Manager: IT & Data -Technical Assessment

For Part 1, develop a home loan app that will receive inputs from the user and determine the user’s affordability for a given purchase price. All inputs need to be factored to determine the outcome.

For Part 2, import the dataset provided into SQL or MS Access and provide the outputs in a table.

For Part 3, analyse your data results and answer the questions based on Part 2 results.

# Inputs:

Gross Salary, Credit Score, Purchase Price

# Business Rules

1. The instalment of a home loan should be no more than 30% of a customer’s gross salary.
2. The home loan percentage granted is determined by the credit score as below:

|  |  |
| --- | --- |
| * 800 and above = 110% loan. | * 5. 600-649 = 85% loan. |
| * 750-799 = 100% loan. | * 6. 550-599 = 80% loan. |
| * 700-749 = 95% loan. | * 7. 549 and below = rejected. |
| * 650-699 = 90% loan. |  |

1. All deposits are determined by the percentage of the loan granted. If the home loan granted for a R1 000 000 property is 90%, which is R900 000; then the customer will be required to pay the 10% shortfall of R100 000 as a deposit. The deposit is only required if the qualifying loan amount loan is <100%
2. Monthly instalment is calculated as Bond Amount x 0.00785
3. The Existing Home Loans table contains customers with existing home loans and should be taken into consideration when determining the customer’s affordability. **(Only for Part 2 & 3)**

## Part 1 – Python or C# Console App Below is what is expected.

Text

Description automatically generated

# Outputs

1. Loan application status: Granted or Declined
2. What is the maximum home loan instalment that the customer can I qualify for?
3. Percentage Home Loan granted by the bank?
4. How much deposit is required from the customer?
5. How much will the monthly instalment be if the application is granted?

## Part 2 – SQL or MS Access

Create a table that will show the following information based on the dataset and business rules provided. Populate the table with Customer’s ID, name, age and the 5 fields below.

1. How much will the customer’s monthly instalment be?
2. What is the maximum home loan instalment that the customer can qualify for?
3. Percentage Home Loan granted by the bank?
4. How much deposit is required from the customer?
5. Loan application status: Granted or Declined

Part 3 – Analysis

1. List the name of the top 3 customers who were granted the biggest 100% home loans, in descending order by listed price of the property.
2. How many customers qualify for a home loan but require 20% deposit?
3. List the name of the top 5 cities with the most granted home loans and the number of home loans granted, in descending order by number of home loans