```
void countingSort(int array[], int size, int place) {
  int[] output = new int[size + 1];
  int max = array[0];
  for (int i = 1; i < size; i++) {
    if (array[i] > max)
      max = array[i];
  }
  int[] count = new int[max + 1];

  for (int i = 0; i < max; ++i)
    count[i] = 0;

  for (int i = 0; i < size; i++)
    count[(array[i] / place) % 10]++;
  for (int i = 1; i < 10; i++)
    count[i] += count[i - 1];

  for (int i = size - 1; i >= 0; i--) {
    output[count[(array[i] / place) % 10] - 1] = array[i];
    count[(array[i] / place) % 10]--;
  }

  for (int i = 0; i < size; i++)
    array[i] = output[i];
}

int getMax(int array[], int n) {
  int max = array[0];
  for (int i = 1; i < n; i++)
    if (array[i] > max)
      max = array[i];
  return max;
}
void radixSort(int array[], int size) {
  int max = getMax(array, size);

  for (int place = 1; max / place > 0; place *= 10)
    countingSort(array, size, place);
}
```

Submitted By:

Jatin Thakwani

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181500838