Siemens S7-1200 & Siemens Touch HMI KTP-600
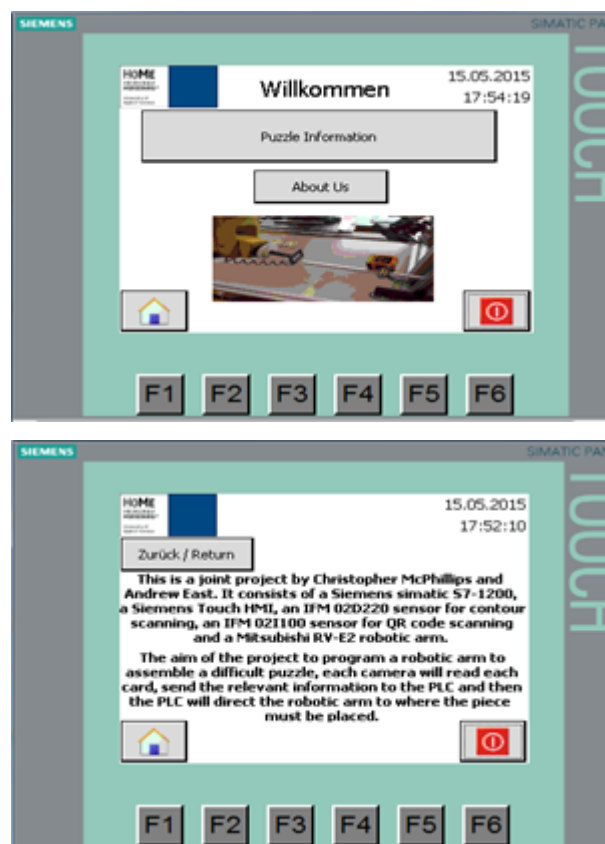
Once the IFM O2D220 has scanned the tile, and the information has been trimmed and converted into the correct data-type within the PLC. The PLC then sends the information required to the HMI. Both the HMI and PLC are Siemens products and both are programmed with TIA Portal, this allowed for easy interactions between them. On the HMI we created a welcoming page with two choices, an "About Us" page and a "Puzzle Information" page. The "Puzzle Information" page is where we sent the information from the PLC. On this page the tile number, percentage match and output string could all be viewed.
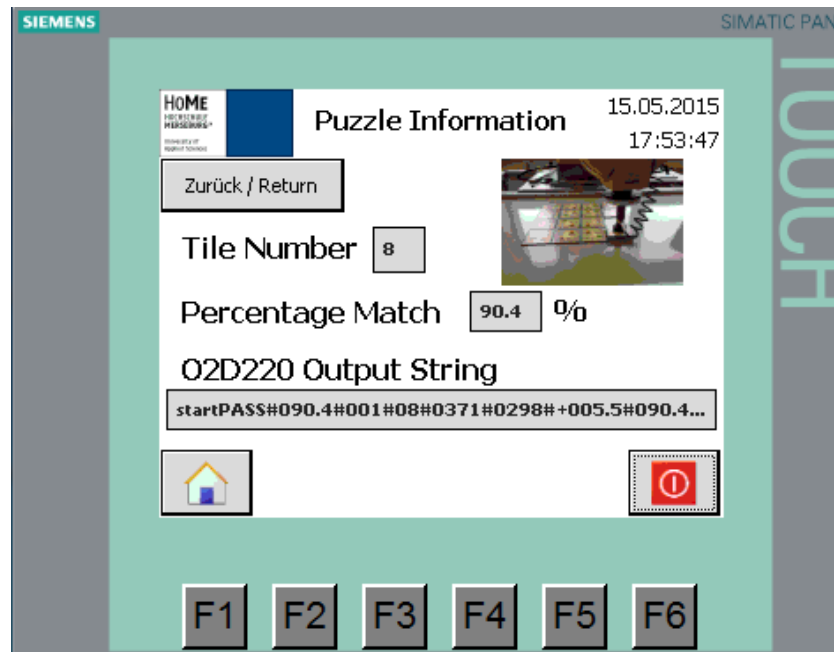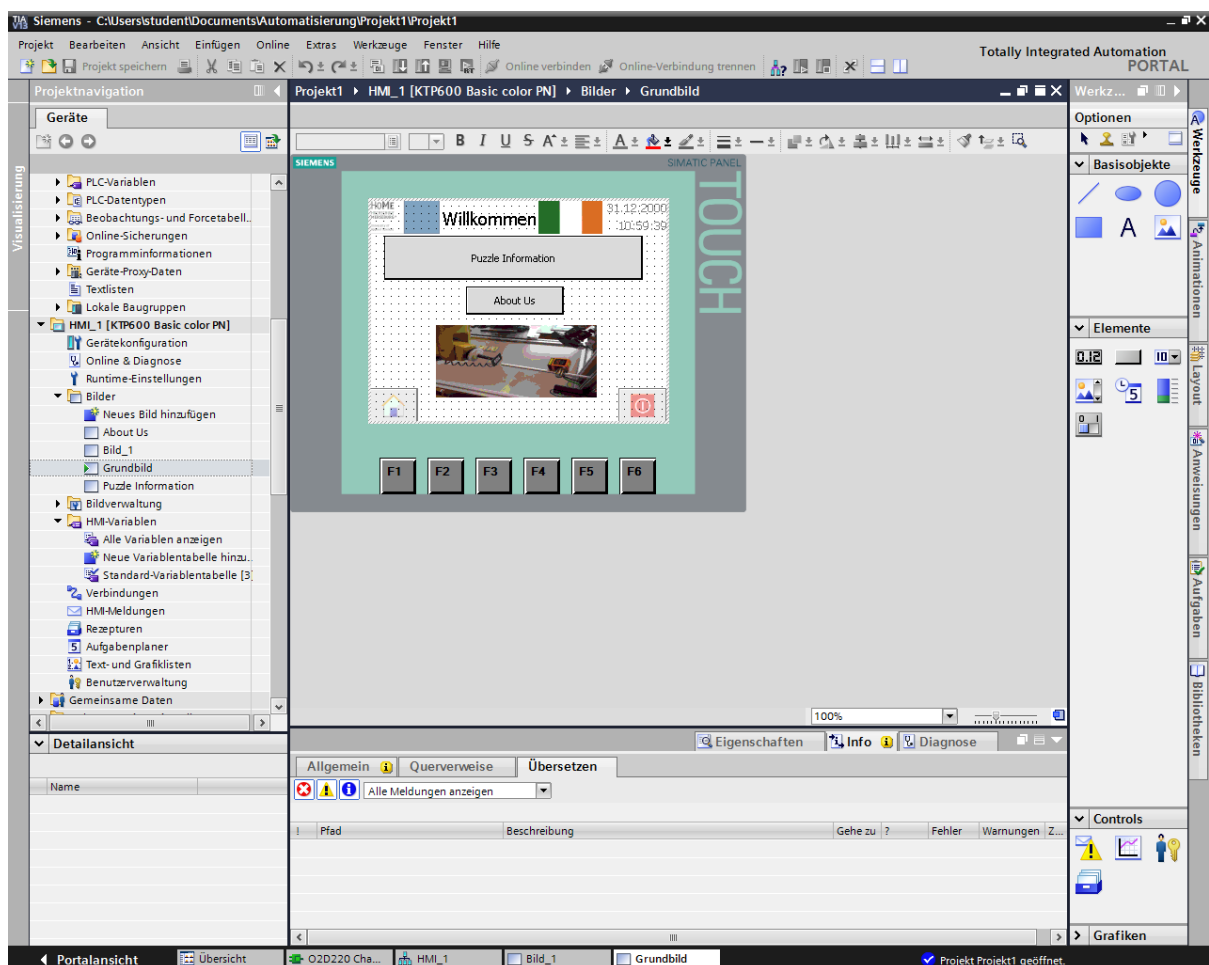
Figure 1 HMI Pages

Figure 2 HMI KTP-600 in TIA Portal

The HMI was connected via Ethernet cable and configured by setting the IP address. After which we created the pages and also set variable tags to each the string, percentage match and tile number so that they could be fetched by the HMI within the data block of the PLC program files and displayed to the user.