Adequate Infosoft Pvt. Ltd.

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CASE Study of Project "Jupiter Software"

CLIENT REQUIREMENT:

- Client is looking to be developed a **Windows based editable software** for the users to create logics to control the hardware connected with the PC.
- Client want to be developed a software from scratch to accept the inbound signals and send outbound commands through
    - **Jupiter control Module,**
    - **Motor drives,**
    - **Weight modules,** and
    - **Network cameras.**

- Client want to add a **"RUN" button** to activate the project and **"STOP" button** to stop the project.
- He also want to **save the projects** on the computer or open previously-made projects for execution.
- Client is also looking **to show the status** of the inputs and outputs (such as weight value, motor speed etc.) on a web application.
- Client is looking for an editable Software similar to "Scratch". It has but not limited to the following blocks:

- **Beginning Cap Blocks** are used to start a logic.

- **Execution Blocks** are used to send commands.

- **Report Blocks** are used to display the value of the results.

- **Logic Blocks** are used to divert actions based on True or False

- **Ending Cap Blocks** are used to end a logic.

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ADEQAUTE INFOSOFT SOLUTION:

1. We developed a Complete **Windows based editable software named Prime Systems integrid software** for the users to create logic to control the hardware connected with the PC.

2. **Connect Hardware:** Software can accept the inbound signals and send outbound commands through the following hardware:
   - Jupiter control module connects with the PCs through RS-485
   - Motor drives are connected to the PCs through Modbus to send and accept variable signals.
   - Weight modules are connected to the PCs through   TTL to input.
   - Network cameras connected to PCs with USB and WiFi.

3. **For Installation:** User will use the Windows installer package to install the software.

4. **After installation,** there will be an **Integrids** shortcut on the desktop.
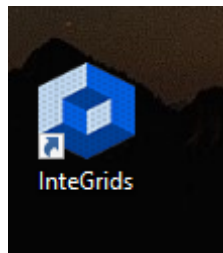

Fig 3: Software Shortcut

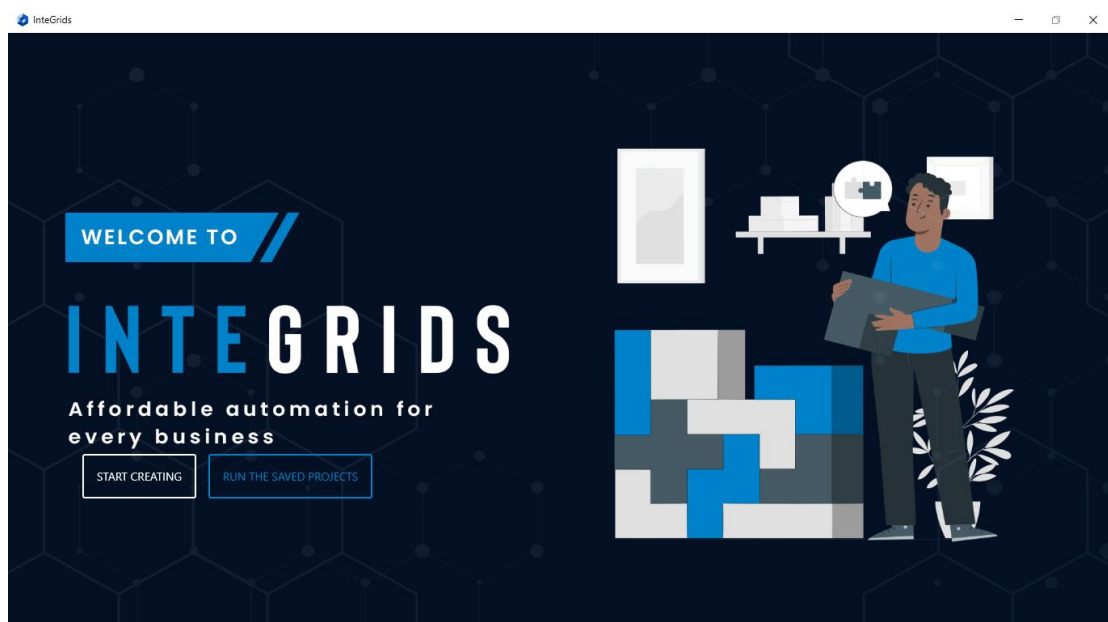5. **For Opening the Software:** Double click on it to open the software:

Fig 4: Welcome Page of Software

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6. Run the Save Project Option:

- If user want to run a saved Project then click on the **Run The Saved Project Button** and it will ask for the project. Select the required project and click on OK.
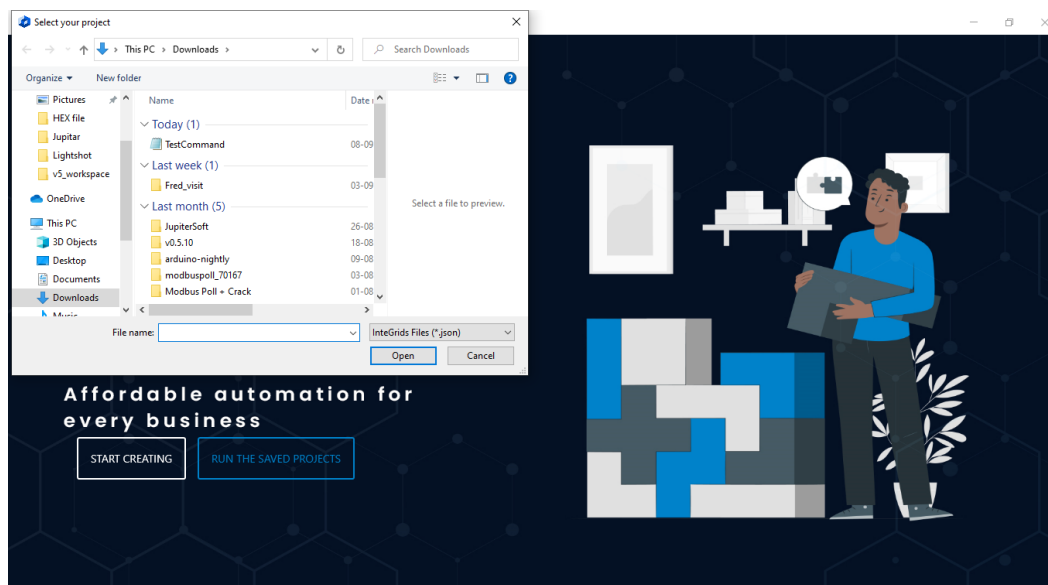

Fig 5: Run The Saved Project Button

- **Code Screen:** We have created a Code screen that will be shown after clicking on Run button:
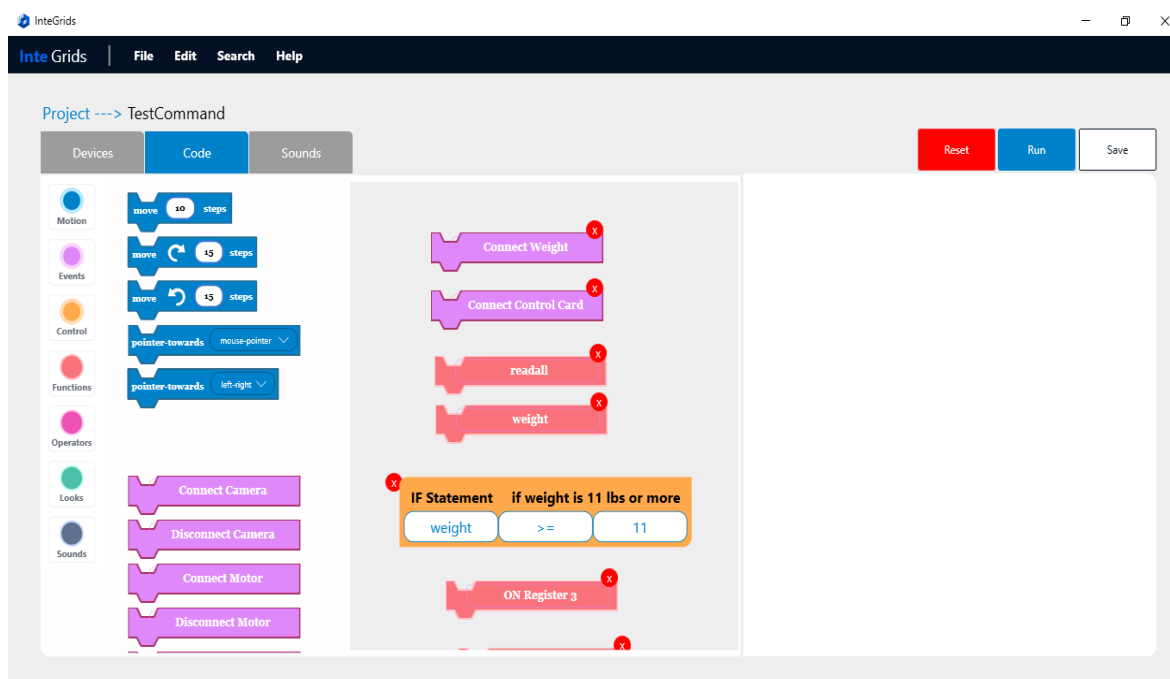

Fig 6: Code Screen

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7. **Start Creating Option:**
   - **Devices Screen:** If user will click on start creating option then it will be on the testing page for the devices. Here, User will be able to test the connection of their devices by selecting the applicable parameters.
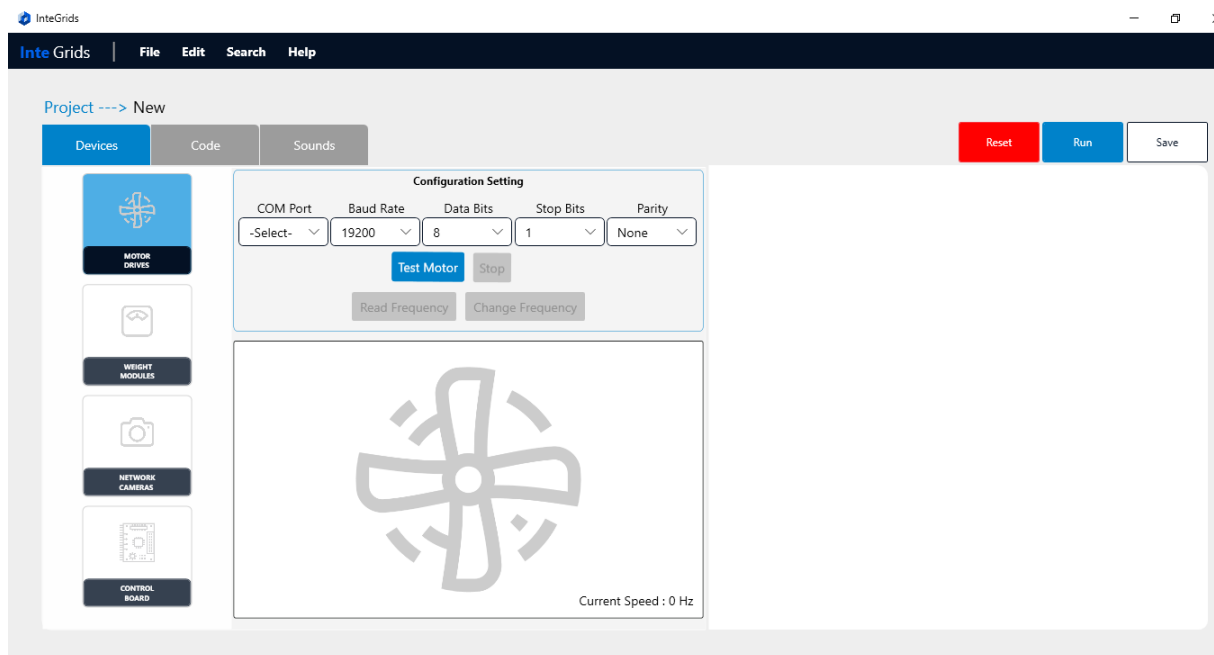

Fig 7: Devices Screen

   - **Fresh Code Screen:** The fresh code screen looks like this. User can go to the code screen and make their logic by dragging the right block.
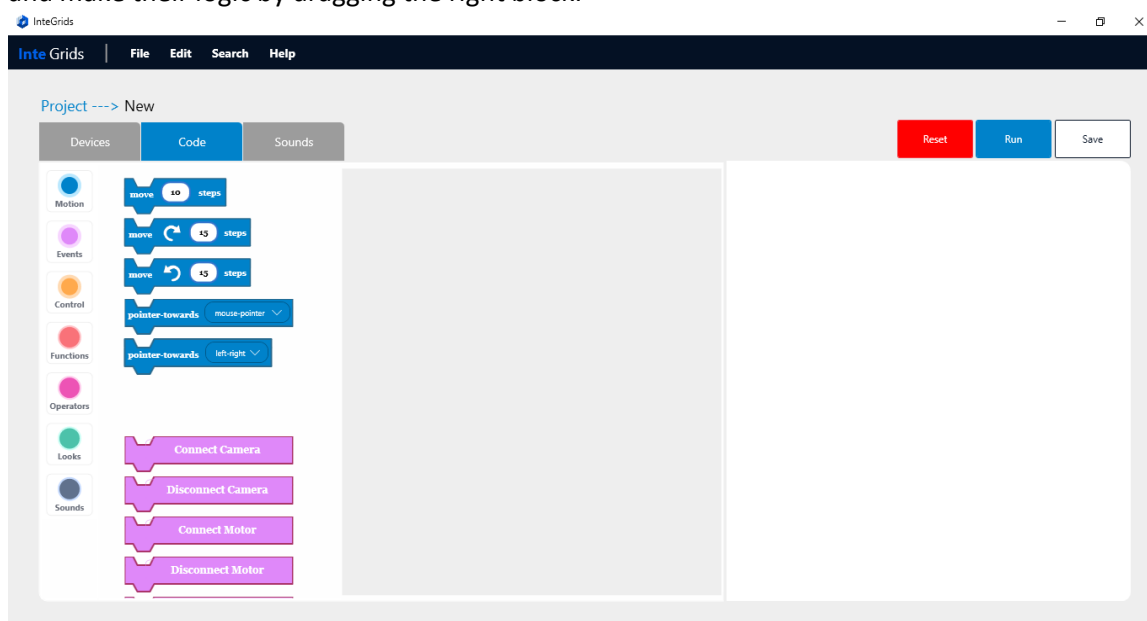

Fig 8: Fresh Code Screen

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- After completion of the logic, User can click on **Run button** and If User want to save the project then he can click on **Save button.**
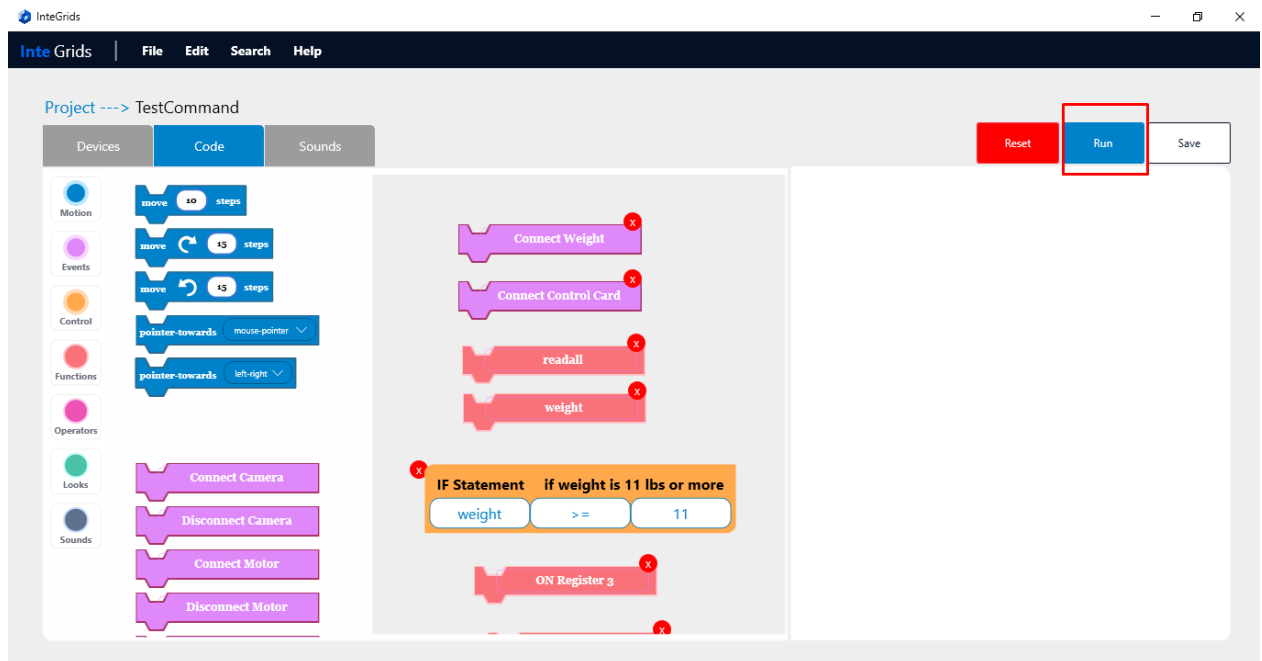

Fig 9: Example Logic Screen

- After clicking on the **Run button,** the HMI screen will come. Click on **start program button** and it will run your block successfully. If you want to stop the execution, then click on **stop Program button.**
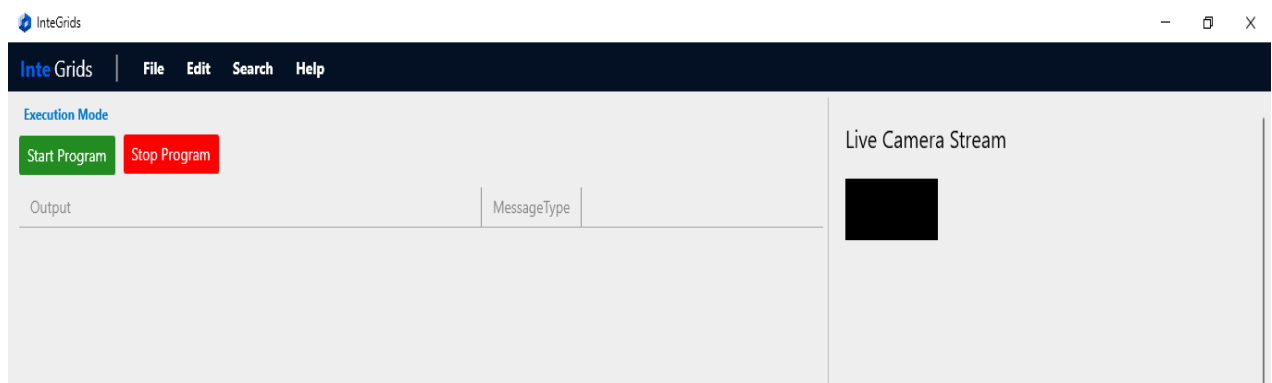

Fig 10: HMI Screen

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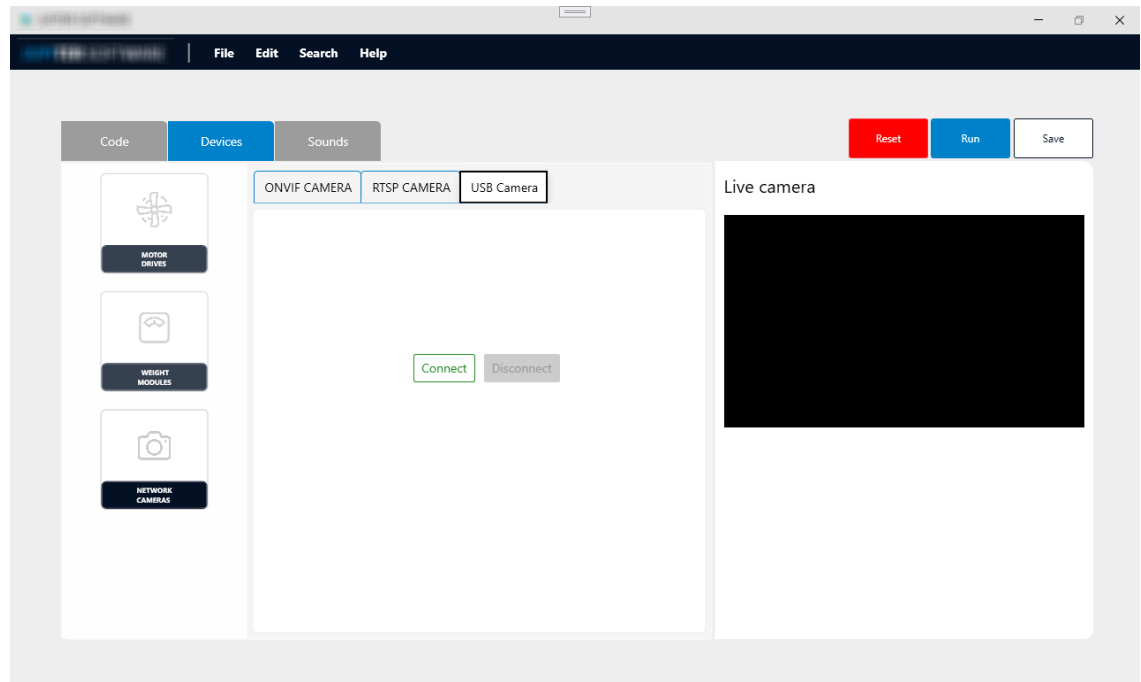Tel: +91-120-4198878
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- **USB Camera Tab Screen:**

Fig 11: USB Camera Tab Screen
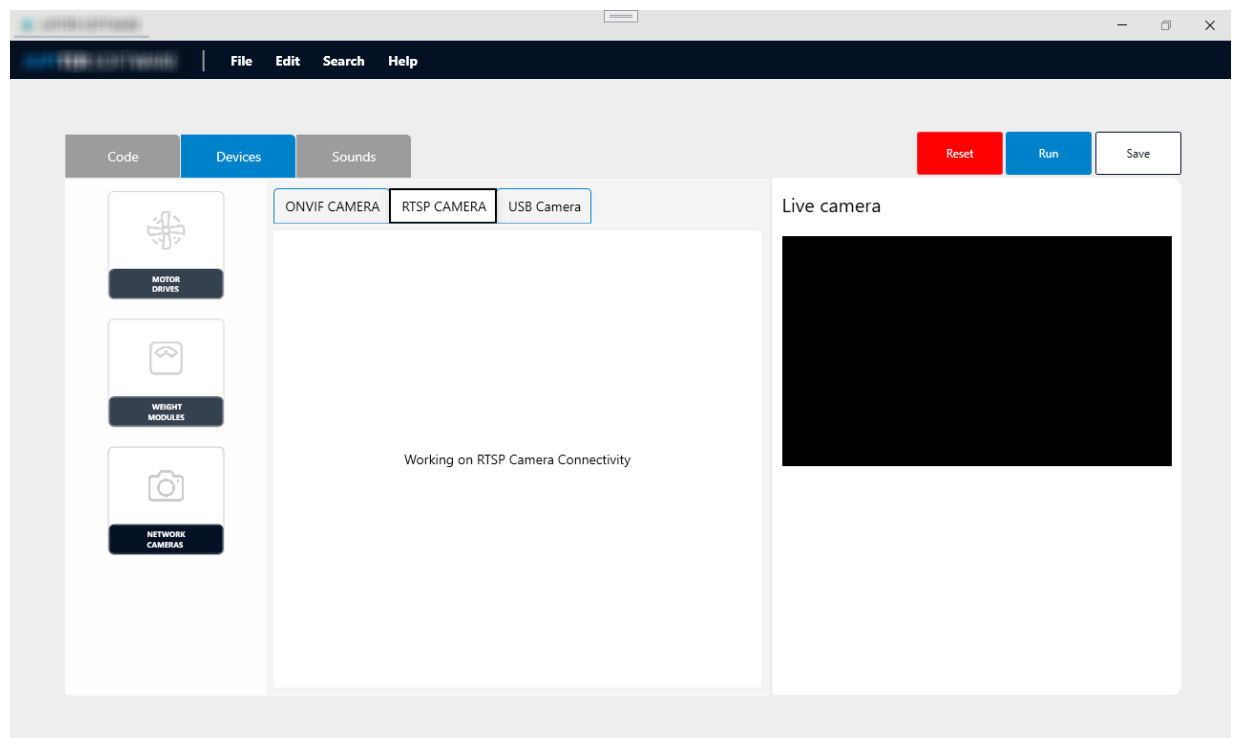
- **RTSP Camera Tab Screen:**

Fig 12: RTSP Camera Tab Screen

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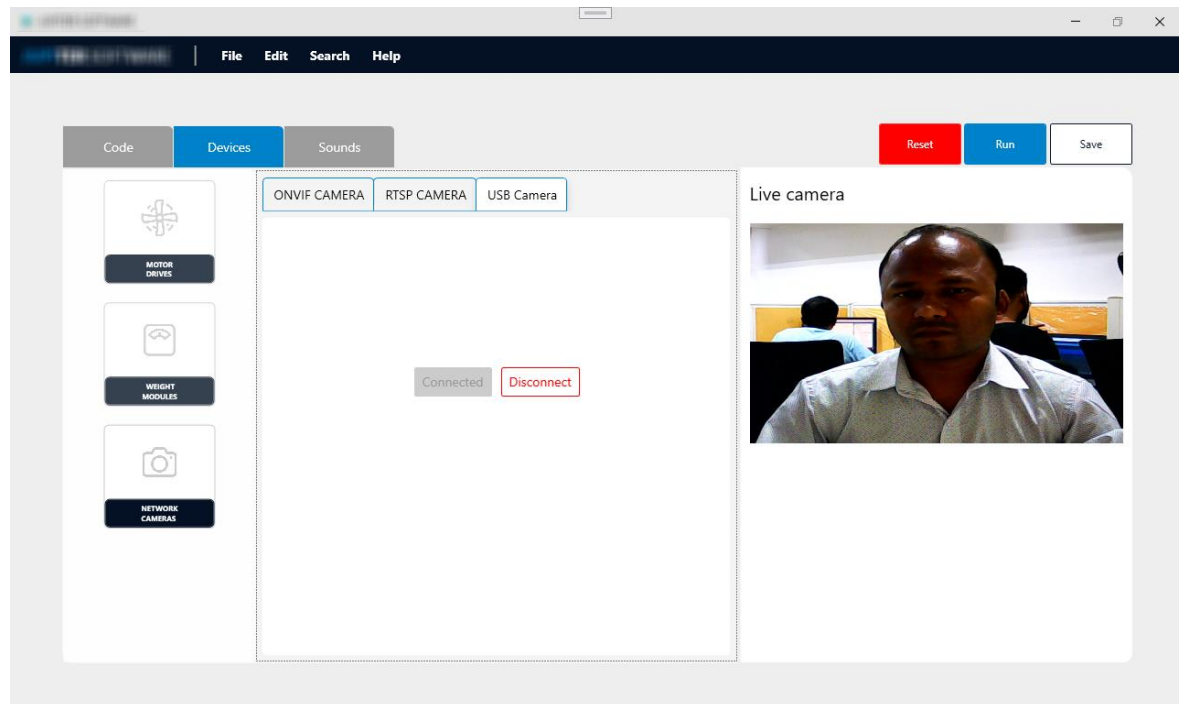Tel: +91-120-4198878
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- **Connected USB Camera Screen:**

Fig 13: Connected USB Camera Screen

TECHNOLOGIES USED:

Front End Desktop : MAUI .Net 6
Back End: .Net Core 6,
Front End Web: Asp.Net Core
Database: MS SQL
Server-side language: C# , Type Script
Communication Protocol : UART , MODBUS , MAX 232 , Ovnif , ZigBee , Wifi , BLE