Modulo problem in C++ :-

In C++, the result of $a \% b$ depends on the sign of a (the dividend), while the divisor b determines the possible values for the result. Specifically, C++ uses truncation towards zero for the division, meaning it keeps the quotient as close to zero (rounding towards zero, not towards negative infinity).

This results in the remainder $(a \% b)$ having the same sign as the dividend a in most cases.

Fixing the Problem :-

To ensure the modulus operation always returns a non-negative result (like in Python or mathematical conventions), we use the following technique.

$$\boxed{\text{int } p = (cur \% k + k) \% k}$$