

# Priority Queue

# Priority Queue Example

```
#include <queue>                                // Header file for std::priority_queue

priority_queue<int> q;                            // Create a queue instance
q.push(4);                                       // Add some elements to it
q.push(3);
q.push(5);
q.push(1);

cout << "The queue contains " << q.size() << " elements\n";
cout << "The highest priority element is " << q.top() << endl;
```

## Priority Queue Example (contd)

// Insert a new element in the queue

```
cout << "Adding element with value 2\n";
```

```
q.push(2);
```

```
cout << "The queue contains " << q.size() << " elements\n";
```

```
cout << "The highest priority element is now " << q.top() << endl;
```

// Remove the first element

```
cout << "Removing first element\n";
```

```
q.pop();
```

```
cout << "The queue contains " << q.size() << " elements\n";
```

```
cout << "The highest priority element is now " << q.top() << endl;
```