**SQL Queries for Financial Data**

CREATE TABLE loan\_data (

id BIGINT,

address\_state VARCHAR(10),

application\_type VARCHAR(50),

emp\_length VARCHAR(50),

emp\_title VARCHAR(255),

grade VARCHAR(5),

home\_ownership VARCHAR(50),

issue\_date DATE,

last\_credit\_pull\_date DATE,

last\_payment\_date DATE,

loan\_status VARCHAR(50),

good\_vs\_bad\_loan VARCHAR(20),

next\_payment\_date DATE,

member\_id BIGINT,

purpose VARCHAR(100),

sub\_grade VARCHAR(10),

term VARCHAR(20),

verification\_status VARCHAR(50),

annual\_income DECIMAL(15,2),

dti DECIMAL(10,2),

installment DECIMAL(12,2),

int\_rate DECIMAL(5,2),

loan\_amount DECIMAL(15,2),

total\_acc INT,

total\_payment DECIMAL(15,2)

);

select \* from loan\_data;

**Beginner Level**

1.select \* from loan\_data limit 10;

2.select count(\*) as Count\_of\_loans from loan\_data

3.select distinct(loan\_status) from loan\_data;

4.select grade,count(\*) as Count\_of\_loans\_through\_grades from loan\_data group by grade order by Count\_of\_loans\_through\_grades desc;

5.select count(\*) from loan\_data where annual\_income > 100000

6.select avg(loan\_amount) as Avg\_loan\_Amount from loan\_data;

7.select max(int\_rate) as Maximum\_rate, min(int\_rate) as Minimum\_rate from loan\_data

8.select count(distinct(address\_state)) as Count\_of\_states from loan\_data;

**Intermediate Level**

**1.**select \* from loan\_data;

**2.**select purpose,sum(loan\_amount) as Sum\_Loan\_amount from loan\_data group by purpose order by Sum\_Loan\_amount desc;

**3**.select home\_ownership,avg(annual\_income)as Avg\_annual\_income from loan\_data group by home\_ownership order by Avg\_annual\_income

**4**.SELECT DISTINCT(loan\_amount) AS distinct\_amount

FROM loan\_data

ORDER BY distinct\_amount desc limit 5;

**5.**select term,avg(installment) as AVG\_TERM from loan\_data group by term order by AVG\_TERM desc

**6**.SELECT COUNT(\*)

FROM loan\_data as Count\_of\_Good\_Loan

WHERE good\_vs\_bad\_loan = 'Good Loan';

**7.**SELECT COUNT(\*)

FROM loan\_data

WHERE good\_vs\_bad\_loan = 'Bad Loan';

**8.**select issue\_date,count(\*) as count\_of\_Applications\_year from loan\_data group by issue\_date order by count\_of\_Applications\_year desc

**9.**select address\_state,sum(loan\_amount) as Top\_5 from loan\_data group by address\_state order by Top\_5 desc limit 5

**Advanced Level**

**1.**select \* from loan\_data;

**2.**select (total\_payment - loan\_amount) as total\_profit from loan\_data order by total\_profit limit 5;

**3.**select member\_id,count(\*)as Loan\_count from loan\_data group by member\_id having count(\*) > 1 order by Loan\_count desc

**4.**SELECT

loan\_status,

COUNT(\*) AS loan\_count,

ROUND(100.0 \* COUNT(\*) / SUM(COUNT(\*)) OVER(), 2) AS percentage

FROM loan\_data

GROUP BY loan\_status

ORDER BY percentage DESC;

**5.**SELECT

grade,

loan\_amount,

RANK() OVER (PARTITION BY grade ORDER BY loan\_amount DESC) AS rank\_in\_grade

FROM loan\_data;

**6.**select grade, avg(int\_rate),avg(dti),avg(loan\_amount) from loan\_data group by grade order by grade

**7.**SELECT

grade,

ROUND(AVG(int\_rate), 2) AS avg\_interest\_rate,

ROUND(AVG(dti), 2) AS avg\_dti,

ROUND(AVG(loan\_amount), 2) AS avg\_loan\_amount

FROM loan\_data

GROUP BY grade

ORDER BY grade;