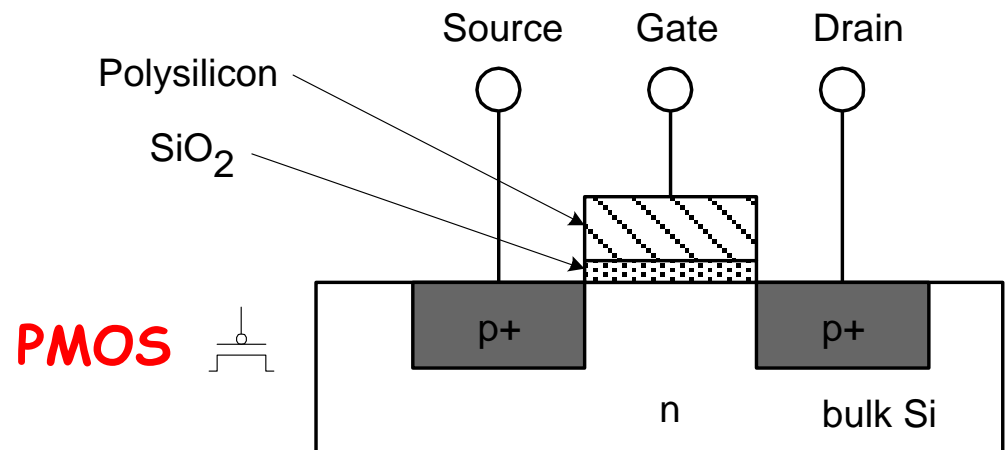
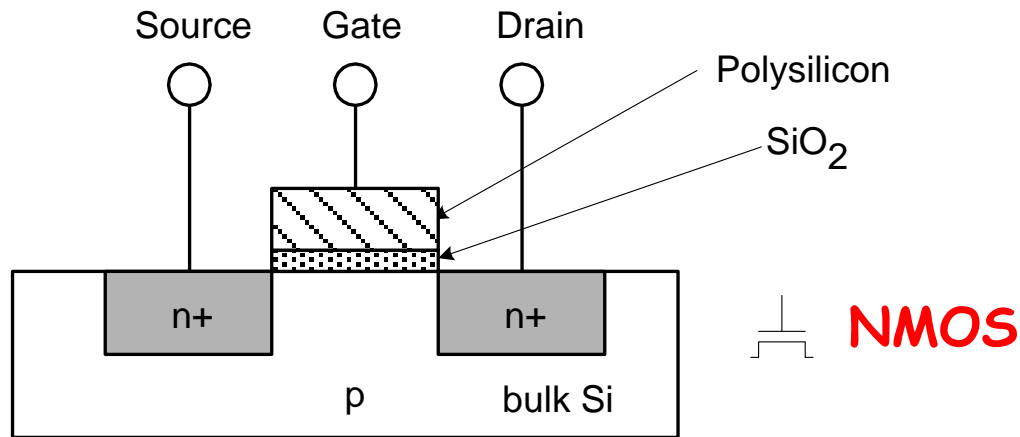


CS204B: 數位系統設計

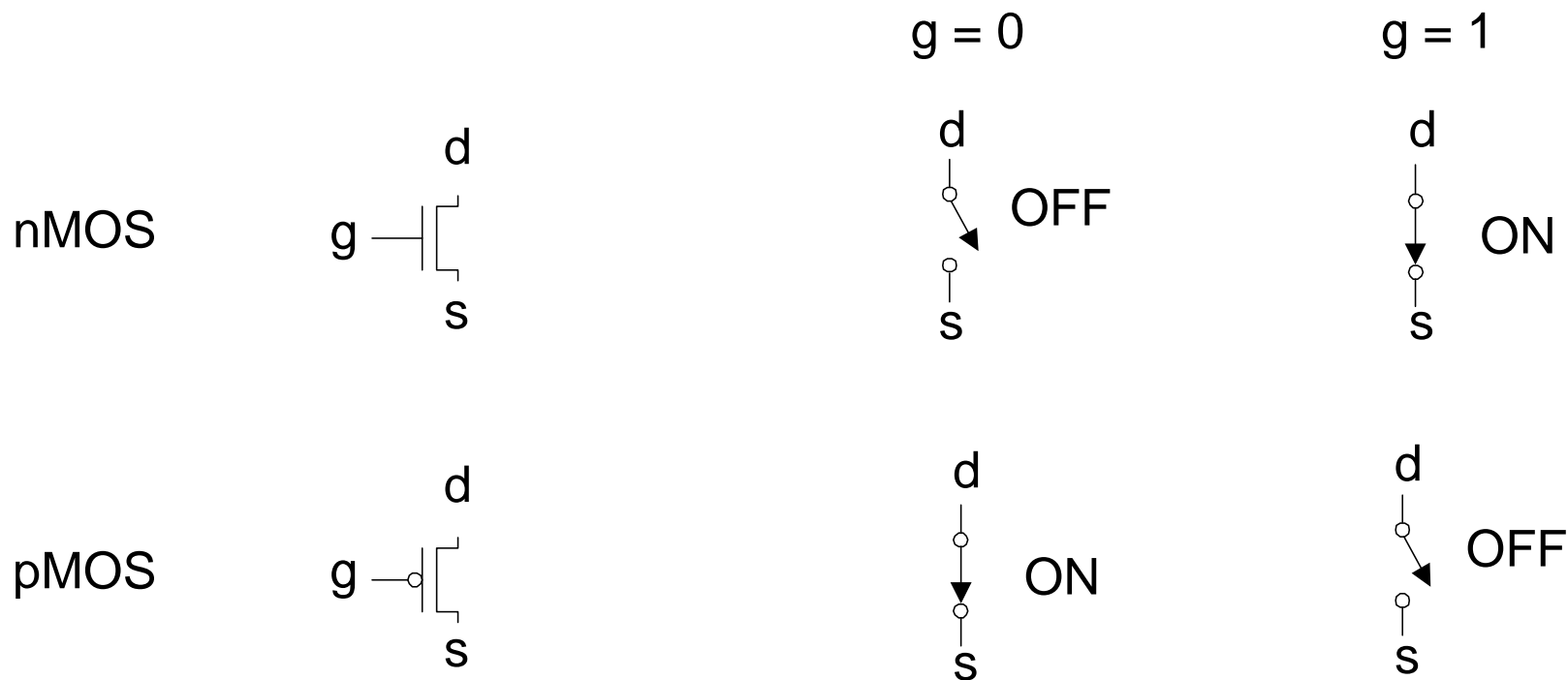
Introduction

為什麼資訊叫做0與1的世界？

現今所有的電子產品，都是從這裡開始的...



電晶體 (transistor) 就像是一個開關



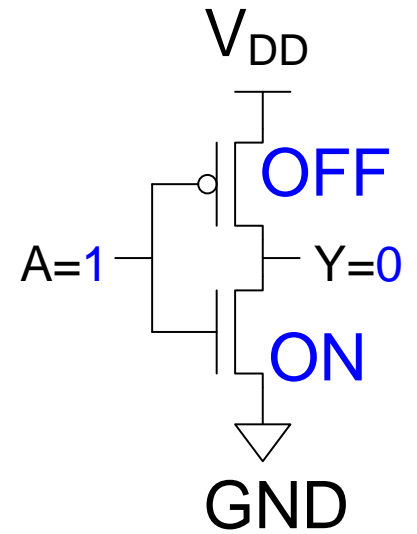
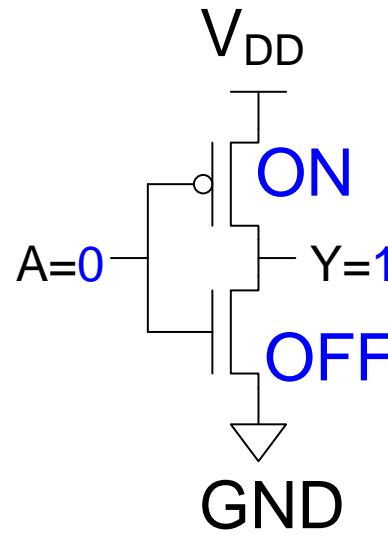
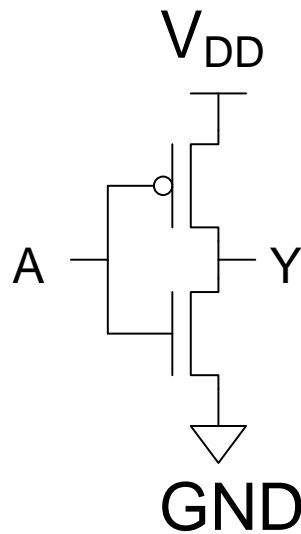
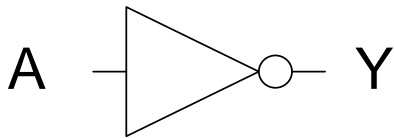
開關只有兩種狀態：開 (turn on)、關 (turn off)

1 0

有了開關，那然後呢？

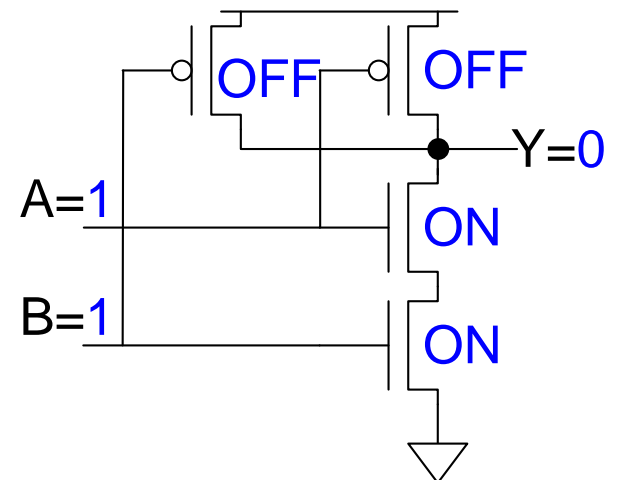
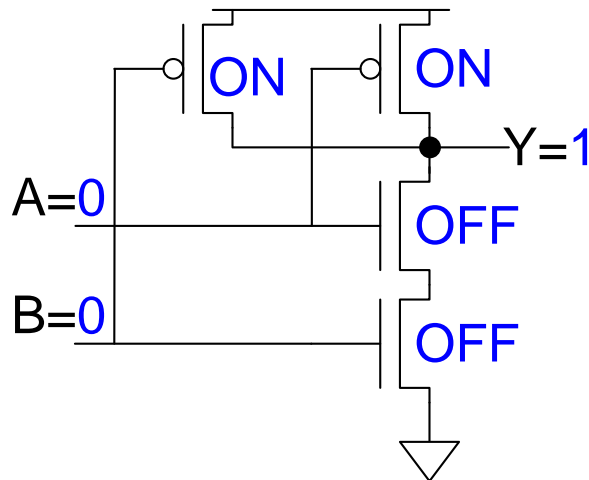
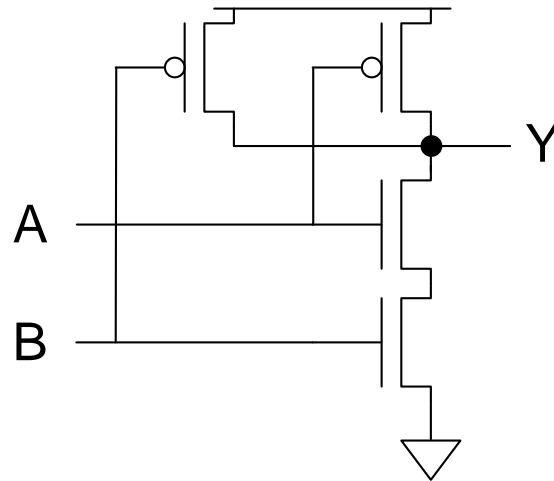
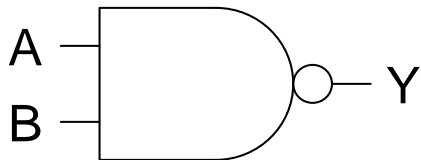
1 PMOS + 1 NMOS

A	Y
0	1
1	0



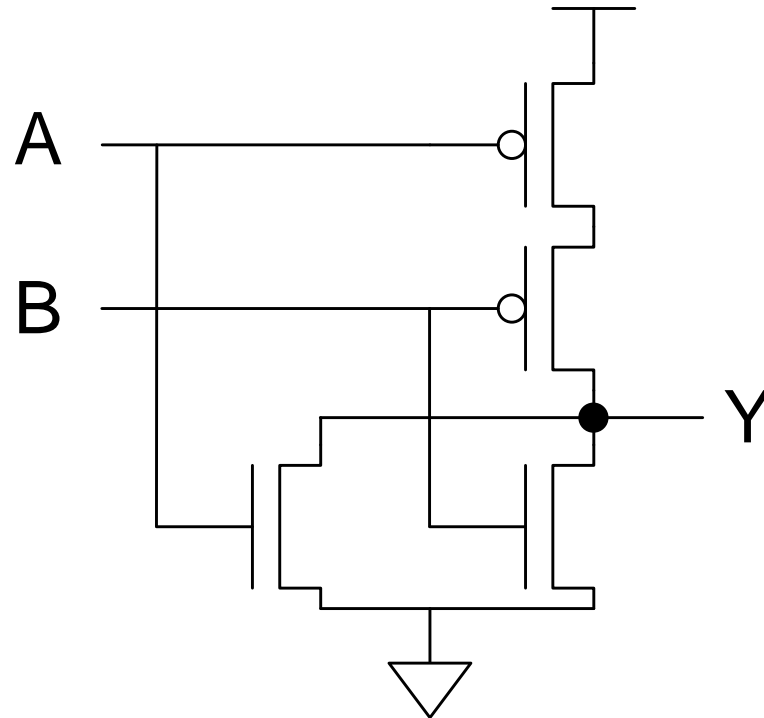
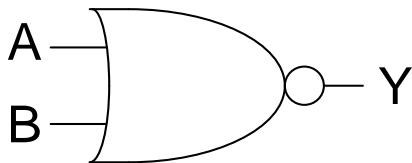
2 PMOS + 2 NMOS

A	B	Y
0	0	1
0	1	1
1	0	1
1	1	0

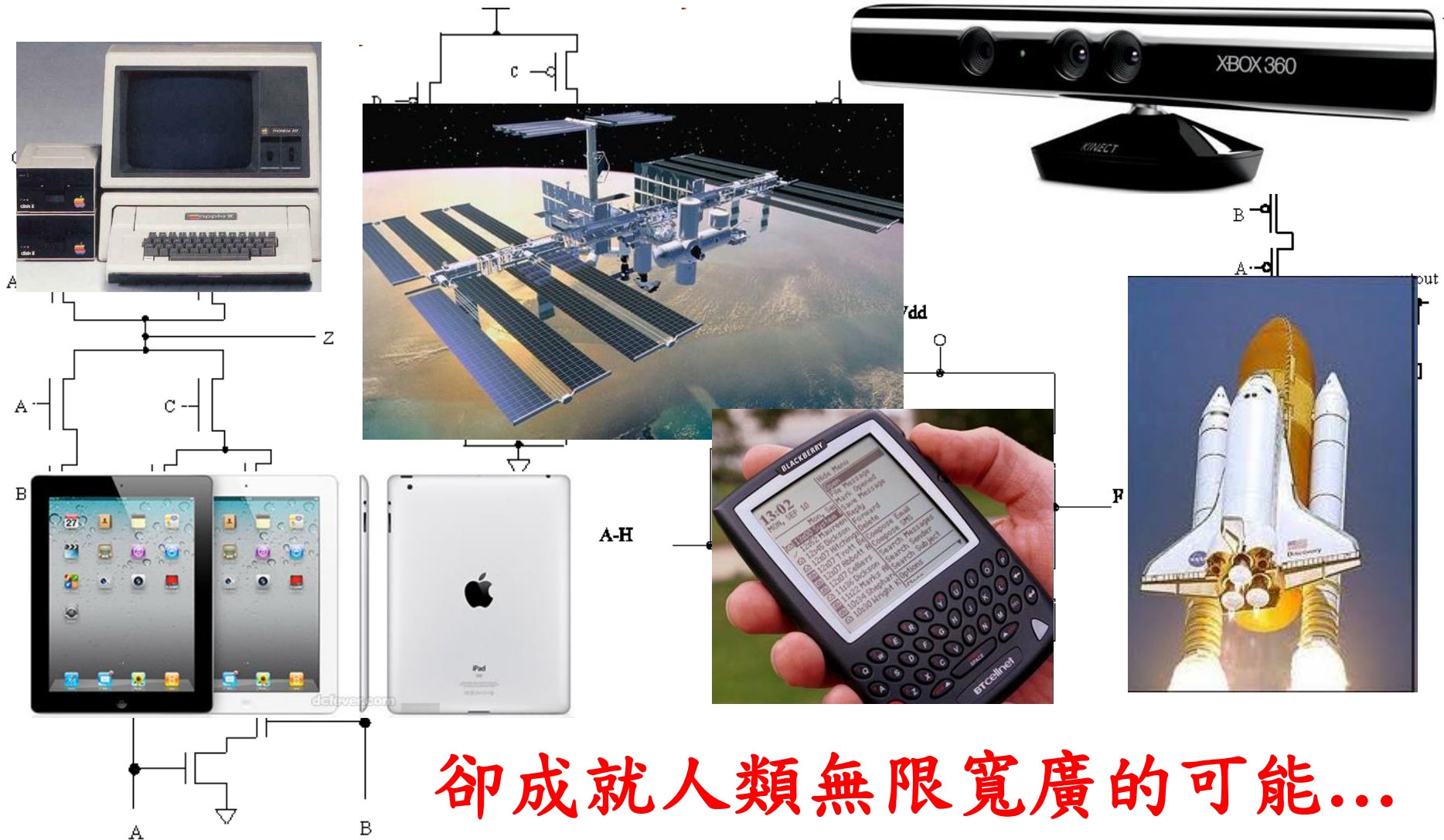


2 PMOS + 2 NMOS

A	B	Y
0	0	1
0	1	0
1	0	0
1	1	0



世界變得越來越複雜



卻成就人類無限寬廣的可能...

三門必修課

▣ 電子電路學

- ◆ 電晶體

▣ 數位系統

- ◆ 邏輯閘，基礎電路

▣ 計算機組織

- ◆ 複雜電路，系統