**Case study:** PEG Africa provides solar energy devices to off-grid communities. These are provided as a loan against an initial deposit and subsequent payments on set frequent intervals. There are different product types and different countries and locations where PEG operates.

The CSV dump file attached named Case 3- Sample data has got some fields as mentioned below

The fields include the following:

1. Values are in local currency for fields such as daily amount, deposit amount, product price, outstanding amount, sumpaidtodate, sumpaidminusdeposit and expectedamount. For Country ID GH use conversion: 1 US$ = 5 units. For Country ID CDI and SN, use conversion: 1 US$ = 580 units
2. **ContractID** - which is similar to a LoanID (Note that a LoanID can have several payments made to it until a customer finishes paying. This is a unique identifier for any product that is purchased.
3. **Sum\_Paid\_To\_Date-** amount customer has paid till date against their total loan value
4. **Credits\_End\_Date**  -Date till which a customer has light (if customer status = finish payment then the date is not applicable)
5. **Dailyamount**-dailyamount expected to be paid by a customer in local currency.
6. **Deposit -**Down payment done by the customer on their loan (product purchase)
7. **Product Price -** This is the Cost of the Device in this case the solar panels we sale to the customer
8. **Activation date -**Date of purchase
9. **Sales location-** nearest PEG store to which the sale was made
10. **Outstanding balance** – Amount that a customer owns against the loan
11. **Sumpaidminus deposit**- delta of 6 from 3.
12. **Customerstatus**- current status of the customer based on loan repayment, active: has light, blocked: inactive for over a month,
13. **Expectedamount**- amount expected against a loan excluding initial deposit
14. **Countryid**-Country of sale
15. **Producttype general**- TV-XXX type of a TV based solar home system, SHS- a simple solar home system, Add-on- an add-on to the above-mentioned TV / SHS products

**Exercise**

1. **Business understanding:** Demonstrate your understanding of the business by suggesting KPIs and metrics relevant to the business based on this dataset or otherwise. Include for overall, cross functional teams such as sales, after-sales (credit management and customer experience) and finance
2. **Analysis:** Do a group level analysis of the data and suggest insights. Also carry out analysis including but not limited to different functions, based on location, repayment and product type etc
3. **Simple Data visualization:** Prepare a unified management dashboard using any BI tool of your choice with the existing data and adding any relevant calculated or fictious fields as applicable

Please be creative and innovative where needed