*Assignment*

***Question***

*Selection, Bubble and Insertion sorts.*

***Code***

#include <stdio.h>

void swap(int \*x, int \*y){

int t = \*x;

\*x = \*y;

\*y = t;

}

void selection(int arr[], int n){

int i, j, min;

for (i = 0; i < n-1; i++)

{

min = i;

for (j = i+1; j < n; j++)

if (arr[j] < arr[min])

min = j;

swap(&arr[min], &arr[i]);

}

}

void insertion(int arr[], int n){

int i, j, k;

for (i = 1; i < n; i++) {

k = arr[i];

j = i - 1;

while (j >= 0 && arr[j] > k) {

arr[j + 1] = arr[j];

j = j - 1;

}

arr[j + 1] = k;

}

}

void bubble(int arr[], int n){

int i, j;

for (i = 0; i < n-1; i++)

for (j = 0; j < n-i-1; j++)

if (arr[j] > arr[j+1])

swap(&arr[j], &arr[j+1]);

}

void print(int arr[], int size)

{

printf("Sorted array: \n");

int i;

for (i=0; i < size; i++)

printf("%d ", arr[i]);

printf("\n");

}

int main()

{

int arr[] = {25, 64, 22, 11, 12};

int n = sizeof(arr)/sizeof(arr[0]);

selection(arr, n);

print(arr, n);

bubble(arr, n);

print(arr, n);

insertion(arr, n);

print(arr, n);

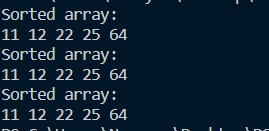
return 0;

}

***Input***

***arr[] = {25, 64, 22, 11, 12};***

***Output***

**