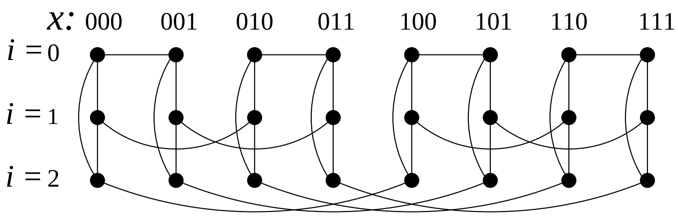
(CS838: Topics in parallel computing, CS1221, Thu, 4, 1999, 8:00-9:15 a.m., Pavel Tvrdik)

Section #5: Homework2

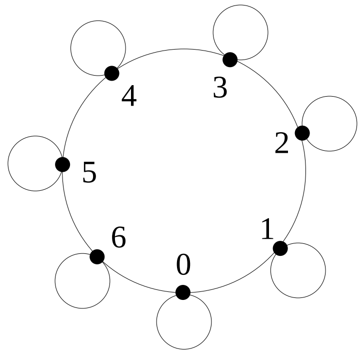
Prove that

1. $\phi(CCC_n) = (2n-2) + \lfloor n/2 \rfloor$ for $n > 3$ and $\phi(CCC_3) = 6$
2. $\phi(wBF_n) = n + \left\lfloor \frac{n}{2} \right\rfloor$

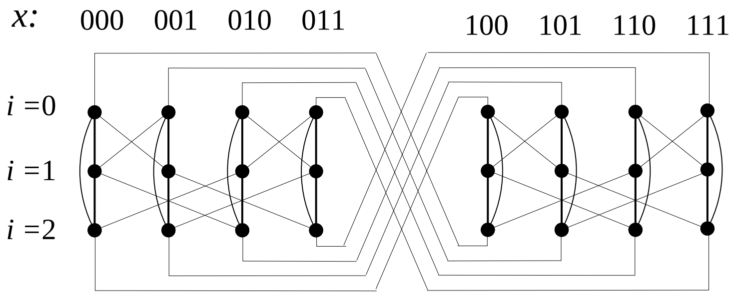
The hints for the solution will be given to you during the lecture. The following two drawings of both topologies should help. This homework will help you to understand the shotest-path routing in hypercubic topologies.



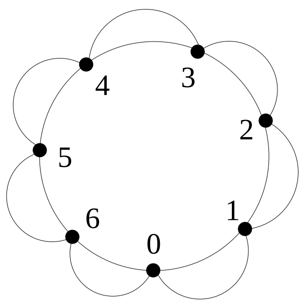
(a) CCC_3



(b) CCC_7



(a) wBF_3



(b) wBF_7