

## Assignment 7: Function

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Implement the following C programs using user defined functions:

- 1) Calculate  $x^y$  i.e `pow(x,y)` using recursion.
- 2) Reads an  $n \times n$  matrix and displays the sum of elements for the main diagonal.
- 3) Insert a word in a string at a position given by user.
- 4) Implement a function named as `flip`; which will take a number as input and flip its last  $N$  digits.

For example: `flip(123, 2)`= 132 ; (here  $N=2$ )

`flip(12345, 3)`= 12543 (here  $N=3$ )

- 5) For the `flip` function in Q-5, verify that `flip(flip(N,k), k)`=  $N$ .