**Bubble Sort:**

// Bubble sort in C++

void bubbleSort(int array[], int size) {

for (int step = 0; step < size; ++step) {

for (int i = 0; i < size - step; ++i) {

if (array[i] > array[i + 1]) {

int temp = array[i];

array[i] = array[i + 1];

array[i + 1] = temp;

}

}

}

}

**Time Compexity:**

n+1+n(n+1+4n)=5n^2+2n+1

big(O)=n^2

**Insertion Sort:**

void insertionSort(int array[], int size)

{

for (int step = 1; step < size; step++)

{

int key = array[step];

int j = step - 1;

while (key < array[j] && j >= 0)

{

array[j + 1] = array[j];

--j;

}

array[j + 1] = key;

}

}

**Time Complexity**

n+1+n(n+1+n+n)+n=3n^2n+1

big(O)=n^2

**Selection Sort:**

void selectionSort(int array[], int size) {

for (int step = 0; step < size - 1; step++) {

int min\_idx = step;

for (int i = step + 1; i < size; i++) {

if (array[i] < array[min\_idx])

min\_idx = i;

}

positionswap(&array[min\_idx], &array[step]);

}

}

**Time Complexity:**

n+1+n(n+1+n+n)+n=3n^2 +2n+1

big(O)=n^2;