

# Financial study on SQL

## Dashboard 1:

### KPI's

#### Total Loan Application

```
SELECT count(id) as total_of_loans
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	total_of_loans ▼
1	38576

#### Total Loan Application(MTD)

```
SELECT count(id) as total_of_loans
FROM `primera-prueba-388817.customer_data.loans`
WHERE extract(month FROM issue_date)= 12 and extract(year FROM issue_date)= 2021
```

Fila	total_of_loans ▼
1	4314

#### Total Loan Application(PMTD)

```
SELECT count(id) as total_of_loans
FROM `primera-prueba-388817.customer_data.loans`
WHERE extract(month FROM issue_date)= 11 and extract(year FROM issue_date)= 2021
```

Fila	total_of_loans ▼
1	4035

#### Total Funded Amount

```
SELECT sum(loan_amount) as total_loan_amount
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	total_loan_amount
1	435757075

## Total Amount Received

```
SELECT sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	total_amount_received
1	473070933

## Average Interest Rate

```
SELECT round(avg(int_rate)* 100,2) as Avg_interest_rate
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	Avg_interest_rate
1	12.05

## Average Debt-to-Income Ratio (DTI)

```
SELECT round(avg(dti)* 100,2) as Avg_dti
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	Avg_dti
1	13.33

## **Good Loan Vs. Bad Loans**

### Application Percentage (good-bad)

```
SELECT
  round((count(case when loan_status="Fully Paid" or loan_status="Current" then id
end))/ count(id),2)*100 as good_loan_percentage
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	good_loan_percentage
1	86.0

```
SELECT
  round((count(case when loan_status="Charged Off" then id end))/ count(id),2)*100
as bad_loan_percentage
FROM `primera-prueba-388817.customer_data.loans`
```

Fila	bad_loan_percentage
1	14.000000000000...

## Application (good-bad)

```
SELECT count(id) as total_application
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Fully Paid" or loan_status="Current"
```

Fila	total_application
1	33243

```
SELECT count(id) as total_application
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Charged Off"
```

Fila	total_application
1	5333

## funded amount (good-bad)

```
SELECT sum(loan_amount) as total_loan_amount
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Fully Paid" or loan_status="Current"
```

Fila	total_loan_amount
1	370224850

```
SELECT sum(loan_amount) as total_loan_amount
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Charged Off"
```

Fila	total_loan_amount
1	65532225

total received amount (good-bad)

```
SELECT sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Fully Paid" or loan_status="Current"
```

Fila	total_amount_received
1	435786170

```
SELECT sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
where loan_status="Charged Off"
```

Fila	total_amount_received
1	37284763

### **Loan Status Grid View**

```
SELECT
loan_status,
count(id) as total_of_loans,
sum(loan_amount) as total_loan_amount,
sum(total_payment) as total_amount_received,
round(avg(int_rate)* 100,2) as Avg_interest_rate,
round(avg(dti)* 100,2) as Avg_dti
FROM `primera-prueba-388817.customer_data.loans`
group by loan_status
```

Fila	loan_status ▼	total_of_loans ▼	total_loan_amount	total_amount_received	Avg_interest_rate ▼	Avg_dti ▼
1	Fully Paid	32145	351358350	411586256	11.64	13.17
2	Charged Off	5333	65532225	37284763	13.88	14.0
3	Current	1098	18866500	24199914	15.1	14.72

## Dashboard 2:

### Charts

#### Monthly Trend by Issue date (Line)

- total loan application

```
SELECT
extract(month from issue_date) as month_number,
format_date("%B", issue_date) as month_name,
count(id) as number_of_applications,
sum(loan_amount) as total_loan_amount,
sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by month_number, month_name
order by month_number
```

Fila	month_number	month_name	number_of_applications	total_loan_amount	total_amount_received
1	1	January	2332	25031650	27578836
2	2	February	2279	24647825	27717745
3	3	March	2627	28875700	32264400
4	4	April	2755	29800800	32495533
5	5	May	2911	31738350	33750523
6	6	June	3184	34161475	36164533
7	7	July	3366	35813900	38827220
8	8	August	3441	38149600	42682218
9	9	September	3536	40907725	43983948
10	10	October	3796	44893800	49399567
11	11	November	4035	47754825	50132030
12	12	December	4314	53981425	58074380

#### Regional Analysis by State (Filled)

```
SELECT
address_state,
count(id) as number_of_applications,
sum(loan_amount) as total_loan_amount,
sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by address_state
order by number_of_applications desc
```

## Loan Term Analysis (Donut)

```
SELECT
    term,
    count(id) as number_of_applications,
    sum(loan_amount) as total_loan_amount,
    sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by term
```

Fila	term ▼	number_of_applications	total_loan_amount	total_amount_received
1	36 months	28237	273041225	294709458
2	60 months	10339	162715850	178361475

## Employee Length Analysis (Bar)

```
SELECT
    emp_length,
    count(id) as number_of_applications,
    sum(loan_amount) as total_loan_amount,
    sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by emp_length
order by number_of_applications desc
```

Fila	emp_length ▼	number_of_applications	total_loan_amount	total_amount_received
1	10+ years	8870	116115950	125871616
2	< 1 year	4575	44210625	47545011
3	2 years	4382	44967975	49206961
4	3 years	4088	43937850	47551832
5	4 years	3428	37600375	40964850
6	5 years	3273	36973625	40397571
7	1 year	3229	32883125	35498348
8	6 years	2228	25612650	27908658
9	7 years	1772	20811725	22584136
10	8 years	1476	17558950	19025777
11	9 years	1255	15084225	16516173

## Loan Purpose Breakdown (Bar)

```
SELECT
  purpose,
  count(id) as number_of_applications,
  sum(loan_amount) as total_loan_amount,
  sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by purpose
order by number_of_applications desc
```

## Home Ownership Analysis (Tree)

```
SELECT
  home_ownership,
  count(id) as number_of_applications,
  sum(loan_amount) as total_loan_amount,
  sum(total_payment) as total_amount_received
FROM `primera-prueba-388817.customer_data.loans`
group by home_ownership
order by number_of_applications desc
```

Fila	home_ownership ▼	number_of_applications	total_loan_amount	total_amount_received
1	RENT	18439	185768475	201823056
2	MORTGAGE	17198	219329150	238474438
3	OWN	2838	29597675	31729129
4	OTHER	98	1044975	1025257
5	NONE	3	16800	19053