

Code:

```
#include <iostream>
```

```
using namespace std;
```

```
const int maxSize= 5;
```

```
int queue[maxSize];
```

```
int front = -1;
```

```
int rear = -1;
```

```
bool isEmpty() {
```

```
    return (front == -1 && rear == -1);
```

```
}
```

```
bool isFull() {
```

```
    return (rear == maxSize - 1);
```

```
}
```

```
void enqueue(int x) {
```

```
    if (isFull()) {
```

```
        cout << "Error: Queue full! Enqueue not possible." << endl;
```

```
    } else {
```

```
        if (isEmpty()) {
```

```
            front = rear = 0;
```

```
        } else {
```

```
        rear++;  
    }  
    queue[rear] = x;  
    cout << "Enqueued: " << x << endl;  
}  
}
```

```
void dequeue() {  
    if (isEmpty()) {  
        cout << "Error: Queue is empty! Dequeue not possible." << endl;  
    } else {  
        if (front == rear) {  
            front = rear = -1;  
        } else {  
            front++;  
        }  
    }  
}
```

```
int frontElement() {  
  
    return queue[front];  
}
```

```
void showQueue() {
```

```
if (isEmpty()) {  
    cout << "Error: Cannot show queue because it is empty." << endl;  
} else {  
    cout << "Queue elements: ";  
    for (int i = front; i <= rear; i++) {  
        cout << queue[i] << " ";  
    }  
    cout << endl;  
}  
}
```

```
int main() {  
    enqueue(5);  
    enqueue(6);  
    enqueue(8);  
    enqueue(10);  
  
    showQueue();  
  
    dequeue();  
    showQueue();  
  
    dequeue();  
    showQueue();  
}
```

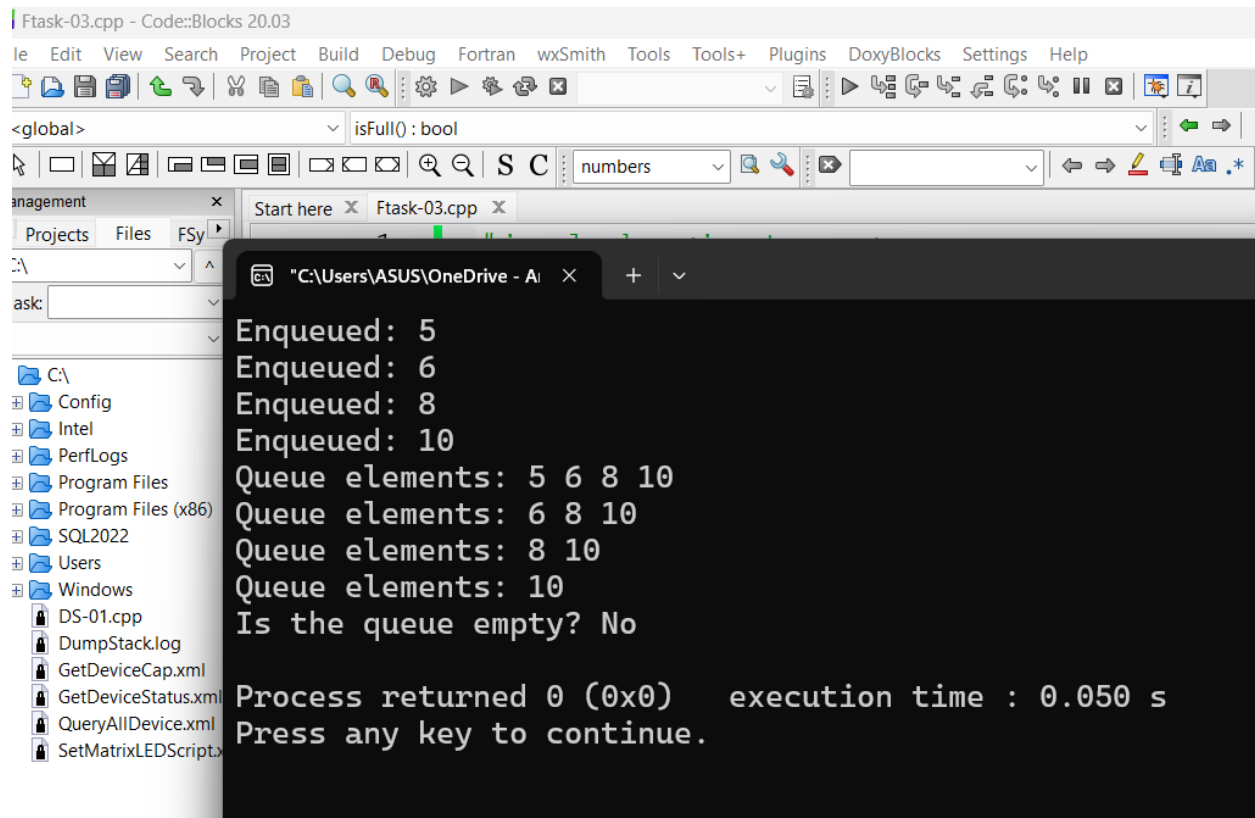
```
dequeue();
```

```
showQueue();
```

```
cout << "Is the queue empty? " << (isEmpty() ? "Yes" : "No") <<  
endl;
```

```
return 0;
```

```
}
```



The screenshot shows the Code::Blocks IDE with the file Ftask-03.cpp open. The console window displays the following output:

```
Enqueued: 5  
Enqueued: 6  
Enqueued: 8  
Enqueued: 10  
Queue elements: 5 6 8 10  
Queue elements: 6 8 10  
Queue elements: 8 10  
Queue elements: 10  
Is the queue empty? No  
Process returned 0 (0x0)   execution time : 0.050 s  
Press any key to continue.
```