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# **User Guide**

**for**

# **Hug the Rail IoT**

**Version 1.0**

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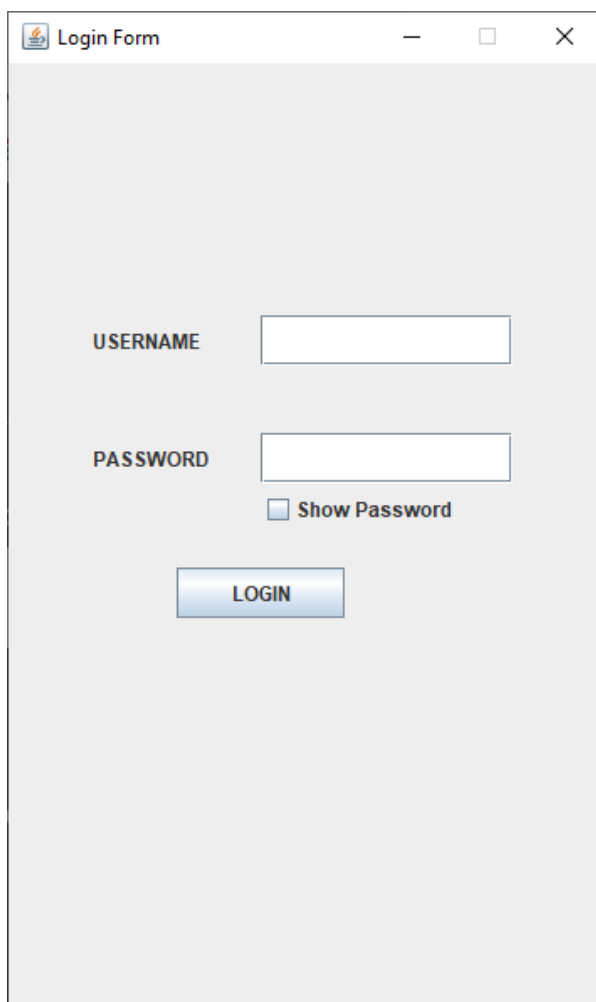
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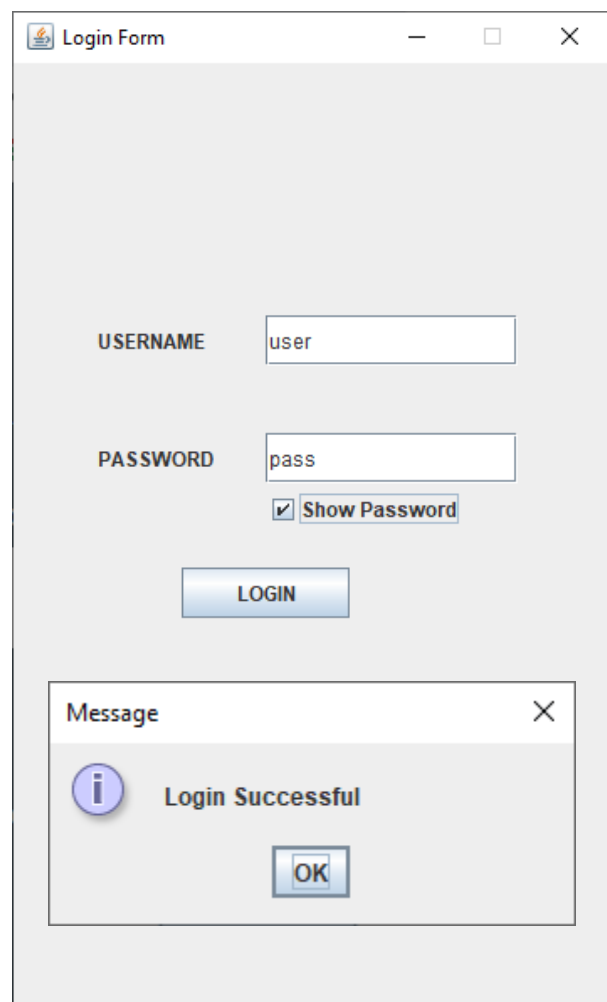
# 1. Turn IoT HTR On/Off

## 1.1 Turn on without admin privileges

1. Run Display.java
2. View Login prompt
3. Login with the username and password, user and pass respectively
4. Click “LOGIN”
5. Click “OK” or “X” in the upper right hand corner if a valid username and password were supplied



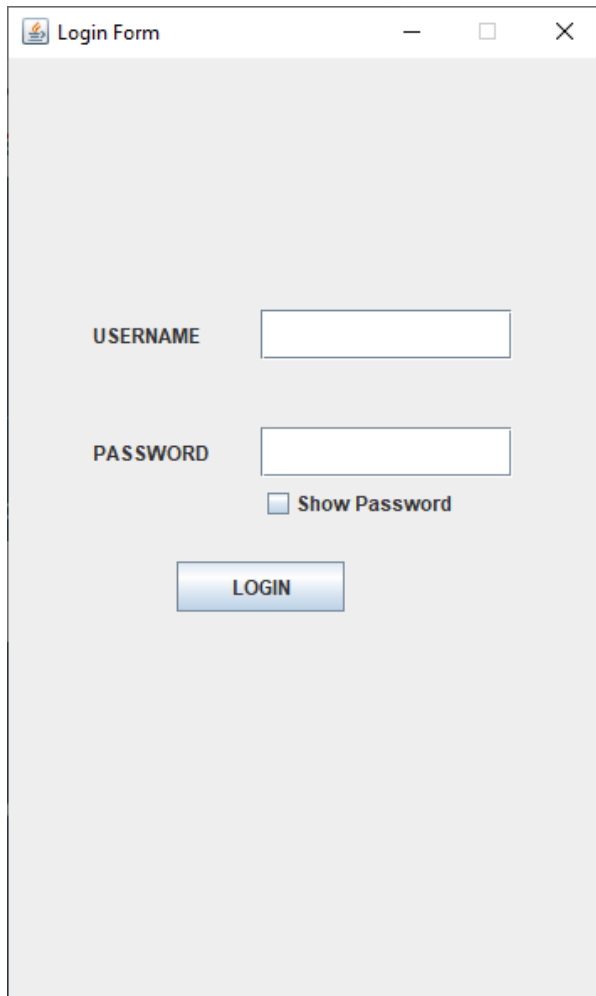
A screenshot of a Java Swing window titled "Login Form". It contains two text input fields: "USERNAME" and "PASSWORD". Below the "PASSWORD" field is a checkbox labeled "Show Password" which is currently unchecked. At the bottom center is a blue button labeled "LOGIN".



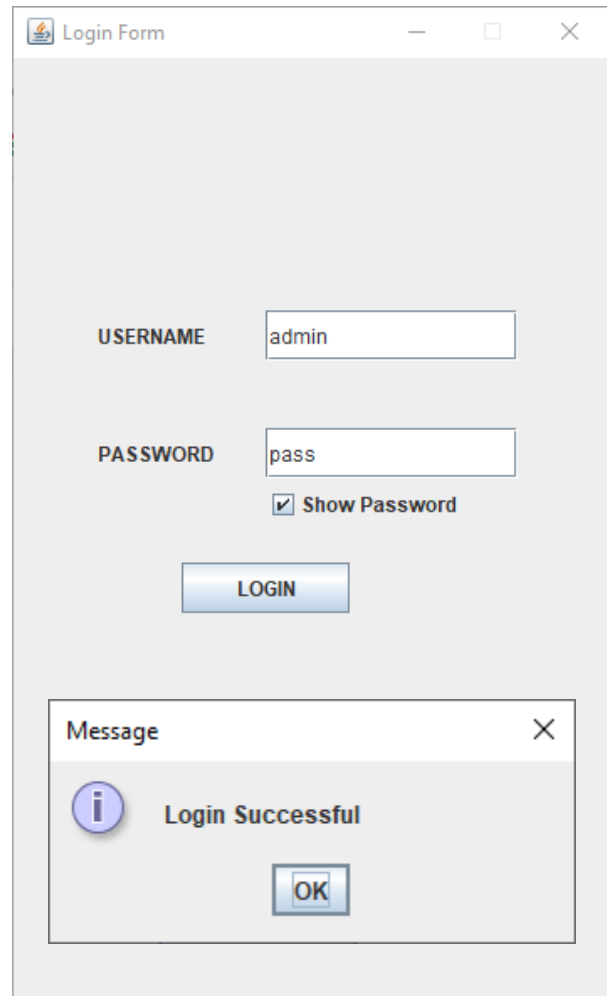
A screenshot of the "Login Form" window after a successful login. The "USERNAME" field contains the text "user" and the "PASSWORD" field contains the text "pass". The "Show Password" checkbox is now checked. A blue "LOGIN" button is still present. At the bottom of the window, a smaller "Message" dialog box is open, displaying an information icon, the text "Login Successful", and an "OK" button.

## 1.2 Turn on with admin privileges

1. Run Display.java
2. View Login prompt
3. Login with the username and password, admin and pass respectively
4. Click “LOGIN”
5. Click “OK” or “X” in the upper right hand corner if a valid username and password were supplied



The screenshot shows a window titled "Login Form" with a light gray background. It contains two text input fields: "USERNAME" and "PASSWORD". Below the "PASSWORD" field is a checkbox labeled "Show Password" which is currently unchecked. At the bottom center is a blue button labeled "LOGIN".



The screenshot shows the same "Login Form" window, but now the "USERNAME" field contains "admin" and the "PASSWORD" field contains "pass". The "Show Password" checkbox is now checked. The "LOGIN" button is still present. Below the main form, a smaller "Message" dialog box is open, displaying an information icon, the text "Login Successful", and an "OK" button.

## 1.3 Turn off

### 1.3.1 At the login screen

Any user can turn off IoT HTR from the login screen by simply pressing the “X” in the upper right hand corner of the login prompt.

### 1.3.2 From a non-admin login

After successfully logging in with a non-admin login, the user will constantly get updates on the operation status of the HTR Train every one second. The only way to stop the program is to force close the program. Refer to 1.3.4 Manually terminate the software.

### 1.3.3 From an admin login

After successfully logging in with an admin login, the user will be prompt with a form.

1. Click the “No” or the “X” in the upper right hand corner of the form
2. Click the “X” in the upper right hand corner of the login screen

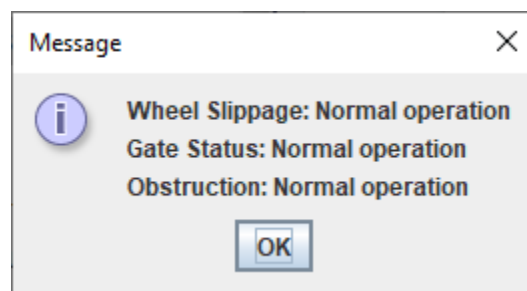
### 1.3.4 Manually terminate the software

At any point in the process of running IoT HTR, any user can force close the software by terminating the code.

1. Locate the IDE the software is being run from (e.g. VS Code, Eclipse)
2. Terminate the program by clicking the red square or its shortcut (for VS Code its SHIFT+F5, for Eclipse its SHIFT+F11)

## 2. Operations Display

When a user logs in without admin privileges, they will only be able to see the operations of IoT HTR. UI will constantly show the most recent operations of the train including the status (normal, minor warning, and major warning) of obstructions, wheel slippage, and gate crossings. In order to view the updated operations, the user must press the “OK” button to acknowledge the information presented.




## 3. Admin Manual Input Testing

When a user logs in with admin privileges, they will be able to manual enter input to test the software. They will be presented with a form that asks for obstruction speed, obstruction distance, gate distance, gate status, wheel rpm, and train speed.

1. Fill out the form
2. Click “Yes” once completed
3. View operations
4. Click “OK” or the “X” button in the upper right hand corner to close the message
5. To test again re-login and repeat steps 1-4

Please fill all the fields and press yes when completed



what is the obstruction speed (mph)?

how far is the obstruction (mile)?

how far is the gate (mile)?

What is the status of the gate (int: open=1, close=0)?


What is the wheel rpm (int)?

What is the speed as given by the GPS (mph)?

Yes

No

Warning



**Stationary Object! Break immediately.**

OK