The program generates 100 number then it makes those number into a heap from the first generator number to the last generator number. We then add those random number and then divide the total number by how many numbers we generate them to get the mean. Then to find the maximum random number we use the push\_back function and then fix the heap back in order using push\_heap function and print it using the front function. Then we delete the maximum number using pop\_back function and pop\_heap function as well. Once we delete it we search for the maximum random number then we sort them in order and then print it just to make sure they are in order.