**package** searchingalgorithms;

**public** **class** ExponentialSearchMain {

**public** **static** **void** main(String[] args) {

**int** arr[] = { 7, 17, 21, 23, 30, 44, 50, 77 };

**int** key = 21;

**int** indexOfKey = *expSearch*(arr, arr.length-1, key);

**if** (indexOfKey != -1)

System.***out***.println(key + " was found in index position " + indexOfKey);

**else**

System.***out***.println(key + " was not found");

}

**private** **static** **int** expSearch(**int**[] arr, **int** end, **int** key) {

// Is the key found in the first index (0)

**if** (arr[0] == key) {

**return** 0;

}

**int** i=1;

**while**( i< end && arr[i] <= key)

i = i \* 2;

// we are here means we have found the range for the key

// to be in.

// Apply binarysearch now

**return** BinarySearchMain.*binarySearch*(arr, i/2, Math.*min*(i,end), key);

}

}

