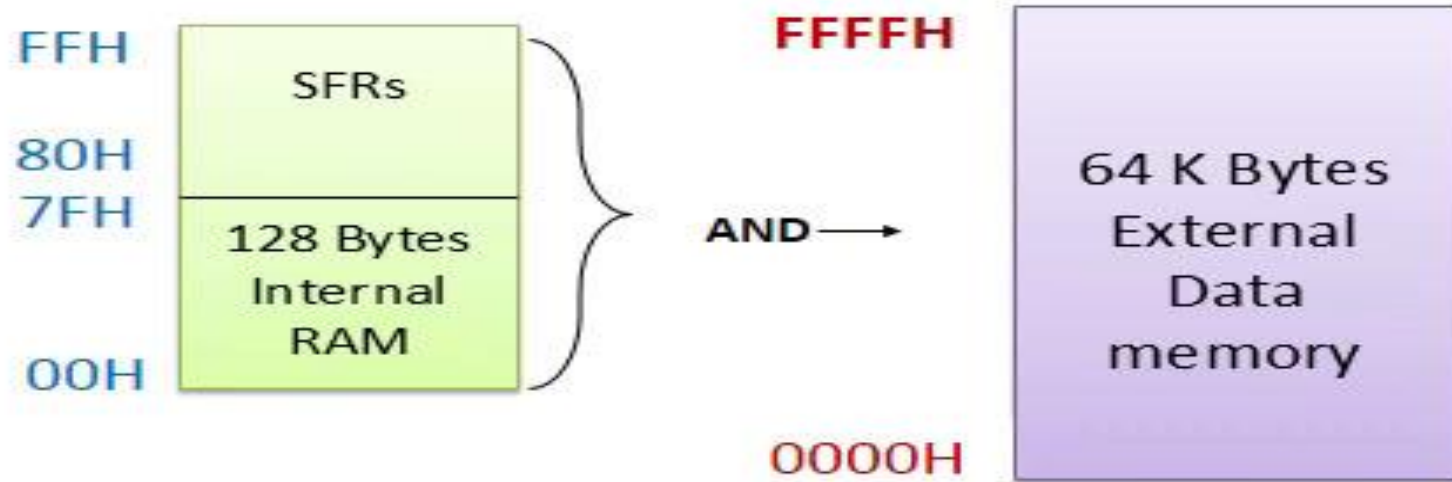
Sol: 8K Bytes memory requires 13 address lines. i.e. A0 - A12



Memory Map

[illegible]

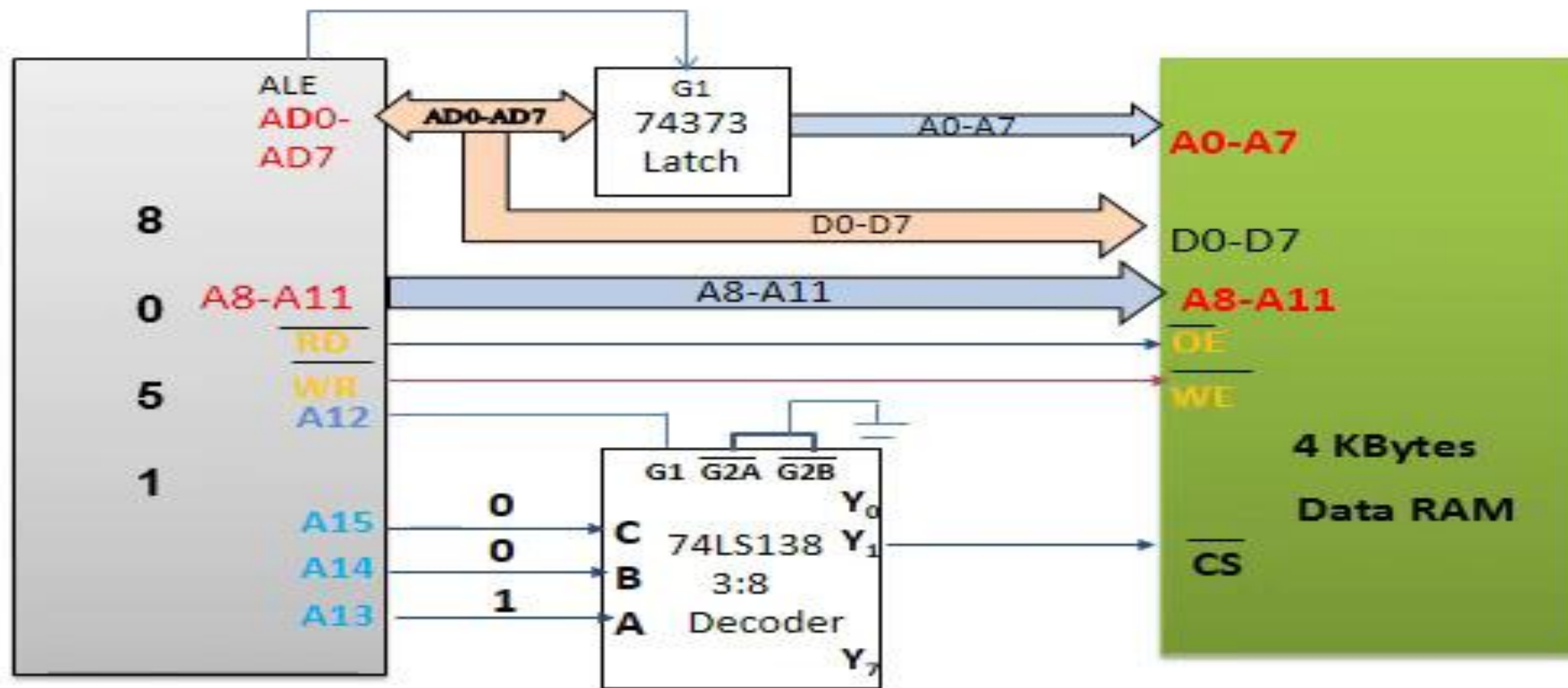
8051 Data Memory



Interfacing of External Data Memory

Ex. Interface 4 KBytes of external RAM to 8051 microcontroller.

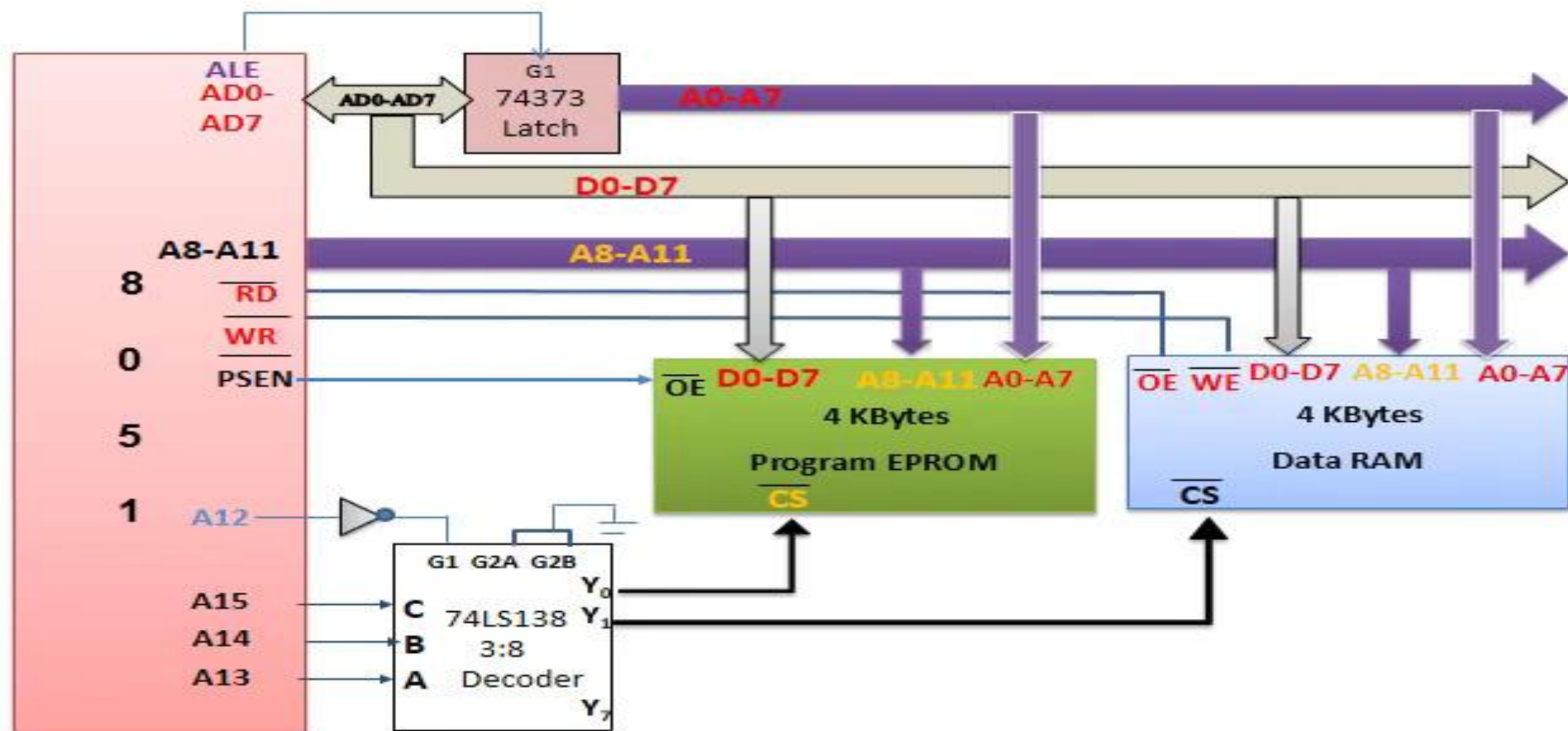
Sol : 4 KBytes memory requires 12 address lines i.e. A0 - A11.



Memory Map

[illegible]

Interface 4K byte EPROM and 4K byte RAM to 8051



Memory Map - Program ROM

[illegible]

Memory Map - Data RAM

[illegible]

Sr. No.	Absolute Decoding	Linear Decoding
1	It is also called as full decoding as all the address lines are used for decoding .	It is also called as partial decoding as all address lines are not used for decoding .
2	It is used in large memory systems.	It is used in small systems .
3	Hardware required for decoding logic is more.	Hardware used for decoding logic is less.
4	Multiple addresses are not generated .	Multiple addresses are generated .