

Selection Sort

Lecture 13

Section 2.8

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- 1 The Selection Sort
 - The `main` Function
 - The `sort` Function
 - The `array_min()` Function
 - The `swap()` Function

- 2 Assignment

1 The Selection Sort

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The main() Function

The main() Function

```
const int MAX_SIZE = 100;
int main()
{
    int arr[MAX_SIZE];
    cout << "Enter the size of the array: ";
    int size;
    cin >> size;

    cout << "Enter " << size << " integers:" << endl;
    for (int* p = arr; p < arr + size; p++)
        cin >> *p;

    sort(arr, size);

    for (int* p = arr; p < arr + size; p++)
        cout << *p << endl;

    return 0;
}
```

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2 Assignment

The `sort()` Function

The `sort()` Function

```
void sort(int* arr, int size)
{
    for (int* p = arr; p < arr + size - 1; p++)
    {
        int* q = array_min(p, arr + size);
        swap(p, q);
    }
    return;
}
```

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The `array_min()` Function

The `array_min()` Function

```
int* array_min(int* start, int* stop)
{
    int* min_p = start;
    for (int* p = start + 1; p < stop; p++)
        if (*p < *min_p)
            min_p = p;
    return min_p;
}
```

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The swap () Function

The swap () Function

```
void swap(int* a, int* b)
{
    int temp = *a;
    *a = *b;
    *b = temp;
    return;
}
```

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- Read Section 2.8.