



# Order Processing System

DSA

# Source Code

- Github link;
  - <https://github.com/AkosibatmanN/DSA-SEMIS-ORDER-PROCESSING-SYSTEM-.git>

# Order Processing System

- This app is made to help organize and manage orders using a queue and stack. New orders go into the queue, and completed orders are moved to the stack for record-keeping.

# Why we Chose This Theme

- **Easy Order Management:** Using a queue means orders are handled in the order they come in, which is fair and simple.
- **Track Completed Orders:** The stack lets us see the latest completed orders, so it's easy to review recent work.
- **Practical Learning:** This project shows how queues and stacks work in real-life applications, which is helpful for learning and practice.

# Overview and Features

- **Overview:** This Order Processing System app lets us handle orders as they come in and mark them as complete when done. It uses a queue to manage new orders and a stack to keep track of completed ones.
- **Features:**
  1. **Add New Order (Enqueue):** Adds a new order to the queue list with a unique number. Each new order goes to the end of the queue.
  2. **Complete Order (Mark as Complete):** Moves the first order in the queue to the stack and marks it as complete.
  3. **Preview Next Order (Peek Queue):** Lets us see the first order in line without moving it.
  4. **Preview Last Completed Order (Peek Stack):** Shows the most recent completed order.
  5. **Remove Order (Dequeue):** Deletes the first order in the queue without marking it as complete.
  6. **Undo Last Completion (Pop):** Removes the most recent order from the stack, like an "undo" for completed orders.

# Overview and Features

- **UI Elements:**
  - **Buttons:** There are buttons for each action, Add Order, Mark as Complete, Peek Queue, Peek Stack, Remove Order, and Undo Completion.
  - **Queue List:** Shows all current orders waiting to be completed.
  - **Stack List:** Shows all completed orders in reverse order (last completed on top).

# Three Test Cases

- **Test Case 1:**
  - **Add New Order**
    - **Goal:** Add an order and check if it appears in the queue.
    - **Steps:**
      - Click the "Add Order" button.
      - See if a new order shows up at the end of the queue list.
    - **Expected Result:** The new order should appear as “Order X” with the next available number.

# Three Test Cases

- **Test Case 2:**
- **Mark Order as Complete**
  - **Goal:** Move the first order from the queue to the completed list.
  - **Steps:**
    - Make sure there's at least one order in the queue.
    - Click "Mark as Complete."
    - Check if the order moved from the queue to the completed list.
  - **Expected Result:** The order should disappear from the queue and appear in the completed list as "Order X marked as complete."



# Three Test Cases

## 1. Test Case 3:

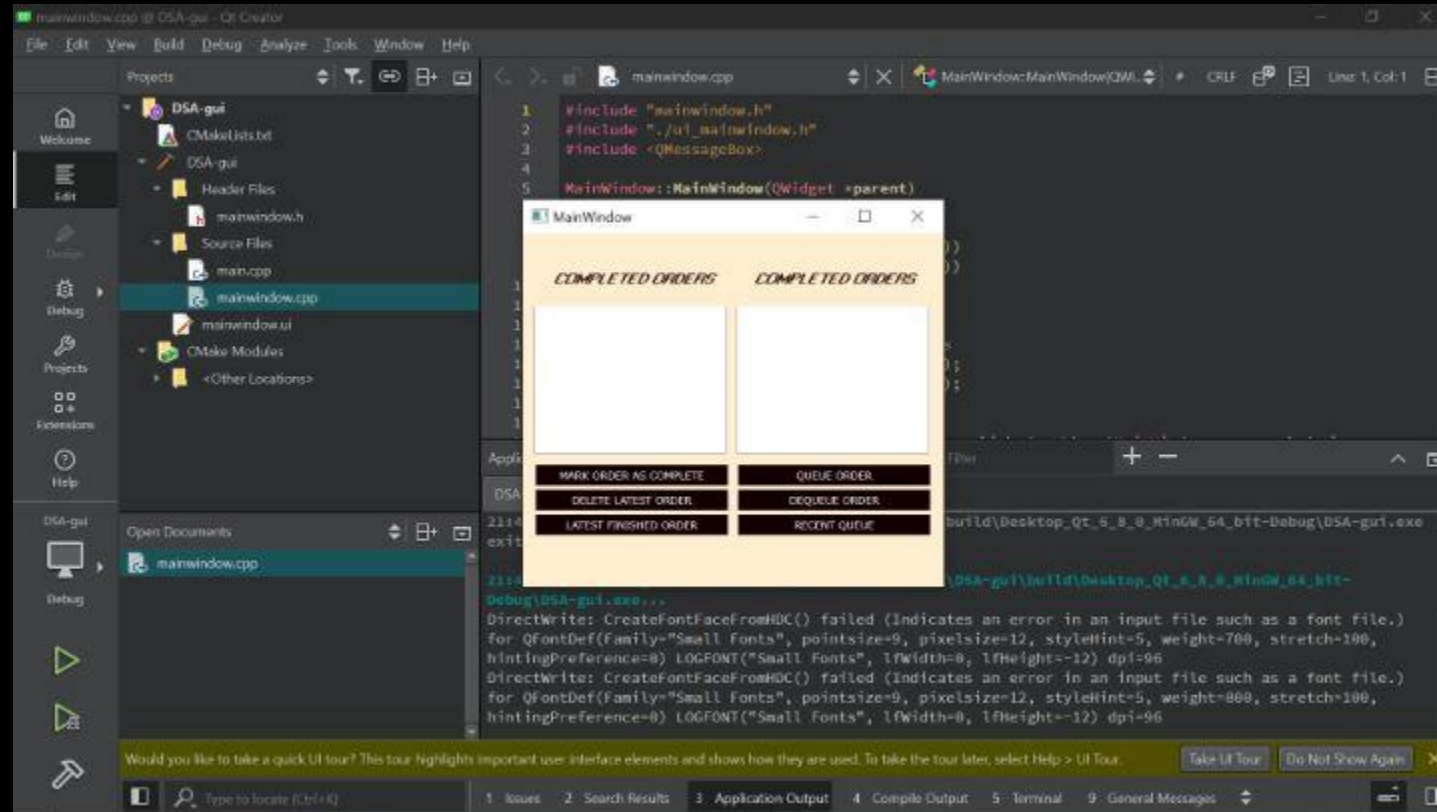
### 2. Preview Orders (Peek)

1. **Goal:** View the first order in the queue and the last one in the stack without changing anything.
2. **Steps:**
  1. Click "Peek Queue" to see the next order in line.
  2. Click "Peek Stack" to see the last completed order.
3. **Expected Result:** A message should show the next order in the queue, and the most recent completed order in the stack.

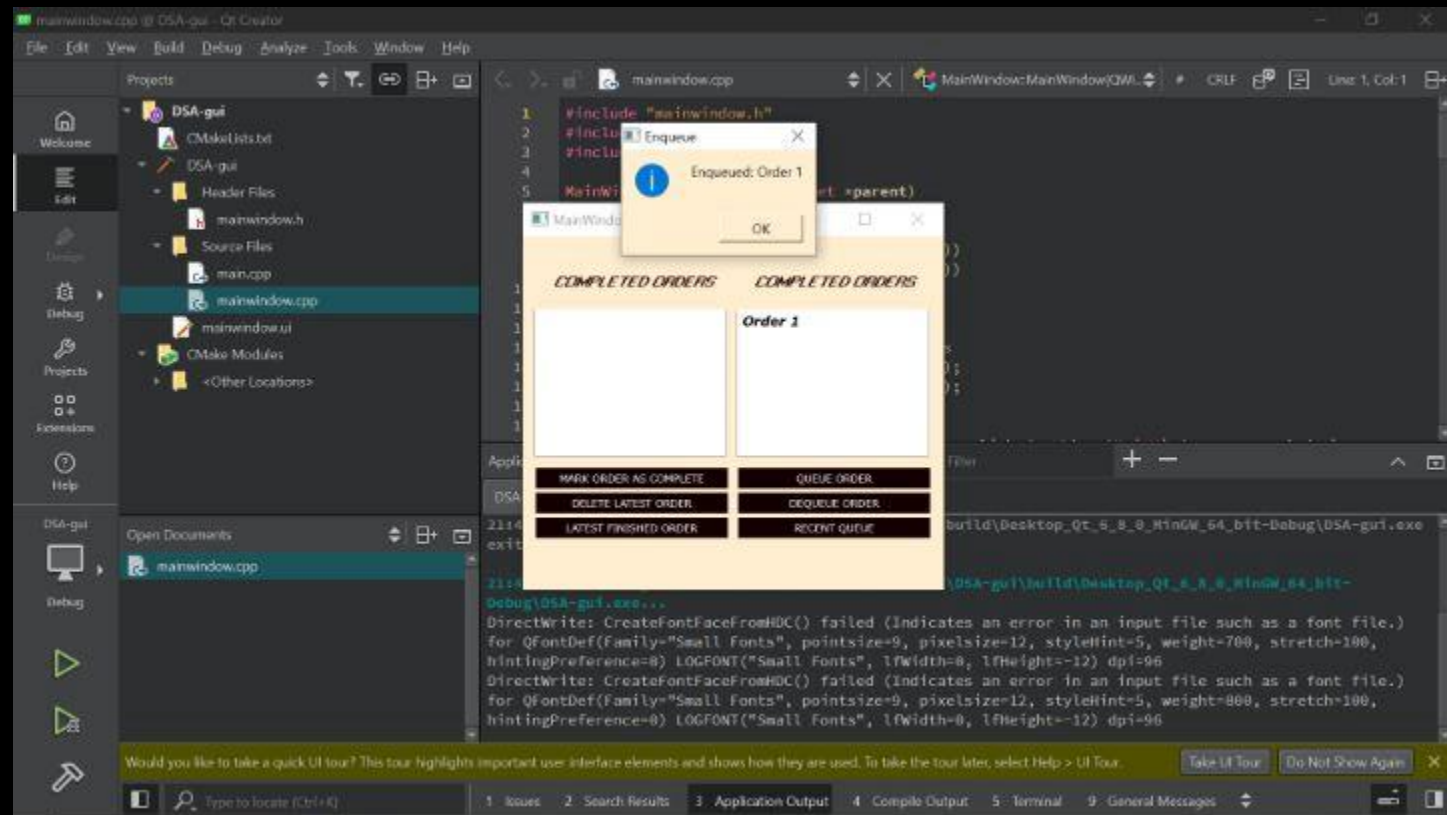
# Challenges Faced during development

1. Downloading Process, It took me so long to download qt application.
2. Reading and reviewing codes from the internet.
3. Designing in qt because it is the first time We use it.
4. Debugging some errors.

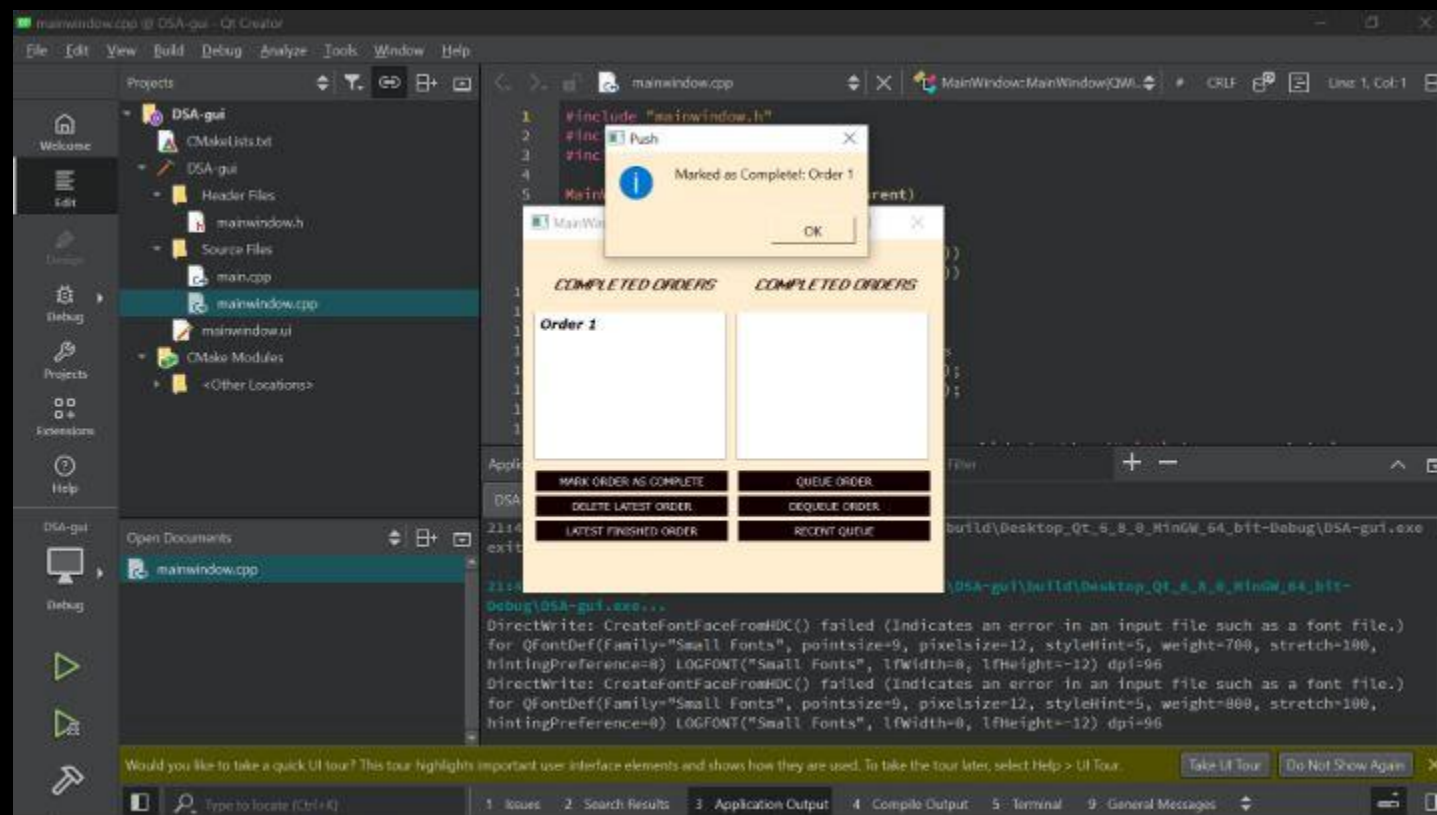
# Screenshot of the application



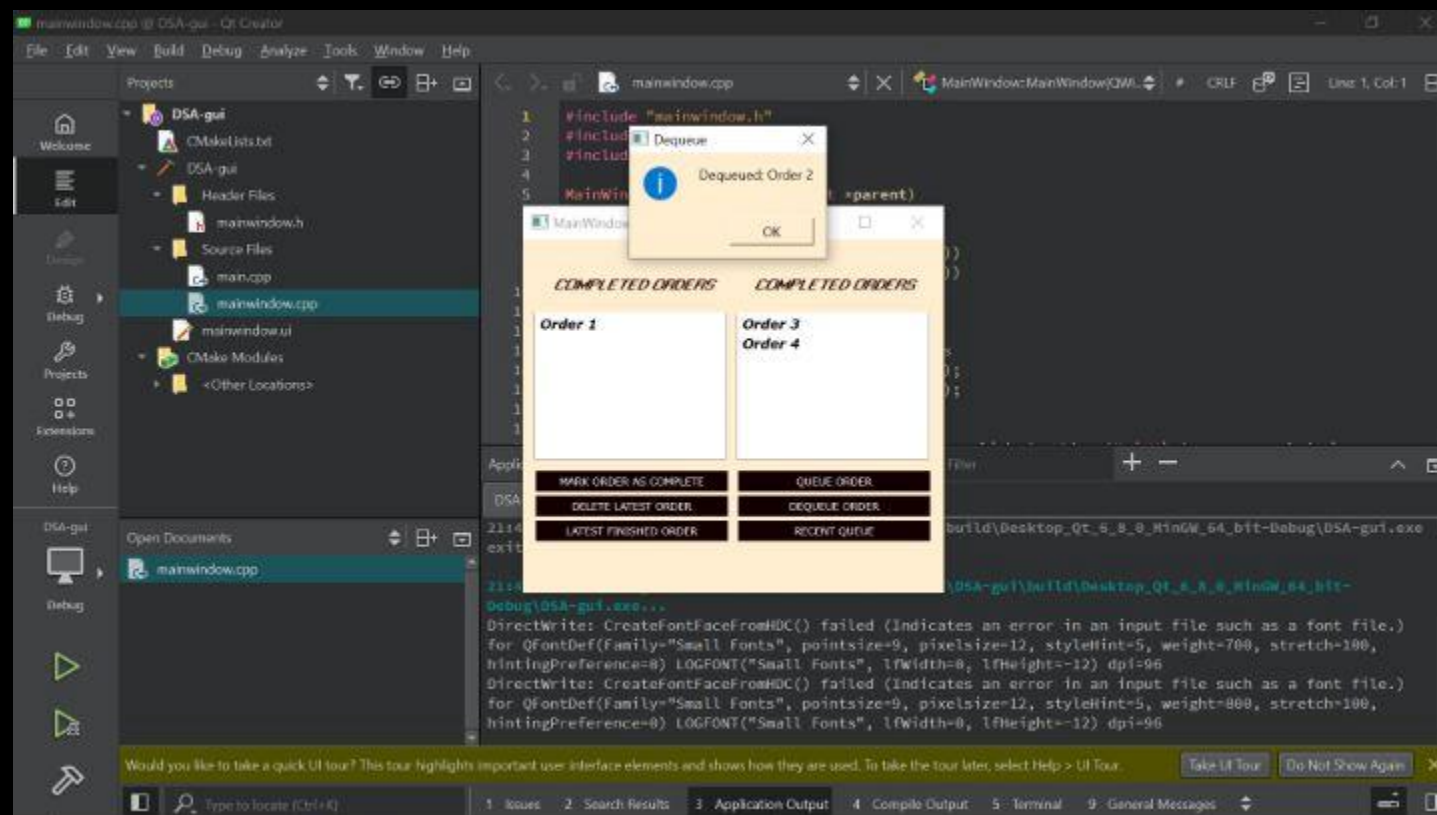
## Screenshot of the application



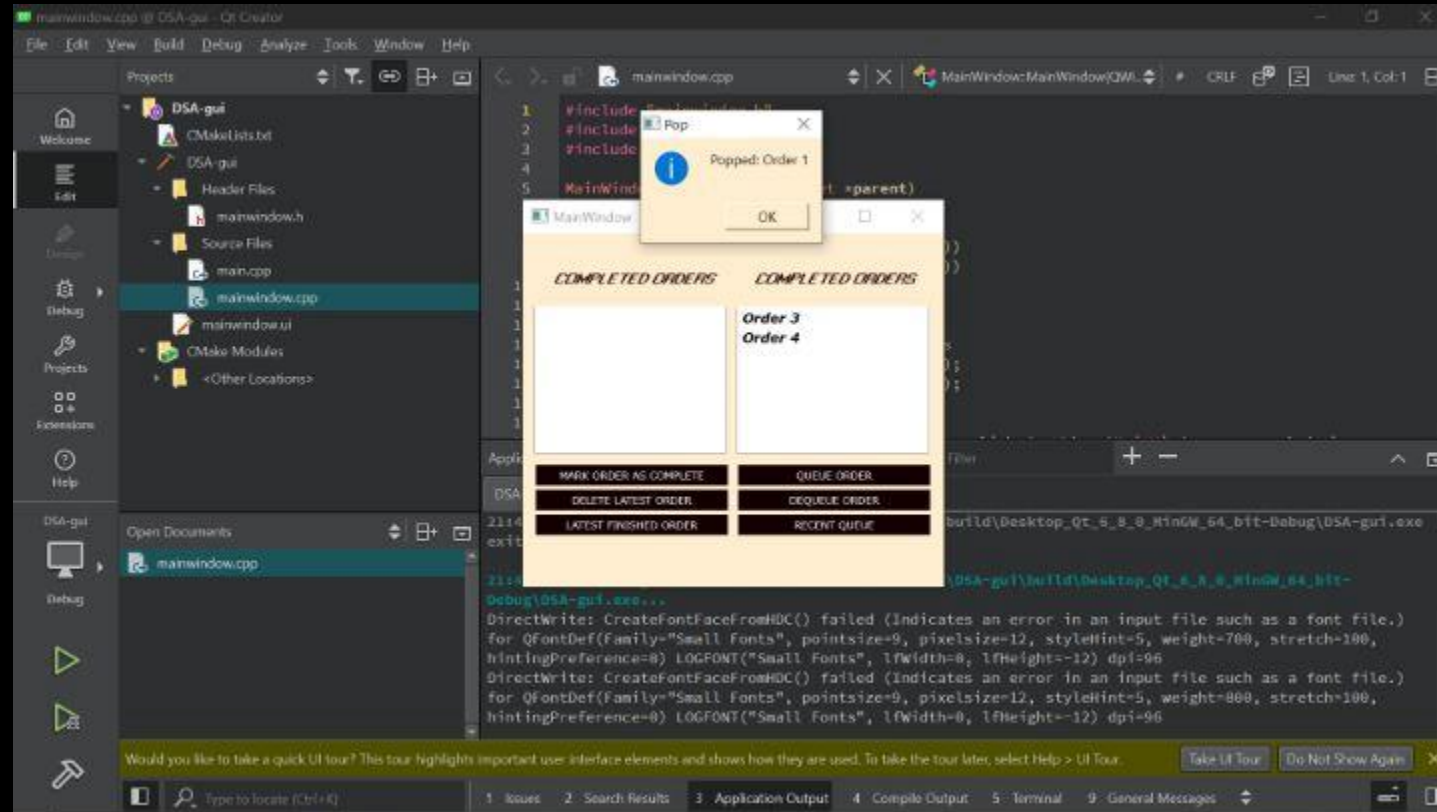
## Screenshot of the application



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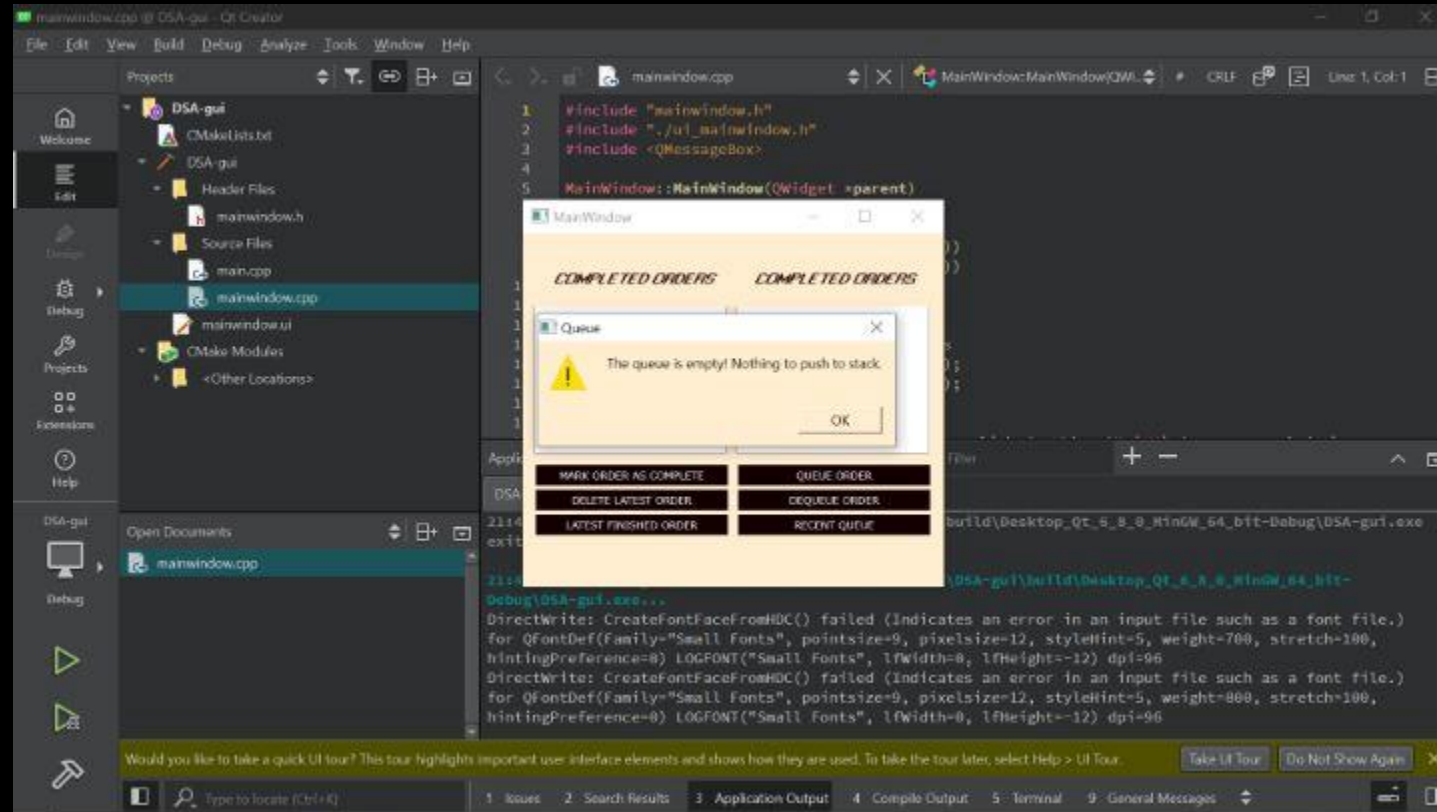


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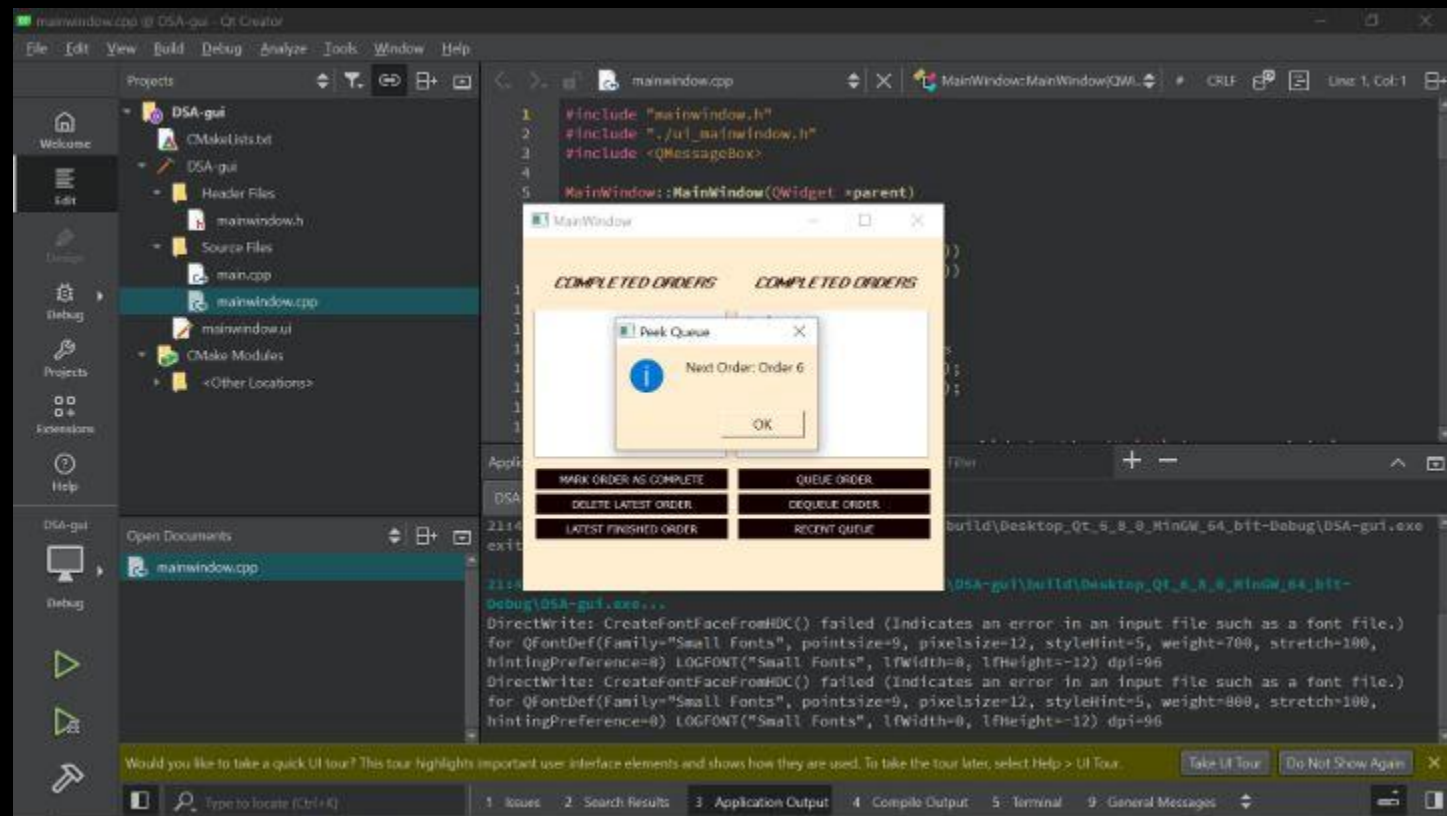


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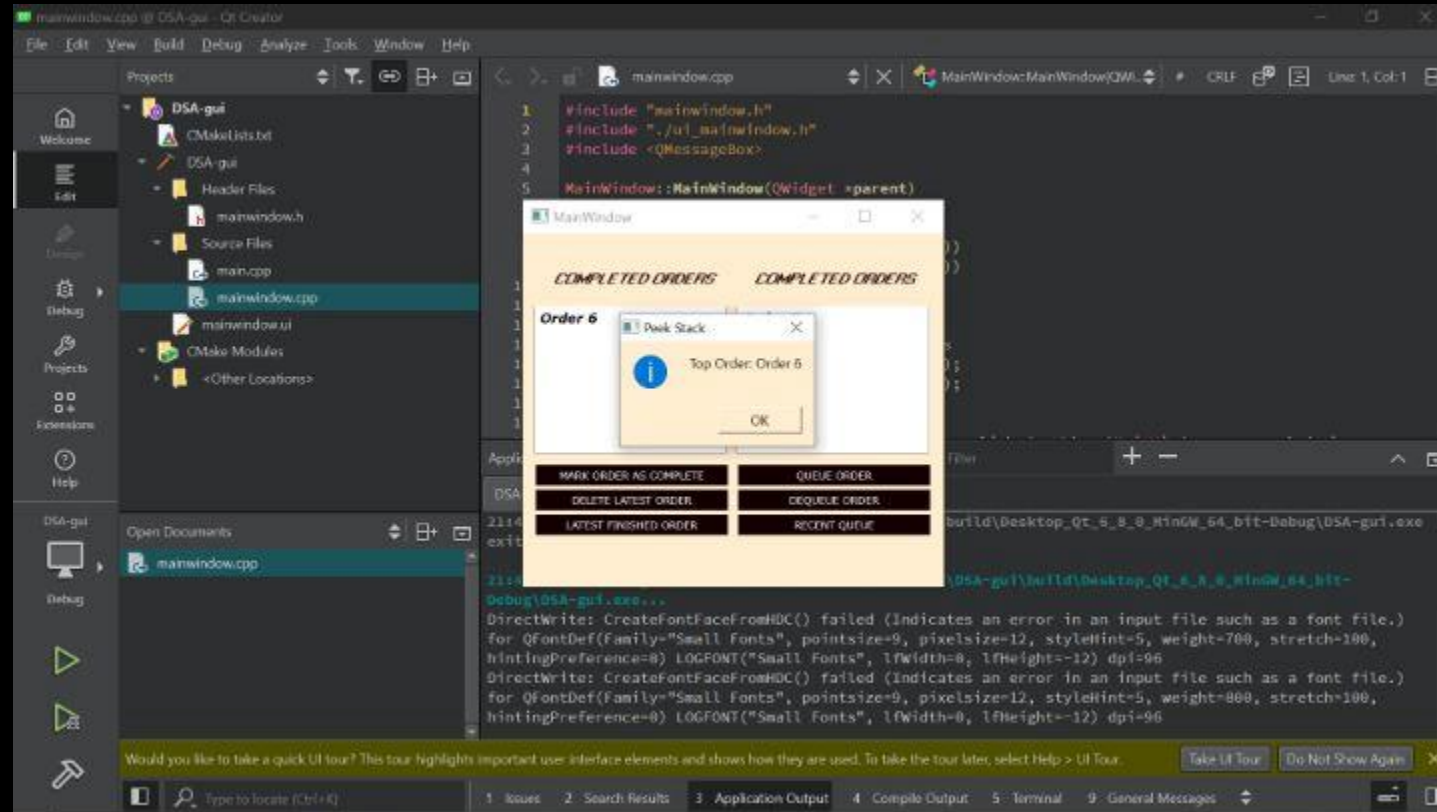




## Screenshot of the application



# Screenshot of the application



# Roles of each member and their Contributions

1. Marc Gabriel P. Galleno – Leader (Designer, Developer, Tester)
2. Niel Deo G. Villaverde – Member (Designer)
3. Geilonn S. Romulo – Member (Tester, Designer)
4. Roentgen Compra – Member (Developer)