**Custom Browser for PICT - Setup Instruction**

**Project Structure**

* **Frontend:** PyQt5-based browser application
* **Backend:** Express.js/TypeScript server with Redis and MongoDB

**Backend Setup**

1. **Navigate to the backend directory:**

cd Backend/custom-browser-server

1. **Install dependencies:**

npm install

1. **Set up Prisma:**

npx prisma generate

1. **Start the backend server:**

npm run dev

The backend server will start on **port 3000**.

**Frontend Setup**

1. **Navigate to the frontend directory:**

cd frontend/pict-chromium-browser

1. **Install Python dependencies:**

pip install -r requirements.txt

**Required packages:**

* + PyQt5
  + websockets
  + python-dotenv
  + PyQtWebengine

1. **Start the browser application:**

python main.py

**Additional Requirements**

1. **Redis Server:**
   * The backend requires a Redis server for real-time updates
   * Ensure Redis is running on the default port (**6379**)
2. **MongoDB:**
   * Required for the backend database
   * Connection string should be configured in backend/.env

**Common Issues**

1. **If the browser fails to connect to the backend:**
   * Verify the backend server is running
   * Check WebSocket connection settings in frontend/settings.json
2. **If Redis connection fails:**
   * Verify Redis server is running
   * Check Redis connection settings in backend/.env