Université Mohammed V de Rabat
Faculté des sciences

SMI Semestre 3

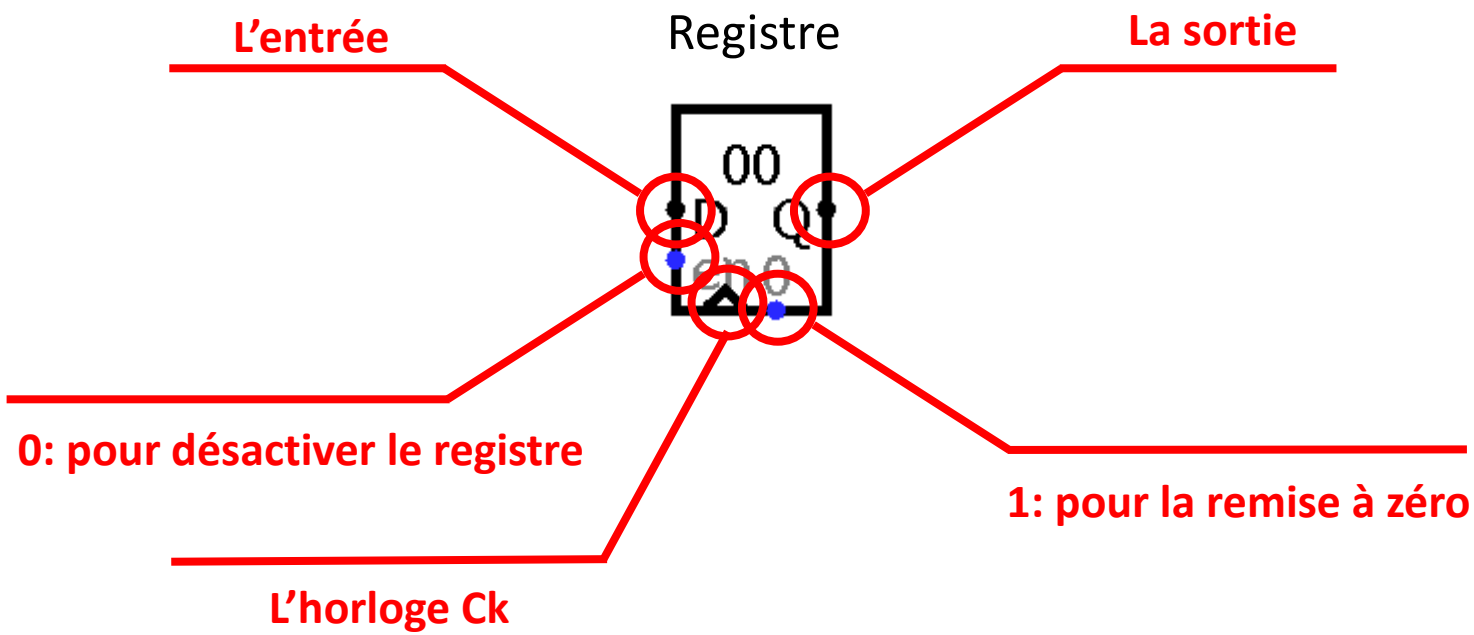
Module: Electronique

TP 4: Bascules, mémoires et compteurs

Issam ELAFI

Année universitaire 2019 - 2020

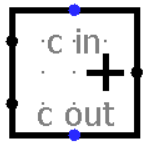
1. Registre (Memory\Register)



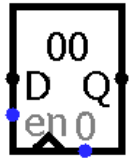
1. Sommateur parallèle

Horloge Ck

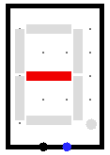
Entrée



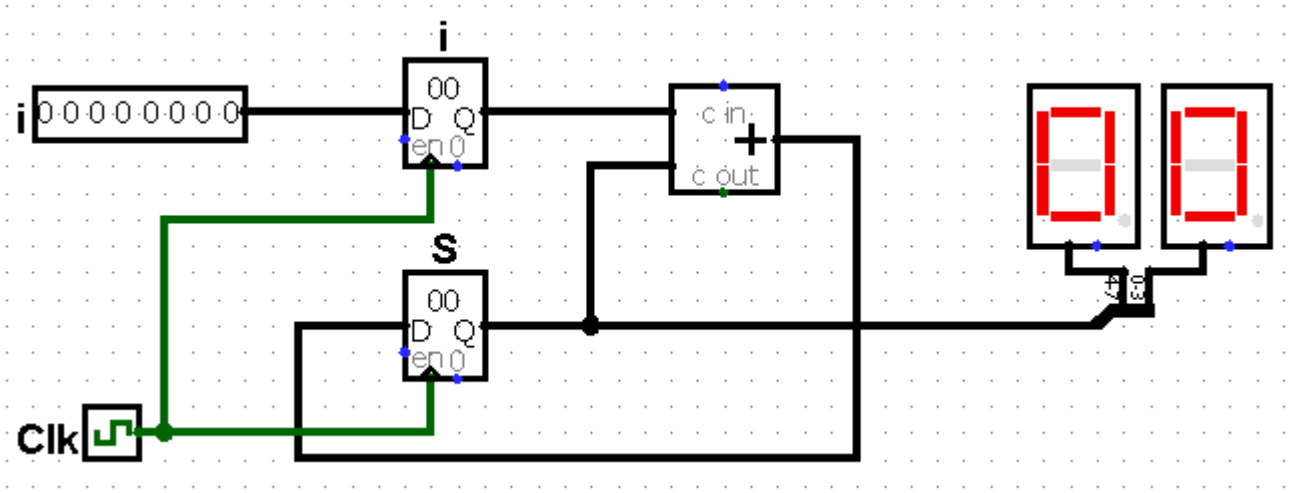
Additionneur



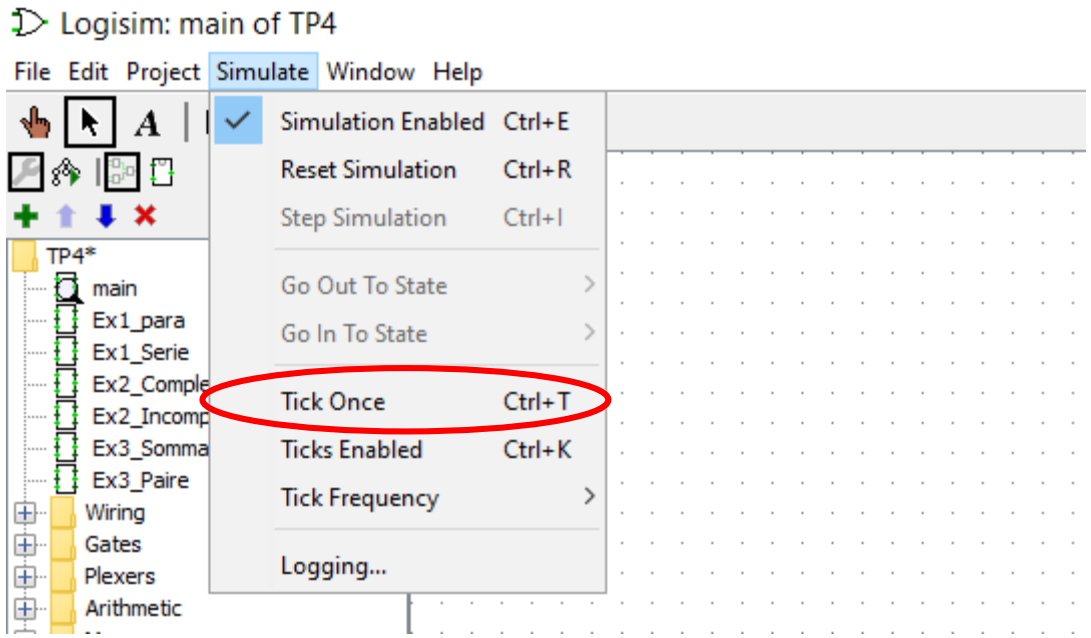
Deux registres de 8 bits

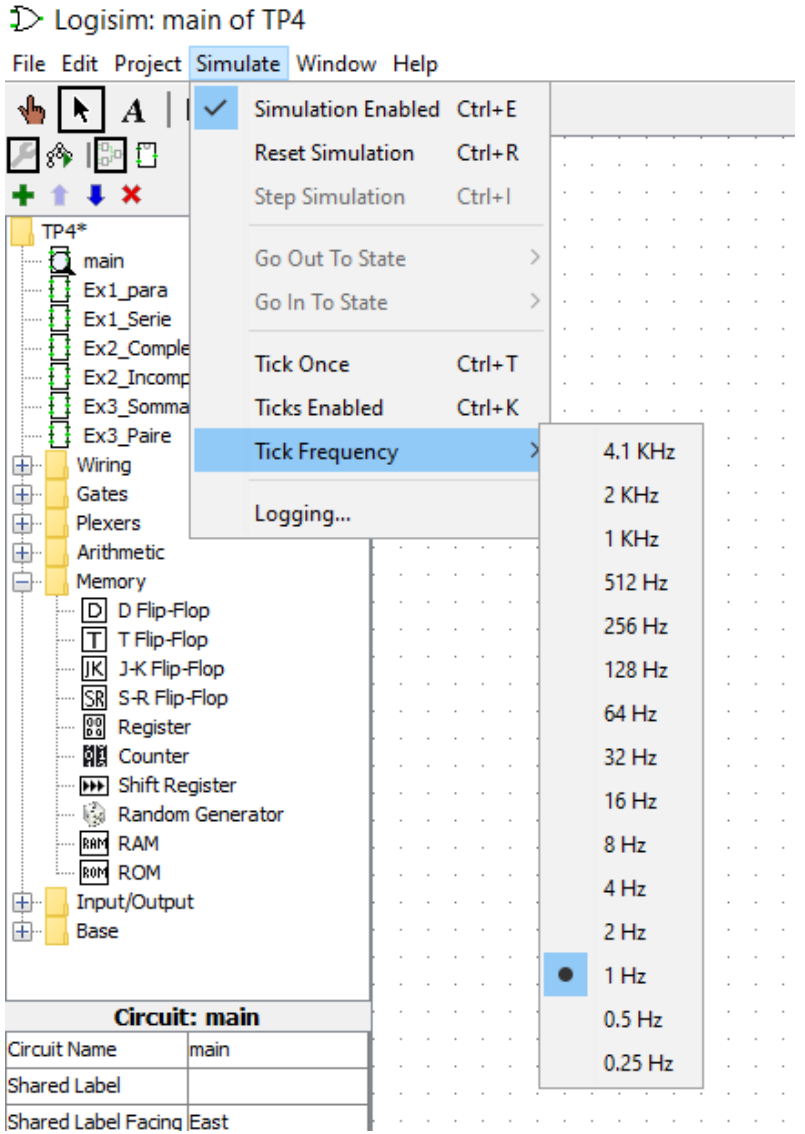


Deux afficheurs hexadécimal

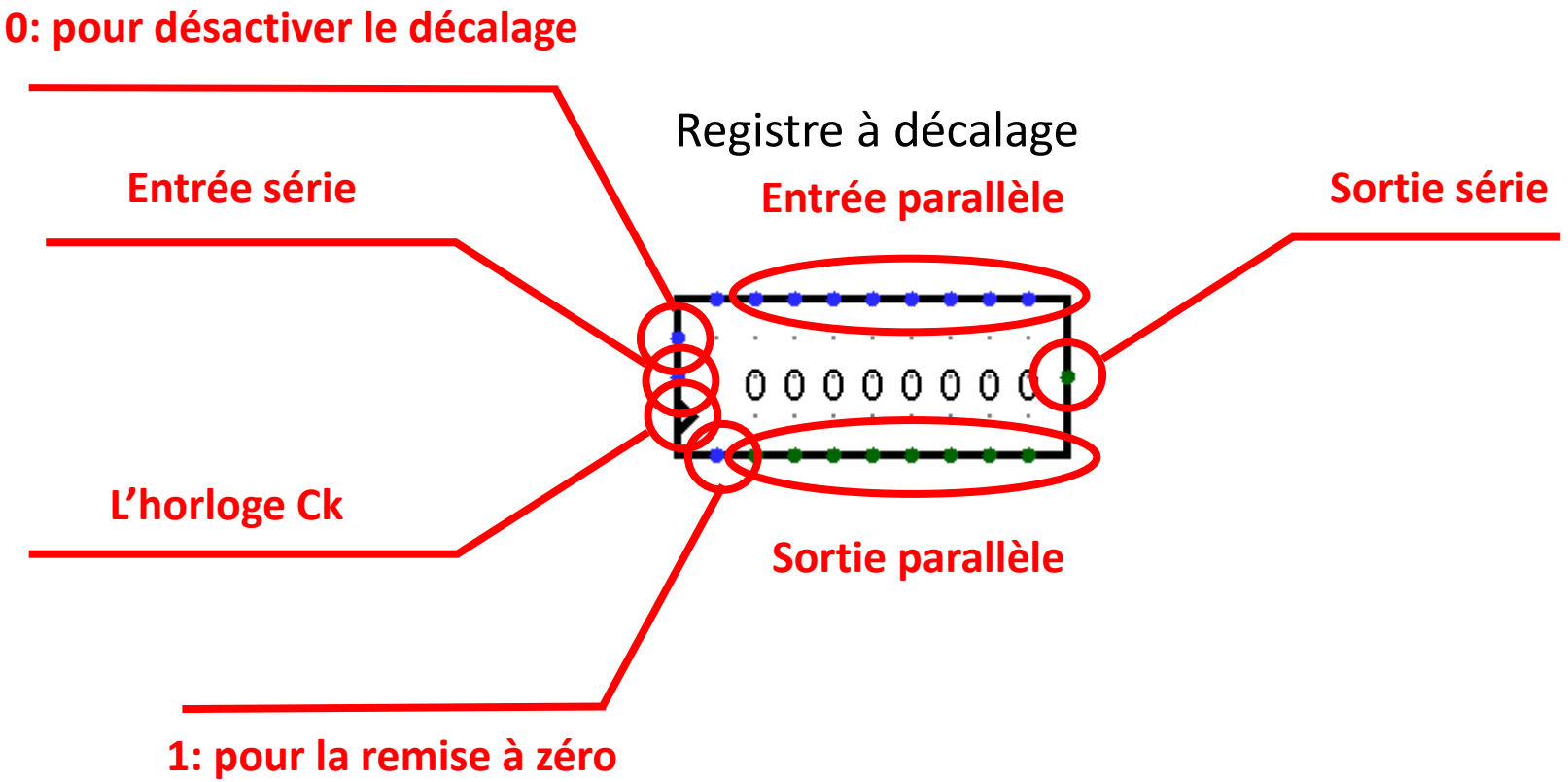


Gestion de l'horloge





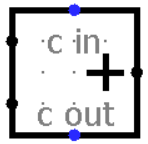
2. Sommateur série



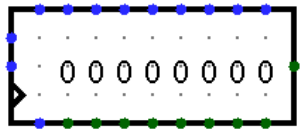
2. Sommateur série

Horloge Ck

Entrée

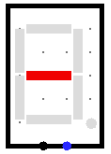


Additionneur

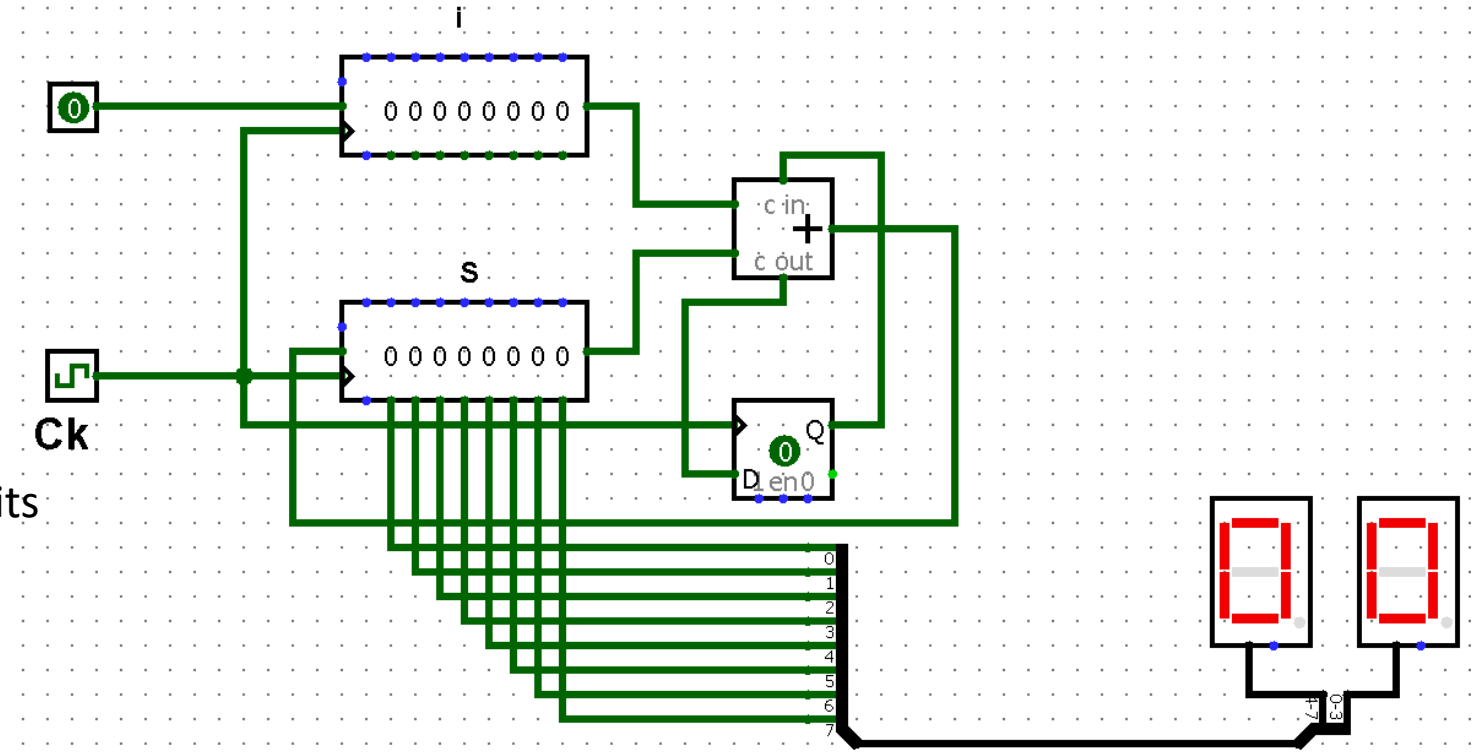


Deux registres à décalage de 8 bits

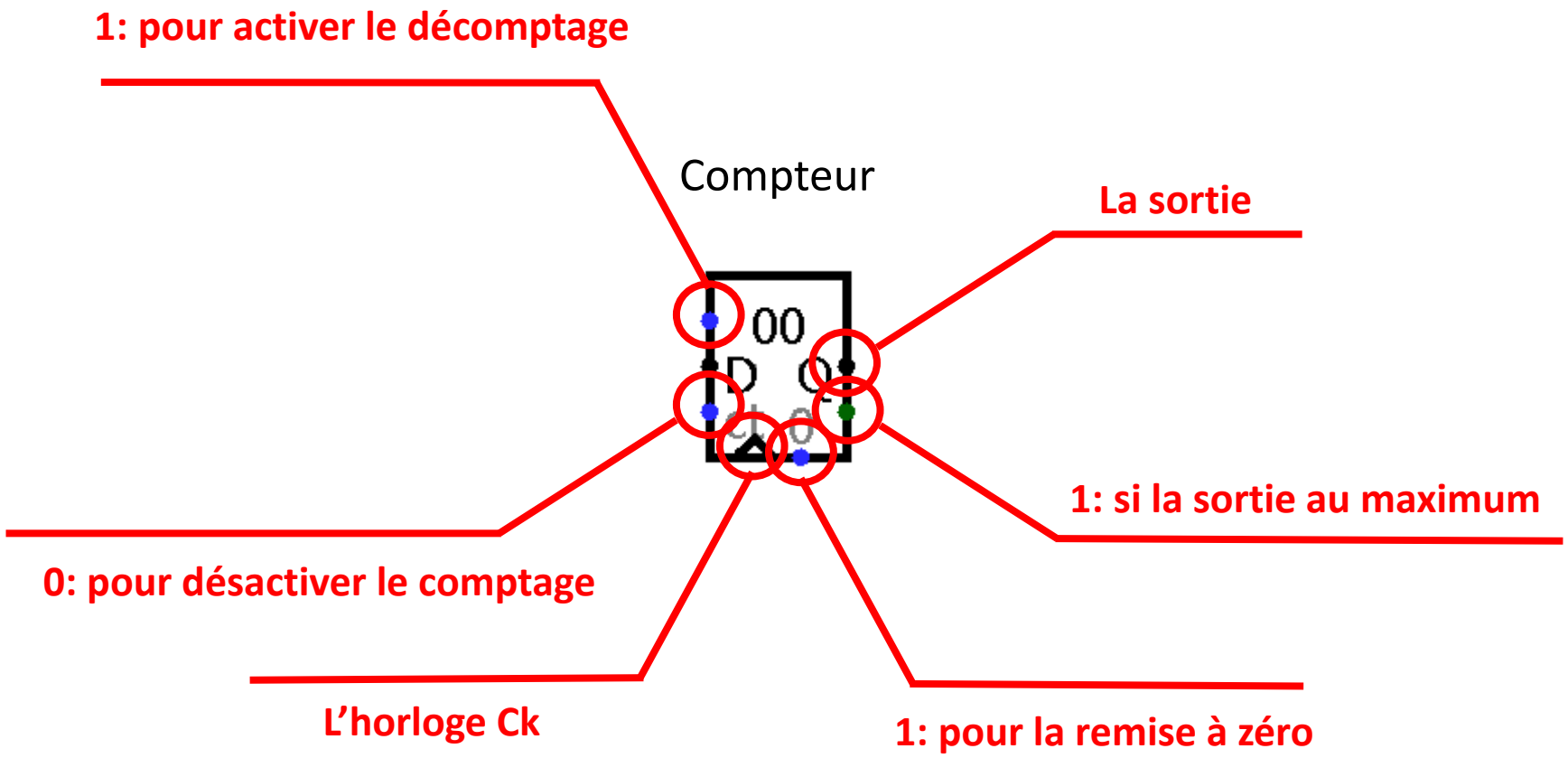
Bascule D



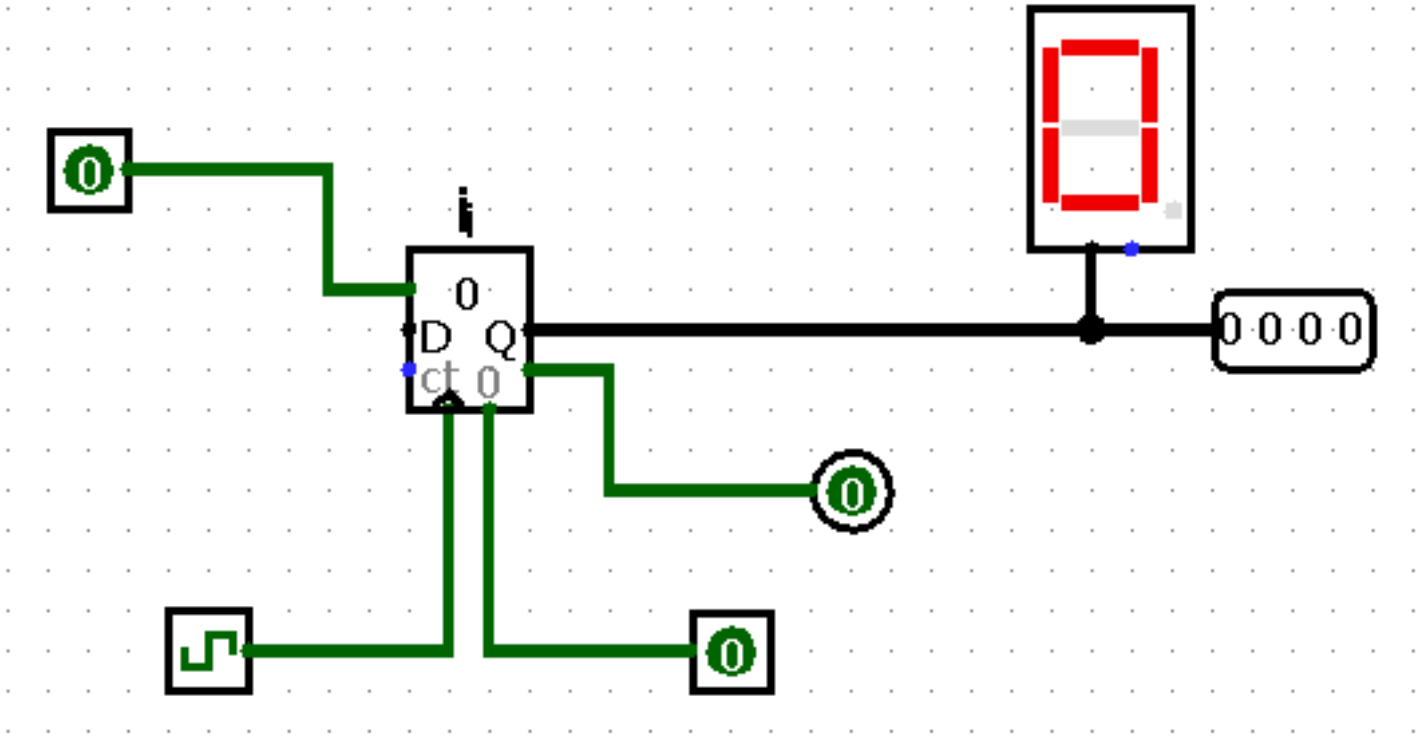
Deux afficheurs hexadécimal



3. Compteurs synchrones de 4bits

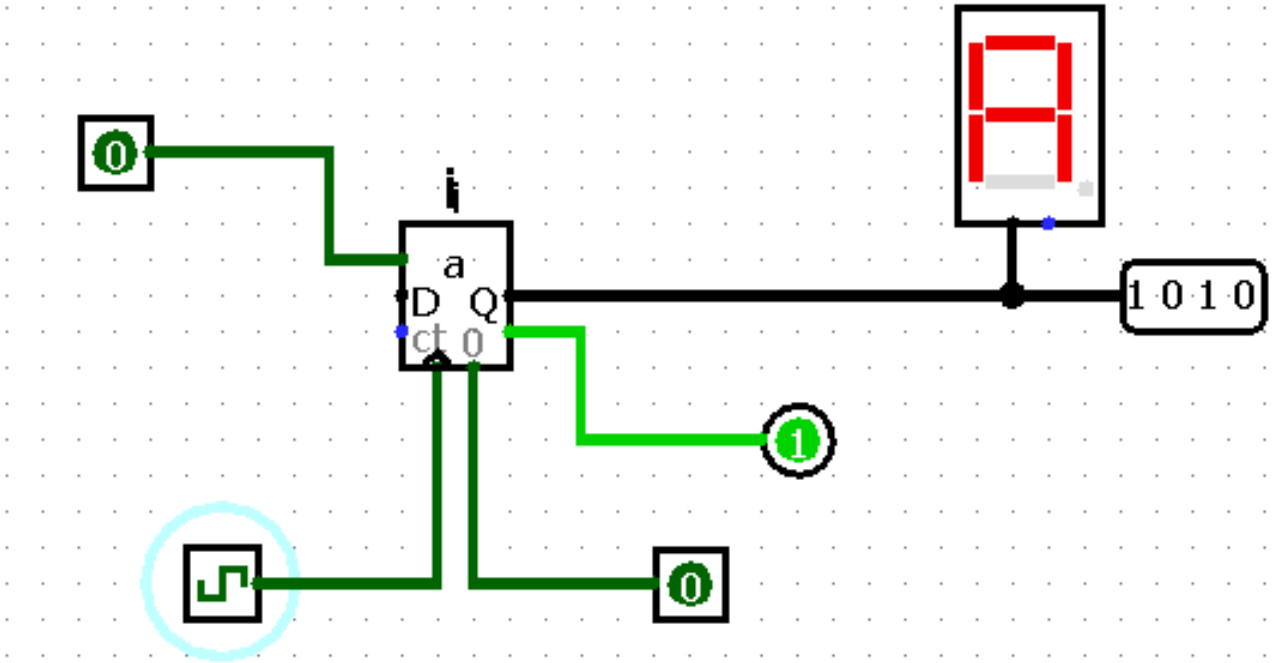


3. Compteurs synchrones de 4bits



4. Compteur synchrone de 4bits à cycle incomplet

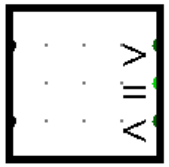
Selection: Counter	
Data Bits	4
Maximum Value	0xa
Action On Overflow	Wrap around
Trigger	Rising Edge
Label	i
Label Font	SansSerif Plain 12



4. Compteur synchrone de 4bits à cycle incomplet

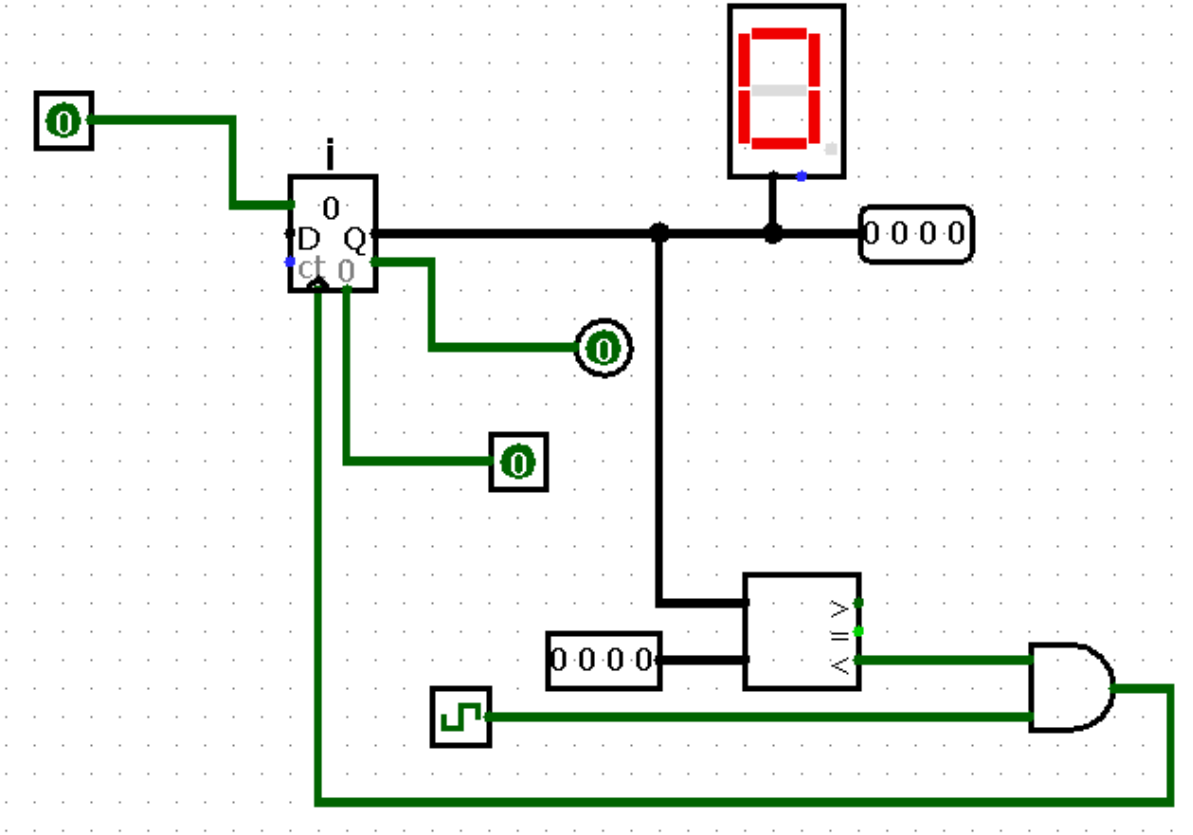
De plus par rapport au compteur à cycle complet:

Entrée



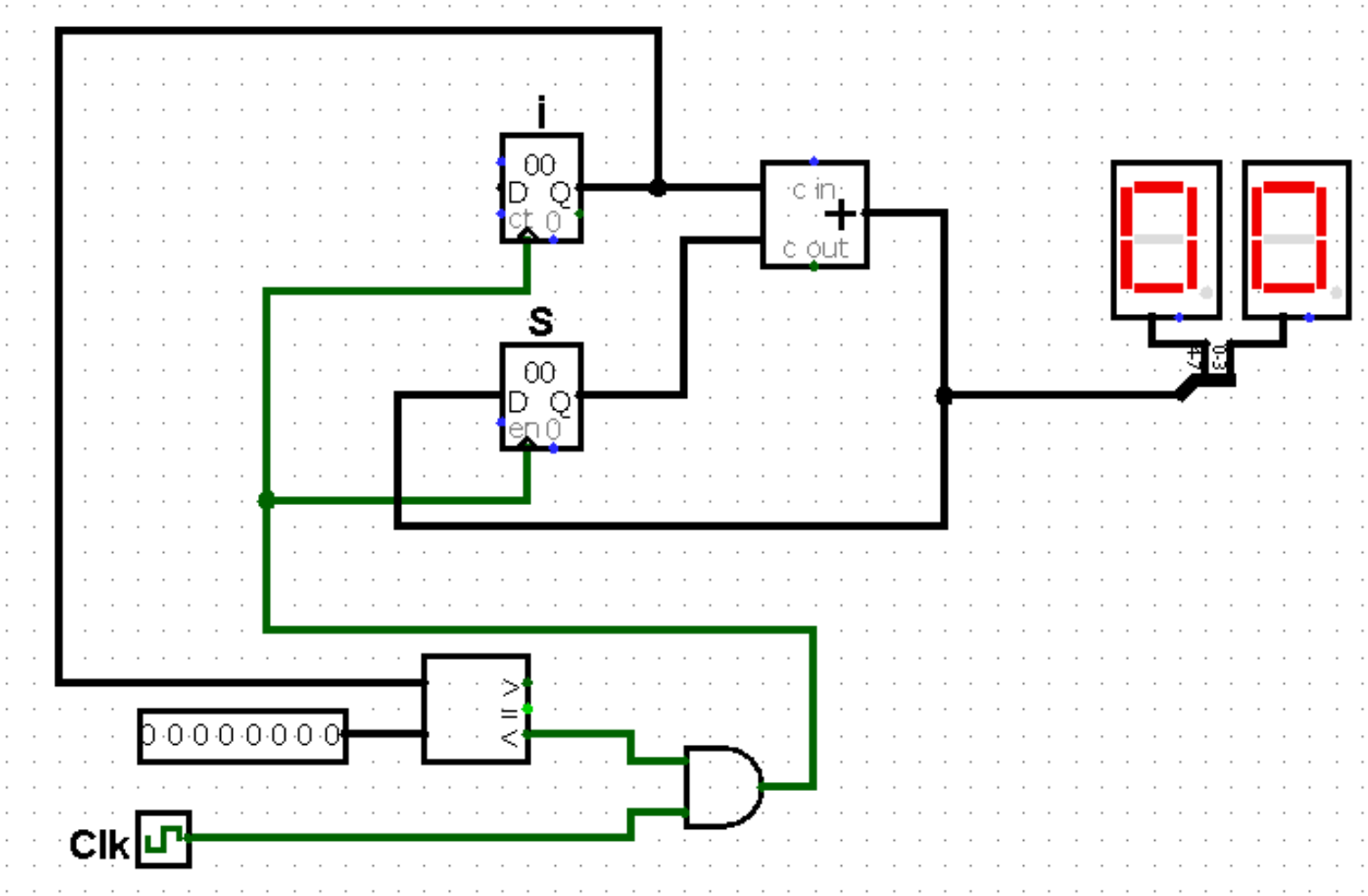
Comparateur

Porte ET



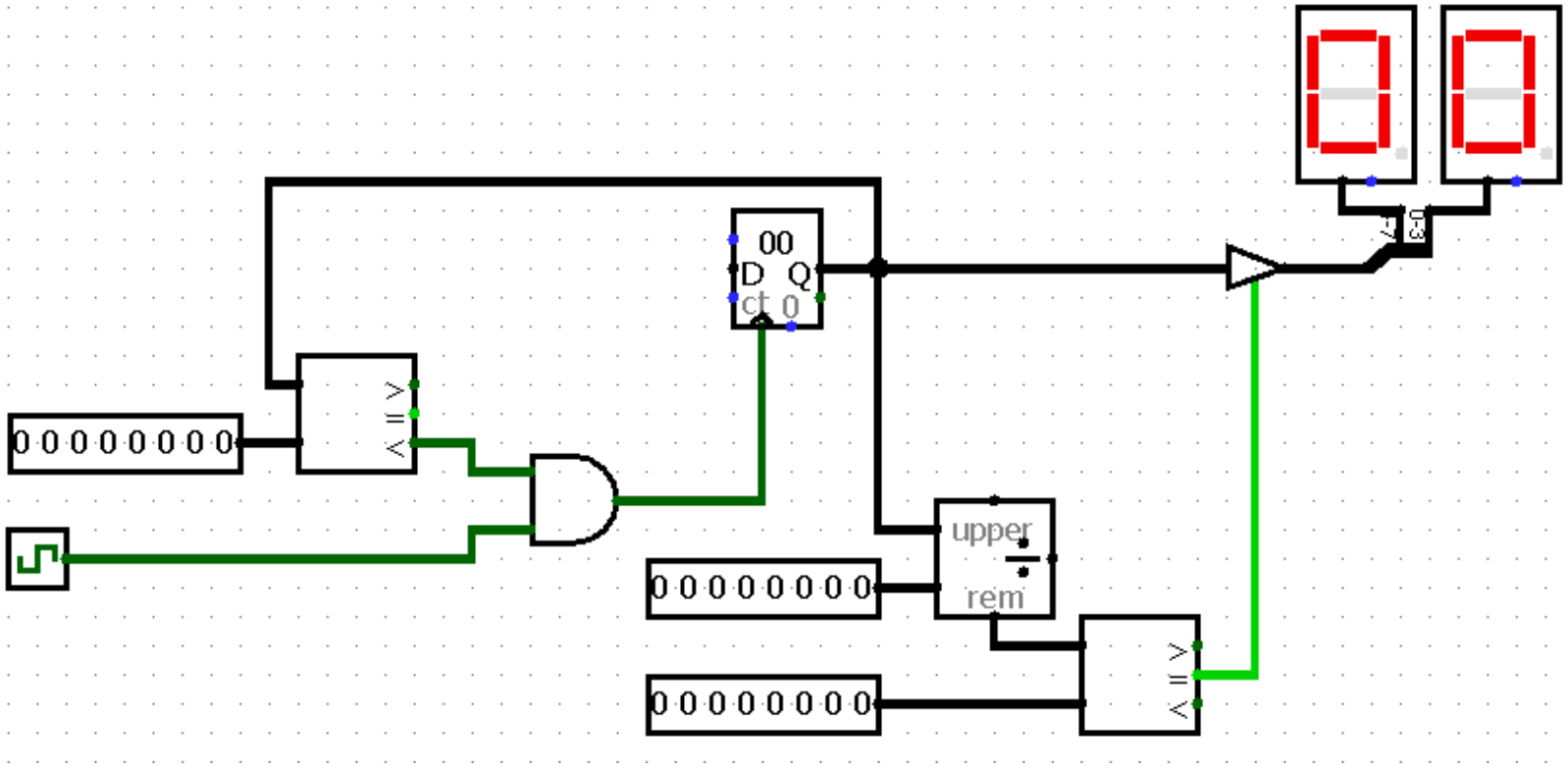
3. Réalisation de Boucles

```
for ( i = 1 ; i <= 20 ; i++)
        S = S + i ;
```



3. Réalisation de Boucles

```
for ( i = 0 ; i <= 100 ; i++)
        if (i %2 = = 0)
                printf("%d", i);
```



The end