

MCAC 302: Design and Analysis of Algorithms

Neelima Gupta

ngupta@cs.du.ac.in

May 3, 2023

Radix Sort

Next, suppose we want to sort n elements in the range $[1 \dots m^c]$ or $[0 \dots m^c - 1]$...doesn't really matter for some integers m and c .

For Example:

- ▶ Integers in the range $[0 \dots 99]$...what is m ? What is c ?
- ▶ Strings of maximum fixed length say 10...what is m ? What is c ?

RADIX-SORT(A, d)

for $i = 1$ **to** d **do**

 | use a stable sort to sort array A on digit i

end

329		720		720		329
457		355		329		355
657		436		436		436
839	457	839	457
436		657		355		657
720		329		457		720
355		839		657		839