int binary\_search(int i,int j,int\* arr,int num)

{

while(i<=j)

{

int mid = (i+j)/2;

if(arr[mid]== num)

{

return mid;

}

else if(arr[mid]<num)

{

i= mid+1;

}

else

{

j= mid-1;

}

}

return -1;

}

int upper\_bound(int l,int h,int\* arr, int num)

{

while(l<h)

{

int mid = (l+h)/2;

if(arr[mid]<=num)

{

l=mid +1;

}

else

{

h = mid;

}

}

return l;

}

int cmp(void\* a, void\*b)

{

return (\*((int\*)a)- \*((int\*)b));

}

int countPairs(int numbers\_count, int\* numbers, int k) {

int i=0,count=0;

qsort(numbers,numbers\_count,sizeof(int),cmp);

while(i<numbers\_count)

{

int j = binary\_search(i,numbers\_count-1,numbers,numbers[i]+k);

if (j!= -1)

{

count++;

}

i = upper\_bound(0,numbers\_count,numbers, numbers[i]);

}

return count;

}