CREDIT CARD DEFAULT PREDICTION

: ARCHITECTURE DESIGN:

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❖ Introduction:

- **What is Architecture Design?**
  Architecture Design (AD) aims to give the internal design of the actual program code for the 'Health Insurance Premium Prediction'. AD describes the class diagrams with the methods and relation between classes and program specifications. It describes the modules so that the programmer can directly code the program from the document.
- **Scope**
  Architecture Design (AD) is a component-level design process that follows a step-by-step refinement process. This process can be used for designing data structures, required software, architecture, source code, and ultimately, performance algorithms. Overall, the data organization may be defined during requirement analysis and then refined during data design work. And the complete workflow.
- **Constraints**
  We predict the expected estimating cost of expenses customers based on some personal health information.

❖Problem Statement:

Financial threats are displaying a trend about the credit risk of commercial banks as the incredible improvement in the financial industry has arisen. In this way, one of the biggest threats faced by commercial banks is the risk prediction of credit clients. The goal is to predict the probability of credit default based on credit card owner's characteristics and payment history.

❖Dataset Information:

ID: ID of each client

LIMIT_BAL: Amount of given credit in NT dollars (includes individual and family/supplementary = credit)

SEX: Gender (1=male, 2=female)

EDUCATION: (1=graduate school, 2=university, 3=high school, 4=others, 5=unknown, 6=unknown)

MARRIAGE: Marital status (1=married, 2=single, 3=others)

AGE: Age in years

PAY_0: Repayment status in September 2005 (-1=pay duly, 1=payment delay for one month, 2=payment delay for two months, … 8=payment delay for eight months, 9=payment delay for nine months and above)

PAY_2: Repayment status in August 2005 (scale same as above)

PAY_3: Repayment status in July 2005 (scale same as above)

PAY_4: Repayment status in June 2005 (scale same as above)

PAY_5: Repayment status in May 2005 (scale same as above)

PAY_6: Repayment status in April 2005 (scale same as above)

BILL_AMT1: Amount of bill statement in September 2005 (NT dollar)

BILL_AMT2: Amount of bill statement in August 2005 (NT dollar)

BILL_AMT3: Amount of bill statement in July 2005 (NT dollar)

BILL_AMT4: Amount of bill statement in June 2005 (NT dollar)

BILL_AMT5: Amount of bill statement in May 2005 (NT dollar)

BILL_AMT6: Amount of bill statement in April 2005 (NT dollar)

PAY_AMT1: Amount of previous payment in September 2005 (NT dollar)

PAY_AMT2: Amount of previous payment in August 2005 (NT dollar)

PAY_AMT3: Amount of previous payment in July 2005 (NT dollar)

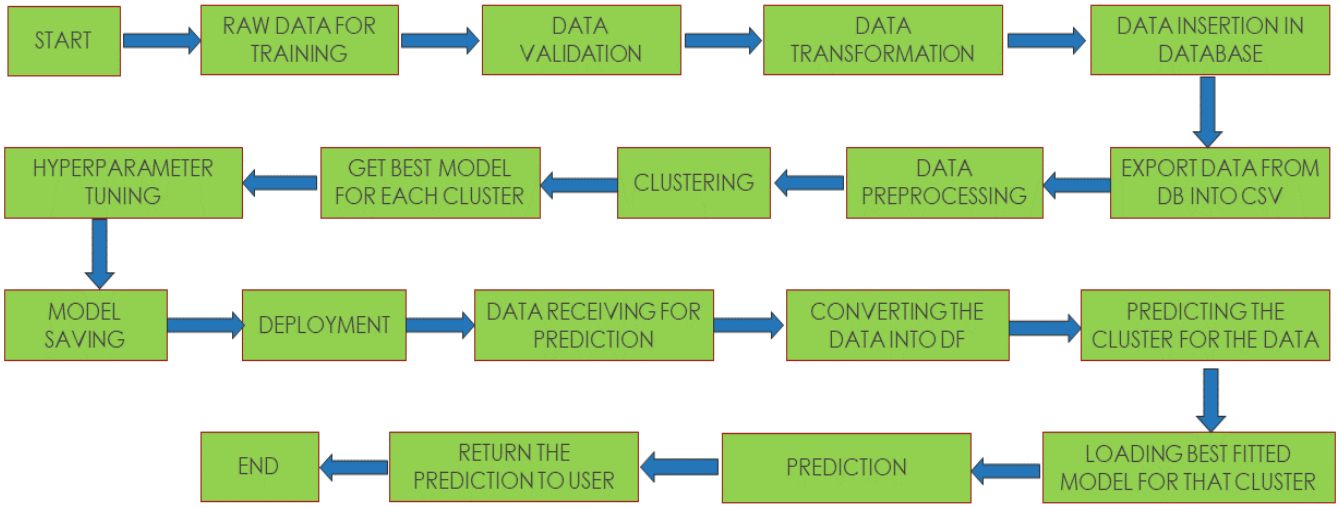
PAY_AMT4: Amount of previous payment in June 2005 (NT dollar)

PAY_AMT5: Amount of previous payment in May 2005 (NT dollar)

PAY_AMT6: Amount of previous payment in April 2005 (NT dollar)

Default payment next month: Default payment (1=yes, 0=no)

❖Architecture:



❖User Input / Output Flow:

❖Conclusion:

The project is designed in the flask; hence it is accessible to everyone. The above design process will help banks and loan lenders predict whether customers will default the credit card payment or not, so the bank or respective departments can take necessary action, based on the model's predictions. The UI is made to be user-friendly so that the user will not need much knowledge of any tools but will just need the information for results.