1. **Write a program to implement Radix sort (prerequisite is Counting sort)**

**AIM:** A program to implement Radix sort.

**PROGRAM:**

def count\_sort(l,exp):

n=len(l)

output=[0]\*(n)

count=[0]\*(10)

for i in range(n):

index=l[i]//exp

count[index%10]+=1

for i in range(1,10):

count[i]+=count[i-1]

i=n-1

while i>=0:

index=l[i]//exp

output[count[index%10]-1]=l[i]

count[index%10]-=1

i-=1

for i in range(n):

l[i]=output[i]

def radix\_sort(l):

max\_l=max(l)

exp=1

count=0

while max\_l>0:

count+=1

max\_l=max\_l//10

for i in range(count):

count\_sort(l,exp)

exp\*=10

print(l)

l=[]

n=int(input("Enter the no of elements required: "))

print("Enter the elements: ")

for i in range(n):

l.append(int(input()))

radix\_sort(l)

print("The sorted list is:",l)

**OUTPUT:**

