1. Registering new use
   1. Set the meter unit to update mode
   2. Register the new user using the android application
   3. Turn on OTG on android settings
   4. Turn off the secondary microcontroller switch on the main unit
   5. Go to the serial port of the main unit and disconnect the serial communication to the secondary microcontroller. Do not forget to connect the serial line after updating.
   6. Plug the USB serial with the OTG adapter to the serial port of the main unit
   7. Connect the serial communication app on the smartphone
   8. Press the register button on the main unit and wait for the message on the screen
   9. Paste the new generated passcode of the new user and hit send
   10. Wait for the system to update. Turn on the secondary microcontroller switch and restart the main unit after updating.
2. Using the meter unit
   1. Enter your unique passcode that was given prior on registration
   2. Press “B” to clear your input and “A” to enter.
   3. Just unplug the appliance that you connected when you want to stop using the system.
3. Data sorting
   1. Get the SD card from the meter unit and plug it into your computer using an SD card adapter
   2. Copy the unsorted data from the txt file and paste it into an empty excel spreadsheet
   3. Enter and plot the passcodes of the users along with their names into the extra empty cells on the bottom.
   4. Create a table description on the remaining empty cells of the spreadsheet for “Passcode”, “Date”, “Time”, and “User” in the correct order.
   5. Select the cells containing the unsorted data. And under the data clipboard, use the “Text to column function to separate the unsorted data.
   6. Under the user column, use the vertical lookup function to identify the user of the consumption data. Set the reference table into constant by adding $ into each of the spreadsheet index addresses.
   7. Select the table of the sorted data and insert the pivot table.
   8. Drag and drop the contents of the pivot table into the desired positions for a detailed and more organized data presentation.
4. Billing procedure
   1. Use the developed android app of the system for this procedure.
   2. Click on the manage energy consumption button and click on the update energy consumption card.
   3. Use the official bill for the electric energy cooperative to input the total KWH used and the bill amount. Then select the reading date.
   4. Select the name of the user and input their energy consumption. Use the sorted data from the pivot table generated on the application as a reference.
   5. Click “calculate and send” and review the confirmation dialog.
   6. Send the SMS notification to the user. The SMS message will be saved as a draft if you have no cellular load so the message can be sent if there is a cellular load on the smartphone.