




# Picture Puzzle Game

## Documentation

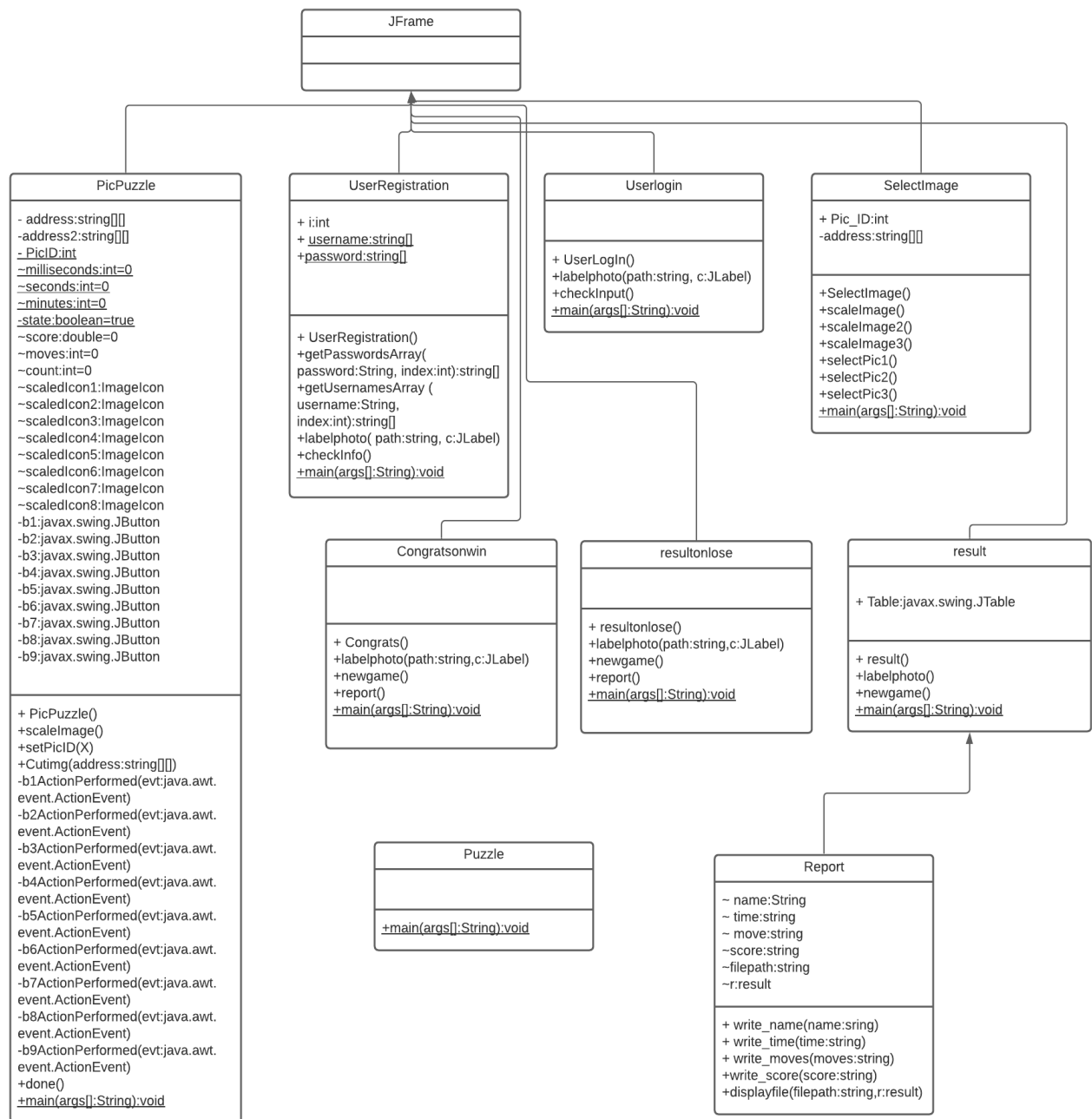
Name	ID
Nour Hossam Qotb Abdelfatah	20201896
Yara Maged Mohammad Mahmoud Eltablawy	20201900
Haidy Mohammad Hassan Mohammad	20201899
Mohammad Ahmed Mahmoud Abdelsatar	20201865
Youssef Kamel Shebl Ali	20201904



## Idea of project:

Picture puzzle which displays a picture cut in a random way and the player has to solve it in a limited time.

## Class Diagram:



***Main requirement function:***

- **Registration:** It allows the user to enter data to be able to login to start the puzzle and it checks the correctness of his information so if anything is wrong it shows him an alerting message.
- **Login:** takes data from user that he registered with and verifies it then he could start the puzzle.
- **Select Image:** Then shows the GUI to select one of three images. Once you chose it will redirect you to the puzzle.
- **Cut, shuffle and swap Image:** Image is cut then it is shuffled randomly then user will be able to swap between images and his moves will be recorded.
- **Check solution:** After the user plays the puzzle he clicks the button “Done” then it checks if it is correct or not by comparing it to the original pattern of buttons, If it’s right a congratulations GUI is shown and if it’s wrong or time’s up Hard luck GUI is shown either way the user will be asked if he wants to play again or see the report in. If he wants to play again he will be redirected to select Image GUI.
- **Report:** if he wants to see the report a table with his name, number of moves, time taken and score will be shown but only if he won he will be added.
- **Score:** Calculate score by an equation fulfilled using the moves.
- **Moves:** It counts the number of moves every time a swap is done.
- **New Game Feature:** player is able to play again whether they win or lose.
- **Timer:** It calculates time taken by user to solve the game and it is limited so if the user took longer than it is intended hard luck GUI will be displayed to inform him that he lost.

***Task of each member:***

Youssef Kamel Shebl : Login, Registration

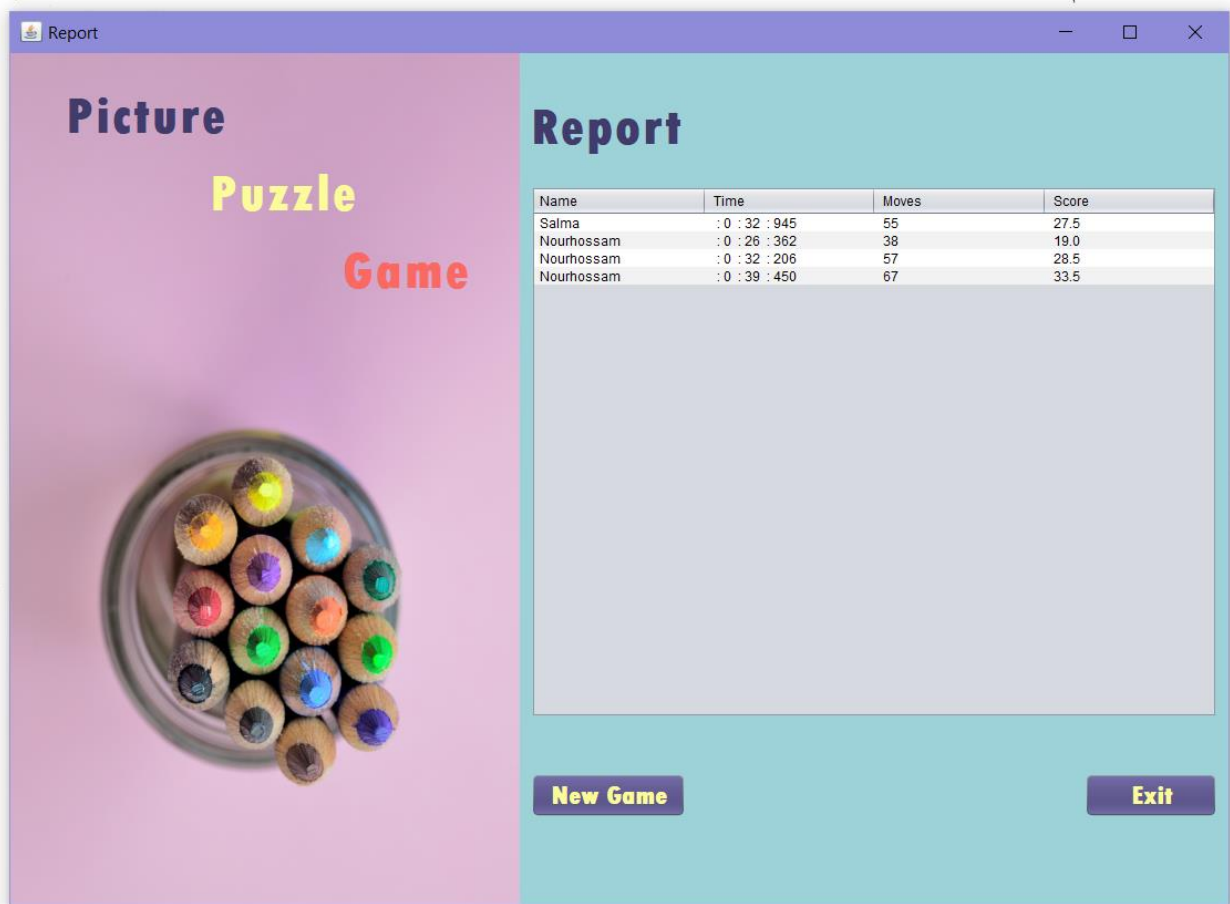
Mohamed Ahmed Mahmoud Abdelsatar : Puzzle core, Swapping

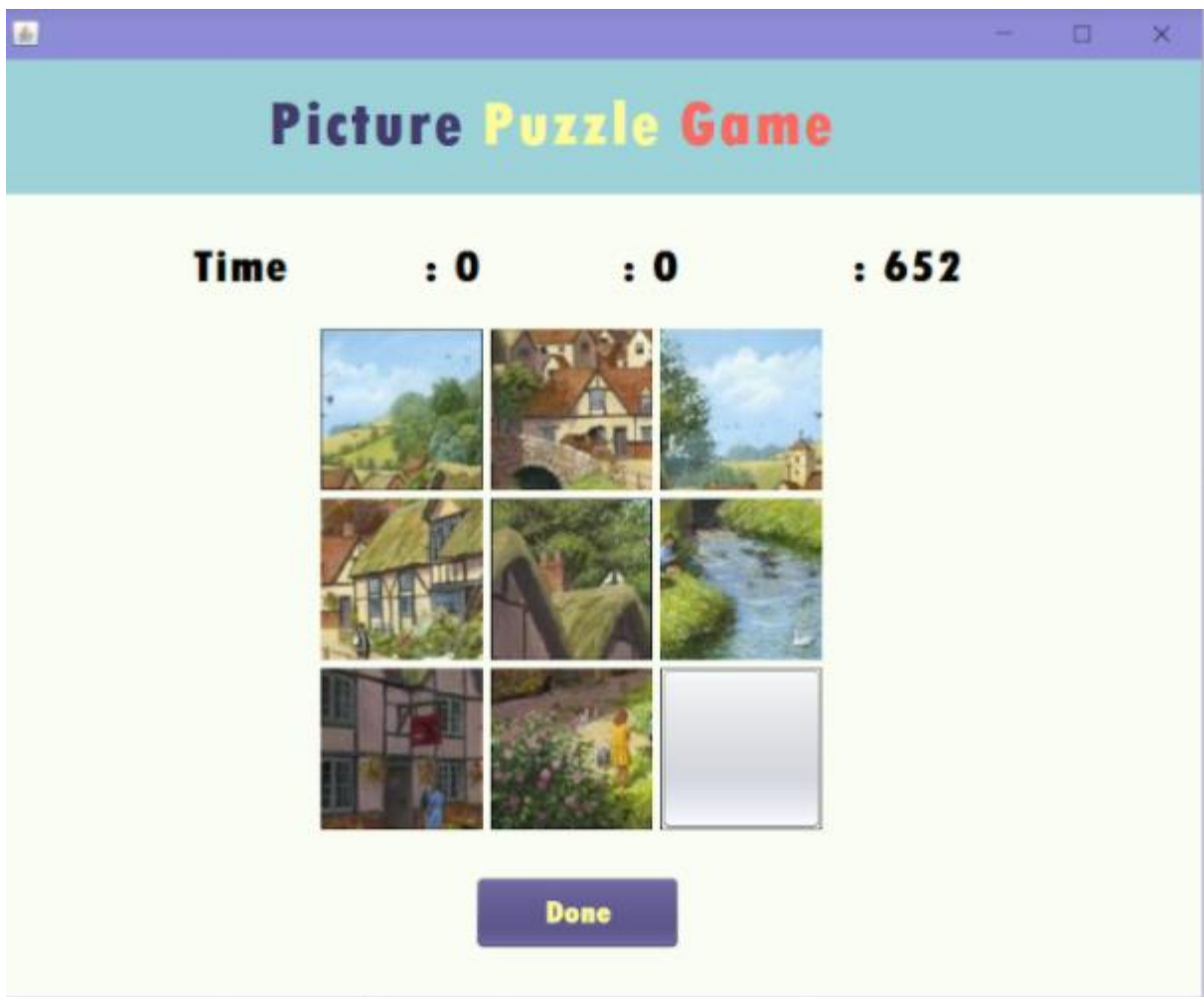
Yara Maged Mohammad : Select image, cut, check solution

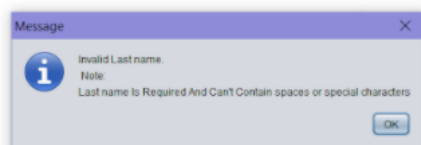
Haidy Mohamed Hassan: Timer (Limited), Moves, Score

Nour Hossam Qotb : Report, Congratulations & Hard Luck GUI, Linking.

## Test Cases:





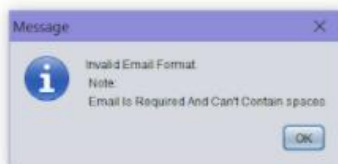


A screenshot of a 'Registration' form with a dark blue header and a light gray body. The form includes the following fields and a button:

- Username**: Input field containing 'Nourhossam'
- First name**: Input field containing 'Nour'
- Last name**: Input field containing 'hossam33'
- Email**: Input field containing 'noor@gmail.com'
- Password**: Input field with masked characters '\*\*\*\*\*'
- Submit** button

The form is decorated with several colorful butterfly icons.

Activate



### Registration

**Username**

**First name**

**Last name**

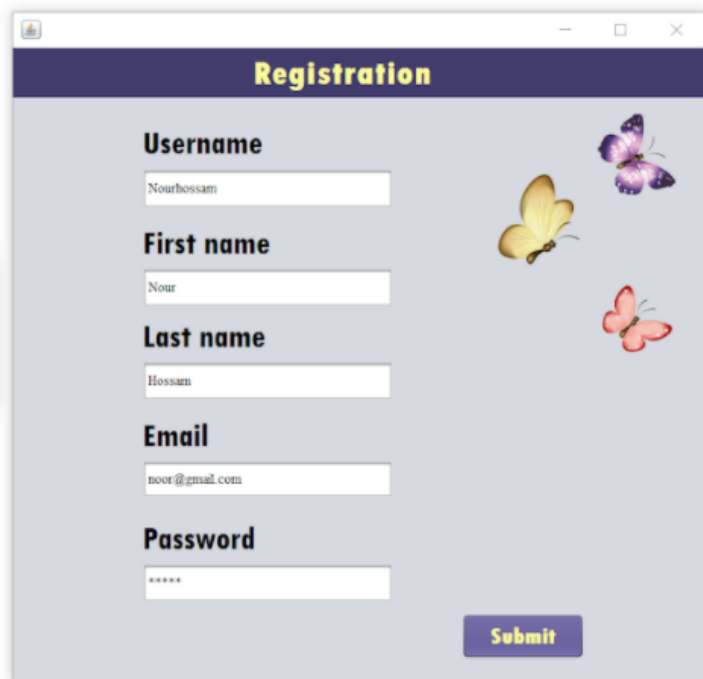
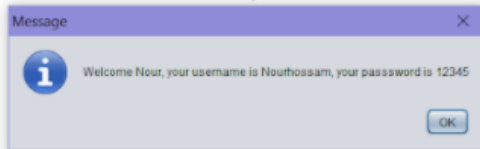
**Email**

**Password**

**Submit**







A registration form window with a purple title bar labeled "Registration". It contains several input fields and a submit button. The fields are labeled "Username", "First name", "Last name", "Email", and "Password". The "Username" field contains "Nourhossam", "First name" contains "Nour", "Last name" contains "Hossam", and "Email" contains "nour@gmail.com". The "Password" field is masked with "\*\*\*\*\*". There are three butterfly icons (yellow, purple, and pink) on the right side of the form. A "Submit" button is at the bottom right.

**Registration**

**Username**  
Nourhossam

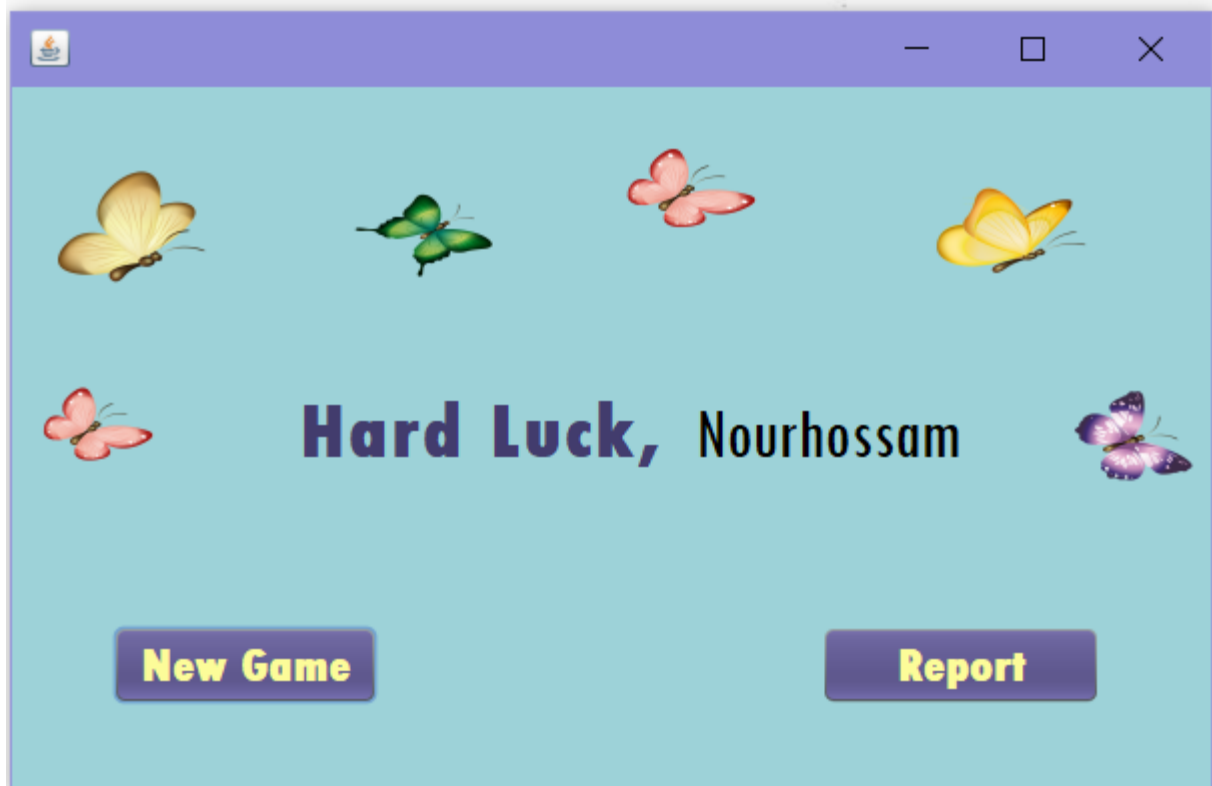
**First name**  
Nour

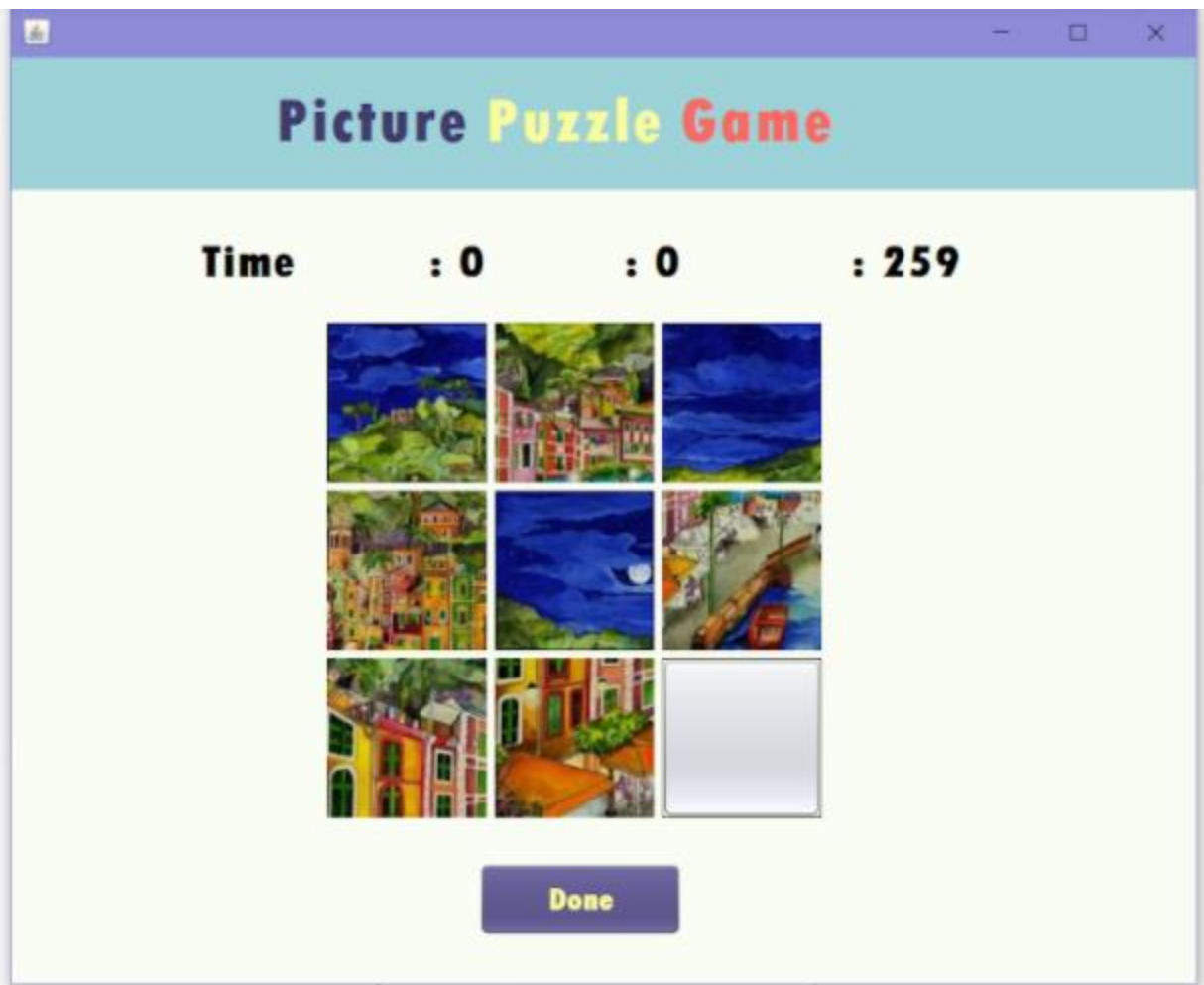
**Last name**  
Hossam

**Email**  
nour@gmail.com

**Password**  
\*\*\*\*\*

**Submit**





A login window titled "Login" with a dark blue header bar. The main area has a light blue background. It contains two input fields: "Username" with the text "Nourhossam" and "Password" with masked characters (asterisks). To the right of the fields are two butterfly illustrations, one pink and one yellow. At the bottom right, there is a dark blue button with the text "Login" in yellow. The window has standard OS window controls (minimize, maximize, close) in the top right corner.

