Start, $x$ is the number to convert

1. Let $d$ be the largest number so $2^d \not\equiv x$

2. Is $d \geq 0$, i.e., are there more digits to process?
   - No → Stop, the places of the number have been found
   - Yes → 3

3. Is $x \equiv 2^d$, i.e., is $x$ at least as large as $2^d$?
   - Yes → The binary place $d$ is 1
     - $x$ has new value $x - 2^d$
   - No → 5

4. Reduce $d$ by 1

5. The binary place $d$ is 0

6. Reduce $d$ by 1