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## Assignment:

Design, code, and test a WPF application that allows the user to perform the following tasks:

1. Select and load an image.
2. Draw one rectangle or more over the image by clicking and dragging the mouse to draw (the size of the rectangle depends on how much the user drags the mouse)
3. Only allow drawing inside the picture.
4. Change the rectangle's color by clicking each rectangle and selecting a different color from a color palette.
5. Resize the rectangle(s) and be able to drag-drop any of them.
6. Delete any rectangle.
7. Save the changes to a new image.

**Important note:** Do **NOT** use a library for the above functionality.

## Minimum Requirements:

1. Select and load an image.
2. Draw one rectangle or more over the image by clicking and dragging the mouse to draw (the size of the rectangle depends on how much the user drags the mouse)

3. Resize the rectangle(s) and be able to drag-drop any of them.

## Additional Point

The user can open the image using your application and update the shapes that were drawn in a previous session.

## Considerations:

Pay attention to the following:

1. Structure and Cleanness of code.
2. Code Comments.
3. Memory usage and performance.
4. Error exception and handling.
5. Neat design.
6. Any interesting scenarios and extra options the user might need.

## Deliverables:

Please put the code and the executable version of the code on GitHub as a **private repo** and share it with [shorouk@caseguard.com](mailto:shorouk@caseguard.com) or send the code along with the executable version of the code to [shorouk@CaseGuard.com](mailto:shorouk@CaseGuard.com).

Quality is more important than quantity to us. So if you cannot finish all the requirements, please send the minimum requirements. We will do the evaluation based on that.

## Due Date:

The code with the execution version should be received **before the end of the day Friday, November 11th, 2022, at 11:59 PM.**

## References:

Please reference all resources (if any) that were used to create the application.