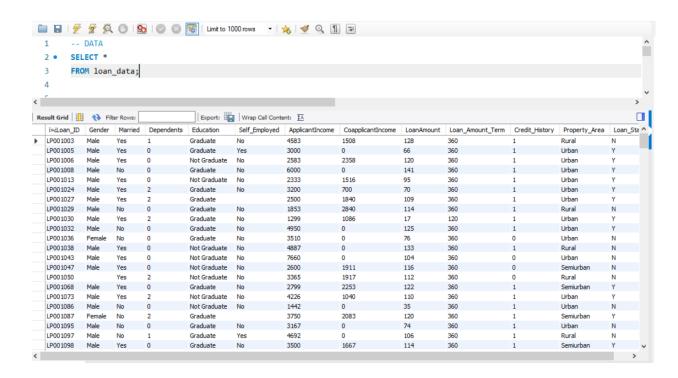
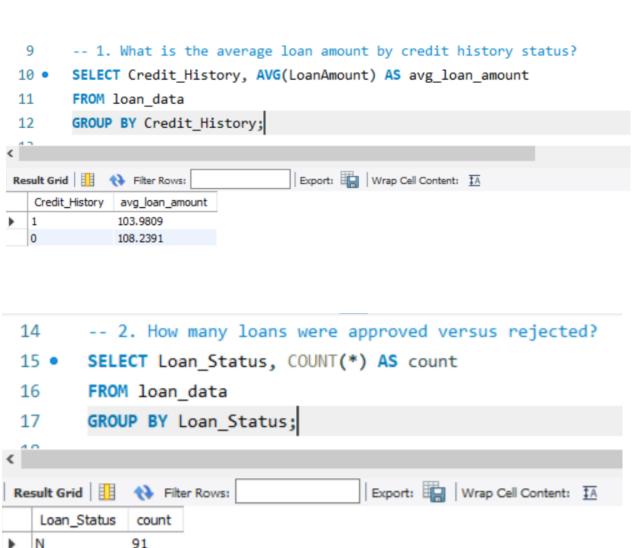
SQL Queries For Loan Approval Data





Y

217

```
19
         -- 3. How many loans were approved for male applicants versus female applicants?
         SELECT Gender, Loan_Status, COUNT(*) AS count
  20 •
  21
         FROM loan_data
  22
         WHERE Gender = 'Male' or Gender = 'Female'
         GROUP BY Gender, Loan_Status;
  23
  24
  25
<
 Export: Wrap Cell Content: IA
    Gender
          Loan_Status count
                    63
   Male
   Male
          Υ
                     170
   Female
                     24
   Female
         Y
                     46
 26
       -- 4. Is there a difference in loan approval rates between married and unmarried applicants?
       SELECT Married, Loan_Status, COUNT(*) AS count
 27 •
 28
       FROM loan data
       GROUP BY Married, Loan_Status;
 29
 30
       -- 5. How does the education level of the applicant relate to loan approval status?
 31
       SELECT Education, Loan_Status, COUNT(*) AS count
       FROM loan data
 33
 34
       GROUP BY Education, Loan_Status;
 35
                                  Export: Wrap Cell Content: IA
Loan_Status count
   Education
  Graduate
                     65
  Graduate
                     167
  Not Graduate Y
                     50
  Not Graduate N
                     26
        -- 5. How does the education level of the applicant relate to loan approval status?
        SELECT Education, Loan_Status, COUNT(*) AS count
 32 •
        FROM loan data
 33
        GROUP BY Education, Loan Status;
 34
 35
<
Export: Wrap Cell Content: IA
   Education
              Loan_Status
                        count
   Graduate
                       65
   Graduate
                       167
   Not Graduate Y
                       50
   Not Graduate N
                       26
```

```
40
         -- 6. Are self-employed individuals more or less likely to get their loans approved?
         SELECT Self_Employed, Loan_Status, COUNT(*) AS count
  41 •
         FROM loan data
  42
  43
         WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
  44
         GROUP BY Self_Employed, Loan_Status;
< |
                                      Export: Wrap Cell Content: IA
 Result Grid | Filter Rows:
    Self_Employed Loan_Status
                         count
                         77
   No
               N
   Yes
               Y
                         15
   No
                         187
   Yes
               N
                         10
  48
        -- 7. How does the location of the property (urban, semiurban, rural) influence loan approval?
  49 •
        SELECT Property Area, Loan Status, COUNT(*) AS count
  50
        FROM loan data
        GROUP BY Property_Area, Loan_Status
  51
  52
        ORDER BY count DESC;
<
 Export: Wrap Cell Content: IA
   Property_Area Loan_Status count
  Semiurban
                       102
                       64
   Urban
   Rural
                       51
                       35
   Rural
             N
   Urban
                       32
   Semiurban
             N
                       24
56
         -- 8. Does the number of dependents impact the likelihood of loan approval?
        SELECT Dependents, Loan_Status, COUNT(*) AS count
57 •
58
        FROM loan data
59
        GROUP BY Dependents, Loan_Status
         ORDER BY count DESC;
60
                                         Export: Wrap Cell Content: IA
Result Grid
             Filter Rows:
   Dependents
             Loan_Status
                         count
                         146
  0
  0
             N
                         62
  2
                         39
             Υ
                         32
  1
  2
             N
                         15
```

1

Ν

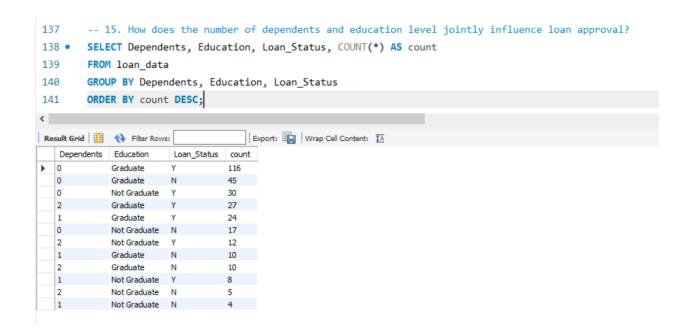
14

```
64
        -- 9. How does the term of the loan (in months) influence loan approval?
       SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count
65 •
66
       FROM loan data
       GROUP BY Loan_Amount_Term, Loan_Status
67
       ORDER BY count DESC;
68
Export: Wrap Cell Content: 1A
  Loan_Amount_Term Loan_Status
                           count
  360
                           190
  360
                 Ν
                           73
  180
                 Υ
                           16
  180
                 Ν
                           8
  480
                 Ν
                           6
  120
                 Υ
                           3
                 Ν
                           3
  480
                 Υ
                           3
  300
                 Υ
                           2
  84
                           2
                 Υ
  240
                           1
  36
                 Ν
```

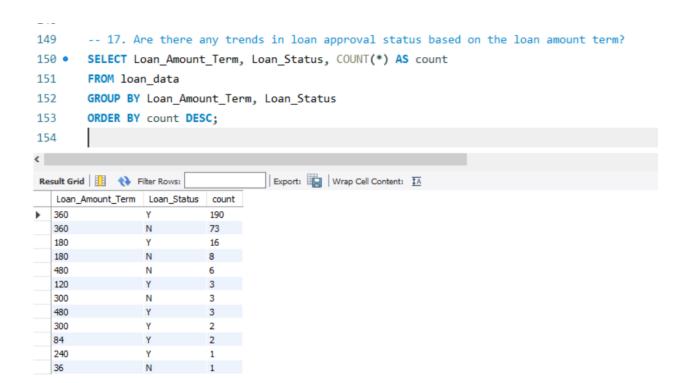
```
71
       -- 10. Is there a correlation between income groups and loan approval status?
       SELECT
 72 •
 73
           CASE
               WHEN ApplicantIncome < ( SELECT avg(ApplicantIncome) FROM loan_data ) THEN 'Below Average'
 74
 75
               ELSE 'Above Average'
 76
           END AS income_group,
 77
           Loan_Status,
 78
           COUNT(*) AS count
 79
        FROM loan_data
       GROUP BY income_group, Loan_Status
 81
       ORDER BY count DESC;
 82
Export: Wrap Cell Content: IA
   income_group Loan_Status count
Below Average
                       128
                       89
  Above Average Y
  Below Average N
  Above Average N
```

```
86
       -- 11. How does the combined income of applicants and co-applicants relate to loan approval?
 87 •
       SELECT
 88
           CASE
 89
               WHEN ApplicantIncome + CoapplicantIncome < (SELECT AVG(ApplicantIncome) FROM loan_data) THEN 'Below Avg Applicant Income'
 90
               WHEN ApplicantIncome + CoapplicantIncome >= (SELECT AVG(ApplicantIncome) FROM loan_data) THEN 'Above Avg Applicant Income'
 91
           END AS combined_income_group,
 92
 93
           Loan_Status,
 94
           COUNT(*) AS count
 95
       FROM loan_data
 96
       GROUP BY combined_income_group, Loan_Status;
Export: Wrap Cell Content: IA
   combined_income_group Loan_Status count
  Above Avg Applicant Income N
                                 66
                                 37
  Below Avg Applicant Income Y
  Above Avg Applicant Income Y
                                 180
  Below Avg Applicant Income N
                              25
        101
                -- 12. Does the combination of credit history and property area provide additional insights into loan approval?
        102 •
                SELECT Property_Area, Credit_History, Loan_Status, COUNT(*) AS count
        103
                FROM loan_data
                GROUP BY Property_Area, Credit_History, Loan_Status
                ORDER BY count DESC:
        105
        106
        107
        <
                                           Export: Wrap Cell Content: IA
        Property_Area Credit_History Loan_Status count
        Semiurban
                                          101
          Urban
           Rural
                                         20
           Rural
                                Ν
          Urban
                                Ν
                                         19
                                         15
           Semiurban
                     0
                                N
           Rural
                                Ν
                                         15
           Urban
                     0
                                Ν
                                         13
           Semiurban
                                         2
           Rural
          Semiurban
       110
                 -- 13. How does the combination of education level and employment status affect loan approval?
                SELECT Education, Self_Employed, Loan_Status, COUNT(*) AS count
       111 •
       112
                FROM loan_data
       113
                 WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
       114
                GROUP BY Education, Self_Employed, Loan_Status
       115
                 ORDER BY count DESC;
       116
       117
       <
       Export: Wrap Cell Content: IA
                       Self_Employed
           Education
                                    Loan_Status
                                               count
          Graduate
                      No
                                    Υ
                                               145
                                               54
          Graduate
                      No
                                   Ν
                                    Υ
          Not Graduate
                      No
                                               42
          Not Graduate No
                                   Ν
                                               23
          Graduate
                       Yes
                                               11
          Graduate
                      Yes
                                   Ν
                                               8
          Not Graduate
                      Yes
                                    Υ
                                               4
                                   Ν
                                               2
          Not Graduate Yes
```

```
121
        -- 14. Is there a correlation between loan amount and property area in terms of loan approval?
122 •
        SELECT Property_Area,
123
            CASE
124
                 WHEN LoanAmount < (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Below Avg'
125
                 WHEN LoanAmount >= (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Above Avg'
126
127
             END AS loan_amount_range,
128
             Loan_Status,
129
            COUNT(*) AS count
130
        FROM loan_data
        GROUP BY Property_Area, loan_amount_range, Loan_Status;
131
132
Export: Wrap Cell Content: IA
   Property_Area loan_amount_range Loan_Status count
  Rural
              Above Avg
                             Ν
                                        25
  Urban
              Below Avg
                             Υ
                                        31
  Urban
              Above Avg
                                        33
  Urban
                             N
                                        20
              Below Avg
  Semiurban
              Above Avg
                             Ν
                                        11
                                        61
  Semiurban
              Above Avg
                             Y
  Urban
              Above Avg
                             Ν
  Semiurban
              Below Avg
                             Υ
                                        41
              Below Avg
  Rural
                                       39
              Above Avg
                             Υ
  Semiurban
              Below Avg
                             Ν
                                        13
  Rural
              Below Avg
                             Υ
                                        12
```



```
143
        -- 16. What is the distribution of credit history among different property areas?
144 •
        SELECT Property_Area, Credit_History, COUNT(*) AS count
        FROM loan_data
145
146
        GROUP BY Property_Area, Credit_History
147
        ORDER BY count DESC;
148
Export: Wrap Cell Content: IA
   Property_Area Credit_History
                         count
Semiurban
              1
                         110
  Urban
                         83
              1
  Rural
                         69
              1
  Rural
              0
                         17
  Semiurban
              0
                         16
  Urban
              0
                         13
```



```
160
        -- 19. What is the average loan amount for self-employed applicants compared to non-self-employed ones?
 161 •
        SELECT Self_Employed, AVG(LoanAmount) AS avg_loan_amount
 162
        FROM loan data
 163
        WHERE Self_Employed = 'Yes' or Self_Employed = 'No'
        GROUP BY Self_Employed;
 164
 165
<
 Export: Wrap Cell Content: IA
   Self_Employed avg_loan_amount
              104,4015
   Yes
              104.3200
  155
            -- 18. What is the average income of applicants in each property area?
  156 •
            SELECT Property_Area, AVG(ApplicantIncome) AS avg_income
  157
            FROM loan_data
            GROUP BY Property Area:
  158
  159
                                                   Export: Wrap Cell Content: TA
 Property_Area
                     avg income
     Rural
                     3708.0465
     Urban
                     3443.7083
     Semiurban
                     3441.1190
166
      -- 20. Are there any significant differences in loan approval rates for different education levels in various property areas?
167 • SELECT
168
         Education.
169
         Property_Area,
170
         Loan_Status,
         COUNT(*) AS count
171
172
      FROM loan_data
173
      GROUP BY Education, Property_Area, Loan_Status
174
      ORDER BY count DESC;
175
<
                             Export: Wrap Cell Content: IA
Education
           Property_Area Loan_Status count
▶ Graduate
          Semiurban
  Graduate
          Urban
  Graduate
          Urban
  Not Graduate Semiurban
                           21
  Graduate Rural
  Graduate
          Semiurban
  Not Graduate Rural
                            13
  Not Graduate Urban
  Not Graduate
         Urban
```

Not Graduate Semiurban

SQL Queries

-- 1. What is the average loan amount by credit history status? SELECT Credit_History, AVG(LoanAmount) AS avg_loan_amount FROM loan_data GROUP BY Credit History; -- 2. How many loans were approved versus rejected? SELECT Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Loan_Status; -- 3. How many loans were approved for male applicants versus female applicants? SELECT Gender, Loan_Status, COUNT(*) AS count FROM loan_data WHERE Gender = 'Male' or Gender = 'Female' GROUP BY Gender, Loan_Status;

-- 4. Is there a difference in loan approval rates between married and unmarried applicants?

SELECT Married, Loan_Status, COUNT(*) AS count

FROM loan_data

GROUP BY Married, Loan_Status;

-- 5. How does the education level of the applicant relate to loan approval status?

SELECT Education, Loan_Status, COUNT(*) AS count

FROM loan data

GROUP BY Education, Loan_Status;

-- 6. Are self-employed individuals more or less likely to get their loans approved?

SELECT Self_Employed, Loan_Status, COUNT(*) AS count

FROM loan_data

WHERE Self_Employed = 'Yes' or Self_Employed = 'No'

GROUP BY Self_Employed, Loan_Status;

-- 7. How does the location of the property (urban, semiurban, rural) influence loan approval?

SELECT Property_Area, Loan_Status, COUNT(*) AS count

FROM loan_data

GROUP BY Property_Area, Loan_Status

ORDER BY count DESC;

-- 8. Does the number of dependents impact the likelihood of loan approval?

SELECT Dependents, Loan_Status, COUNT(*) AS count

FROM loan_data

GROUP BY Dependents, Loan_Status

ORDER BY count DESC;

-- 9. How does the term of the loan (in months) influence loan approval?

```
SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count FROM loan_data

GROUP BY Loan_Amount_Term, Loan_Status

ORDER BY count DESC;
```

-- 10. Is there a correlation between income groups and loan approval status?

SELECT

CASE

WHEN ApplicantIncome < (SELECT avg(ApplicantIncome) FROM loan_data) THEN 'Below Average'

ELSE 'Above Average'

END AS income_group,

Loan_Status,

COUNT(*) AS count

FROM loan_data

GROUP BY income_group, Loan_Status

ORDER BY count DESC;

-- 11. How does the combined income of applicants and co-applicants relate to loan approval?

SELECT

CASE

WHEN ApplicantIncome + CoapplicantIncome < (SELECT AVG(ApplicantIncome) FROM loan_data) THEN 'Below Avg Applicant Income'

WHEN ApplicantIncome + CoapplicantIncome >= (SELECT AVG(ApplicantIncome) FROM loan_data)
THEN 'Above Avg Applicant Income'

END AS combined income group,

Loan_Status,

COUNT(*) AS count

FROM loan_data

GROUP BY combined_income_group, Loan_Status;

-- 12. Does the combination of credit history and property area provide additional insights into loan approval?

SELECT Property_Area, Credit_History, Loan_Status, COUNT(*) AS count

FROM loan data

GROUP BY Property_Area, Credit_History, Loan_Status

ORDER BY count DESC;

-- 13. How does the combination of education level and employment status affect loan approval?

SELECT Education, Self_Employed, Loan_Status, COUNT(*) AS count FROM loan_data

WHERE Self_Employed = 'Yes' or Self_Employed = 'No'

GROUP BY Education, Self_Employed, Loan_Status

ORDER BY count DESC;

14. Is there a correlation between loan amount and property area in terms of loan approval?
SELECT Property_Area,
CASE
WHEN LoanAmount < (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Below Avg'
WHEN LoanAmount >= (SELECT AVG(LoanAmount) FROM loan_data) THEN 'Above Avg'
END AS loan_amount_range,
Loan_Status,
COUNT(*) AS count
FROM loan_data
GROUP BY Property_Area, loan_amount_range, Loan_Status;
15. How does the number of dependents and education level jointly influence loan approval?
15. How does the number of dependents and education level jointly influence loan approval? SELECT Dependents, Education, Loan_Status, COUNT(*) AS count
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Dependents, Education, Loan_Status
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Dependents, Education, Loan_Status
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Dependents, Education, Loan_Status ORDER BY count DESC;
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Dependents, Education, Loan_Status ORDER BY count DESC; 16. What is the distribution of credit history among different property areas?
SELECT Dependents, Education, Loan_Status, COUNT(*) AS count FROM loan_data GROUP BY Dependents, Education, Loan_Status ORDER BY count DESC; 16. What is the distribution of credit history among different property areas? SELECT Property_Area, Credit_History, COUNT(*) AS count

-- 17. Are there any trends in loan approval status based on the loan amount term?

SELECT Loan_Amount_Term, Loan_Status, COUNT(*) AS count FROM loan_data

GROUP BY Loan_Amount_Term, Loan_Status

ORDER BY count DESC;

-- 18. What is the average income of applicants in each property area?

SELECT Property_Area, AVG(ApplicantIncome) AS avg_income

FROM loan_data

GROUP BY Property_Area;

-- 19. What is the average loan amount for self-employed applicants compared to non-self-employed ones?

SELECT Self_Employed, AVG(LoanAmount) AS avg_loan_amount

FROM loan data

WHERE Self_Employed = 'Yes' or Self_Employed = 'No'

GROUP BY Self_Employed;

-- 20. Are there any significant differences in loan approval rates for different education levels in various property areas?

SELECT

Education,

Property_Area,

Loan_Status,

COUNT(*) AS count

FROM loan_data

GROUP BY Education, Property_Area, Loan_Status

ORDER BY count DESC;