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void swap(int* a, int* b)
{
    int tmp = *a;
    *a = *b;
    *b = tmp;
}
int partition(int* A, int p, int r)
{
    int x = A[r];
    int i = p - 1;
    int j = p;
    for(; j <= r - 1; j++)
        if(A[j] <= x)
        {
            ++i;
            swap(&A[i], &A[j]);
        }
    ++i;
    swap(&A[i], &A[r]);
    return i;
}
void qsort(int* A, int p, int r)
{
    int q = -1;
    if(p < r)
    {
        q = partition(A, p, r);
        qsort(A, p, q - 1);
        qsort(A, q + 1, r);
    }
}
int main(int argc, char** argv)
{
    int i = 0;
    int a[10] = {9, 8, 7, 6, 5, 4, 3, 2, 1, 0};
    qsort(a, 0, 9);
    for(; i < 10; i++)
        printf("%d\n", a[i]);
    return 0;
}

```