CASE 1. How many active facilities which have DPD>30 or Collectability>2 in the last 2 years?

Steps to calculate How many active facilities which have DPD>30 or Collectability>2 in the last 2 years:

Steps to calculate DBR:

Step 1. Import file “Use_Case_1.txt”

Step 2. Find number of active facilities which have DPD>30 or Collectability>2 in the last 2 years

DPD = tahunbulan01ht - tahunbulan24ht

Collectability = tahunBulan01Kol - tahunBulan01Kol

Facility-1 Bureau
Data Credit Card
Jenis Kredit : X-30
Status : Active

Jul 22		Agt 22		Sep 22		Okt 22		Nov 22		Des 22		Jan 23		Feb 23		Mar 23		Apr 23		Mei 23		Jun 23	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
1	0	1	0	1	0	1	0	1	0	2	1	2	31	2	61	3	91	1	0	1	0	1	0

Jul 23		Agt 23		Sep 23		Okt 23		Nov 23		Des 23		Jan 24		Feb 24		Mar 24		Apr 24		Mei 24		Jun 24	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
1	0	1	0	2	5	2	35	2	66	3	96	4	127	1	0	1	0	1	0	2	4	2	34

Facility-2 Bureau
Data Credit Card
Jenis Kredit : X-30
Status : Paid Off

Jul 22		Agt 22		Sep 22		Okt 22		Nov 22		Des 22		Jan 23		Feb 23		Mar 23		Apr 23		Mei 23		Jun 23	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
1	0	2	30	2	60	2	90	3	120	4	150	4	180	5	210	5	240	5	270	5	300	5	330

Jul 23		Agt 23		Sep 23		Okt 23		Nov 23		Des 23		Jan 24		Feb 24		Mar 24		Apr 24		Mei 24		Jun 24	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
5	360	5	390	5	420	5	450	5	480	5	510	5	540	5	570	5	600	5	630	5	660	5	690

Facility-3 Bureau
Data Personal Loan
Jenis Kredit : P05
Status : Active

Jul 22		Agt 22		Sep 22		Okt 22		Nov 22		Des 22		Jan 23		Feb 23		Mar 23		Apr 23		Mei 23		Jun 23	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
1	0	2	5	2	35	2	65	3	95	1	0	2	30	2	60	2	90	1	0	1	0	1	0

Jul 23		Agt 23		Sep 23		Okt 23		Nov 23		Des 23		Jan 24		Feb 24		Mar 24		Apr 24		Mei 24		Jun 24	
Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD	Col	DPD
1	0	1	0	1	0	1	0	1	0	2	7	2	37	2	67	3	97	1	0	2	1	2	31

CASE 2. The customer has a monthly income of IDR 23,000,000 with the loan details as the following.

Loan Details:

CIF	Monthly Income	Facility Type	Plafond	Outstanding	Due Date	Facility Start Date	Annual Interest Rate	Usage Type	Active?	Tenor	Monthly Installment Amount
999999	23,000,000	Credit Card	10,000,000	8,000,000		8/14/2000	30.2%	Consumption	Yes		?
999999	23,000,000	Credit Card	5,000,000	750,000		9/15/2017	30.2%	Consumption	Yes		?
999999	23,000,000	Personal Loan	15,000,000	13,000,000	9/18/2025	9/18/2021	17.8%	Consumption	Yes	48	?
999999	23,000,000	Mortgage	780,000,000	615,000,000	10/9/2030	9/18/2015	7.8%	Consumption	Yes	180	?

Calculate the Debt Burden Ratio (DBR) follow to the instruction below:

Steps to calculate DBR:

Step 3. Import file "Use_Case_2.txt"

Step 4. Find the Installment Amount.

If Facility Type is Credit Card, then Monthly Installment Amount is 10% of Plafond, otherwise:

$$Monthly\ Installment\ Amount = P\frac{r(1+r)^n}{(1+r)^n - 1}$$

where:

P = Plafond

r = Monthly interest rate

n = Tenor

Step 5. Find the percentage of DBR using the formula:

$$DBR = \frac{Total\ Monthly\ Installment\ Amount}{Monthly\ Income}$$

CASE 3. The customer has a monthly income of IDR 23,000,000. Calculate the facility limit that the bank can give to customer.

Steps to calculate DBR:

Step 1. Import file "Use_Case_3.txt"

Step 2. Calculate the total score using the formula:

Total Score = Intercept + (1.24 x Age Score Weight) + (9.42 x Gender Score Weight) + (7.34 X Occupation Score Weight)

Refer to matrix score as the following:

Characteristics	Attribute	Score Weight
Intercept		33.53
Age	<= 20 years old	13.45
	>20 - 30 years old	17.88
	>30 - 50 years old	18.98
	>50 years old	19.33
Gender	Male	24.44
	Female	21.89
Occupation	Employee	12.45
	Entrepreneur	9.34
	Others	6.78

Step 3. Determine the Risk Segment from the Total Score using the matrix below.

Total Score	Risk Segment
<325	Very High Risk (VHR) 2
>=325 - <350	Very High Risk (VHR)
>=350 - <370	High Risk (HR)
>=370 - <375	Medium Risk (MR)
>=375 - <379	Low Risk (LR)
>=379	Very Low Risk (VLR)

Step 4. Determine Income Multiplier and Calculate Facility Limit using the matrix below.

Risk Segment	Income Multiplier	
	Employee	Self Employed
Very High Risk (VHR)	1.5x	1x
High Risk (HR)	2x	1.3x
Medium Risk (MR)	3.5x	1.5x
Low Risk (LR)	6x	3x
Very Low Risk (VLR)	8x	4x

Facility Limit = Monthly Income x ***Income Multiplier***