

Programming 2 Project Report

Team Name

El Team

Team Leader

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Project Topic

Image Manipulator and Paint

TA

Islam Yousry

Team Information

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Software Requirements Specifications

This is software that allows Image Manipulation and drawing objects.

User can:

- Create new image
- Load an Image in the program
- Draw Objects on it
 - Triangle
 - Rectangle
 - Square
 - Ellipse
 - Line
- Save on the image with the new modifications
- Save to a new image file
- Undo/Redo changes done
- Increase Red/Green/Blue Components in image
- Increase Brightness Components in image
- Increase Contrast Components in image
- Rotate Image 90 Clockwise/Anticlockwise
- Invert colors
- Convert colors to grayscale
- Apply negative effect
- Apply Blur

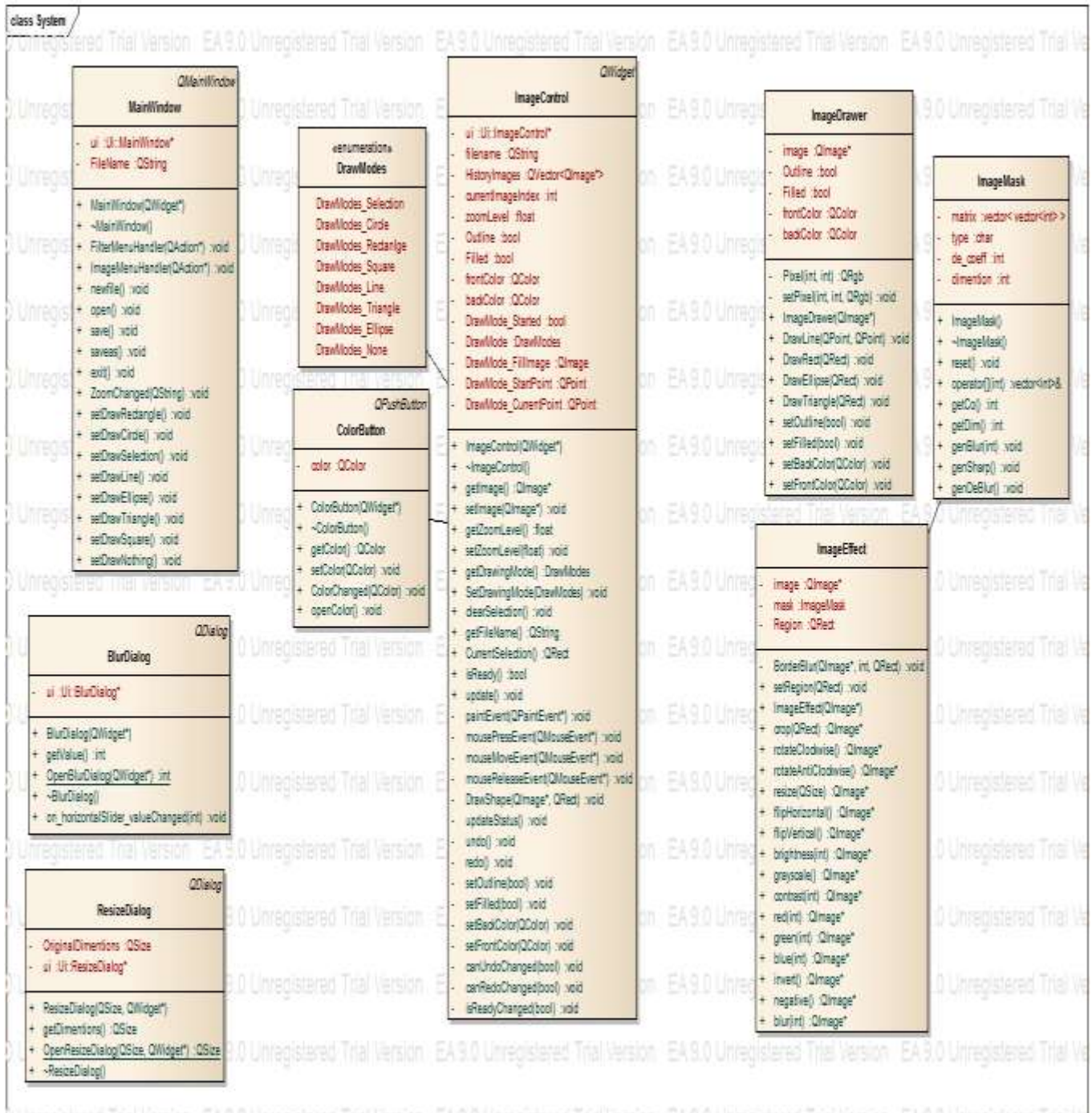
Operating System supported:

- Windows XP/Vista/7
- Linux Distributions
- Mac

Operating System tested:

- Windows 7/8
- Ubuntu

Design Diagram



Concepts Used

[A description of what OOP or other concepts in this course you used in your project.]

1. Software modeling using UML class diagrams: drawing classes, defining methods and attributes and association relations.
2. Cloud Computing: using Dropbox to share the source code across all the team members
3. Object-oriented concepts like:
 - Classes, methods, data members, setters and getters to access private members, virtual and friend functions and access modifiers (public, private and protected).
 - Inheritance, polymorphism, dynamic binding and operator overloading
 - Appropriate class header/source separation
4. GUI: designing a full GUI interface

Bonus Implementation

GUI

Designed a main window interface and owner drawn control

Files

Loading and saving images

Cross Platform

Developing on Qt to provide cross-platform software, compiled and run over Linux (Ubuntu).

Experience

1. GUI Development Using Qt
2. Cross-Platform Development Using Qt
3. Image Processing Knowledge
4. Software System Design Using UML
5. Project Management
6. Team Work