

Name:-Suryakant Upadhyay

- Bubble Sort.

Code: -

```
#include <stdio.h>

int main() {
    int arr[] = {10,9,8,7,6,5,4,3,2,1,0};
    int temp;
    int n = sizeof(arr) / sizeof(0);

    for(int i=0;i<n;i++){
        for(int j=0;j<n-1-i;j++){
            if(arr[j]>arr[j+1]){
                temp = arr[j];
                arr[j] = arr[j+1];
                arr[j+1] = temp;
            }
        }
    }

    for(int i=0;i<n;i++){
        printf("%d",arr[i]);
        printf("\t");
    }

    return 0;
}
```

Output: -

0 1 2 3 4 5 6 7 8 9 10

- Selection Sort.

Code: -

```
#include <stdio.h>
```

```
int main() {
```

```
    int arr[] = {10,9,8,7,6,5,4,3,2,1,0};
```

```
    int temp;
```

```
    int small;
```

```
    int n = sizeof(arr)/sizeof(0);
```

```
    for(int i=0;i<n;i++){
```

```
        small = i;
```

```
        for(int j=i;j<n;j++){
```

```
            if(arr[small]>arr[j]){
```

```
                small = j;
```

```
            }
```

```
        }
```

```
        temp =arr[small];
```

```
        arr[small] = arr[i];
```

```
        arr[i] = temp;
```

```
    }
```

```
    for(int i=0;i<n;i++){
```

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

```
        printf("\t");
```

```
    }
```

```
    return 0;
```

```
}
```

Output: -

```
0    1    2    3    4    5    6    7    8    9    10
```

- Insertion Sort.

Code: -

```
#include <stdio.h>
```

```
int main() {
```

```
    int arr[] = {10,9,8,7,6,5,4,3,2,1,0};
```

```
    int temp;
```

```
    int j;
```

```
    int n = sizeof(arr)/sizeof(0);
```

```
    for(int i=0;i<n;i++){
```

```
        temp = arr[i];
```

```
        j = i;
```

```
        while(j>0 && arr[j-1]>temp){
```

```
            arr[j] = arr[j-1];
```

```
            j = j-1;
```

```
        }
```

```
        arr[j] = temp;
```

```
    }
```

```
    for(int i=0;i<n;i++){
```

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

```
        printf("\t");  
    }  
    return 0;  
}
```

Output: -

0 1 2 3 4 5 6 7 8 9 10