14. Banks and Simple Interest

- **Terminology related to simple interest:**
    1. The amount of money that is borrowed is known as principal and is denoted by P.
    2. The extra amount of money that one has to pay is known as interest and is denoted by I.
    3. The total amount of money, A that one pays back is equal to the sum of principal and interest.
    4. The simple interest (SI) on the principal (P) when borrowed for T years at R% rate of interest per year is given by the formula $SI = \dfrac{P \times T \times R}{100}$

Example:
Rashmi takes a loan of Rs 4000 from a bank at 8% rate of interest per year. Find the amount of money that Rashmi has to repay after 3 years.

Solution:
P = Rs 4000, R = 8% p.a., T = 3 years

$$SI = \dfrac{P \times R \times T}{100} = \dfrac{4000 \times 8 \times 3}{100} = Rs.\,960$$

$\therefore$ Amount = P + I = Rs 4000 + Rs 960 = Rs 4960

Thus, Rashmi has to repay Rs 4960 after 3 years.

Note: Principal remains unchanged throughout the given time period while calculating the simple interest.