

# Queues

## Queue example

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

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 first element is " << q.front() << endl;
cout << "The last element is " << q.back() << endl;
```

## Queue example (contd)

```
// Insert a new element at the end of the queue
```

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

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

```
cout << "The first element is now " << q.front() << endl;
```

```
cout << "The last element is now " << q.back() << endl;
```

```
// Remove the first element
```

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

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

```
cout << "The first element is now " << q.front() << endl;
```

```
cout << "The last element is now " << q.back() << endl;
```