S.Thapa
R.Baniya
ICS4U
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Computer Science Final Project Analysis

Project Overview:

Objective: To develop a comprehensive mortgage calculator application.

Key Features: Interest rate input, mortgage term options, amortization schedule, monthly payment calculator, down payment input, prepayment plan options, total cost analysis, and dynamic taxes.

 User Interface (UI) Design:

Jframe for Application and Login Window: Initial designs to be conceptualized for both the main application interface and the login window.

Login Screen Features: Should include password input, sign up, log in, and forget password options.

Split Window Design: Mortgage calculator on the left side and prepayment plan module on the right.

Information Accessibility: Implement information icons and hover-over features for user guidance.

Navigation: Include a back button for seamless transitions between different windows/frames.
Functionality:

Amortization Schedule and Payment Calculations: Detailed breakdowns of payments, interest, and principal over the loan term.

Graphs and Visuals: Charts and diagrams for better understanding of mortgage dynamics.

Dynamic Calculations: The calculator should adjust calculations based on variables like age, credit score, and provincial tax rates.

Development Phases:

Conceptualization and Planning (Jan 1 - Jan 9): Define application requirements, design initial UI, develop a flowchart for navigation, and gather necessary resources.

Development of Basic Framework (Jan 10 - Jan 13): Set up the development environment, build the basic framework, and start the development of the mortgage calculator's interface.

Advanced Features and Integration (Jan 13- Jan 18): Develop advanced features like the Prepayment Plan module, Mortgage Chart/Diagram, and integrate them into the interface.

Finalization and Testing (Jan 18- Jan 21): Conduct extensive testing, identify and resolve bugs, and refine UI/UX based on feedback.

Testing and Quality Assurance:

Testing Protocols: Thorough testing of all functionalities, including the dynamic response to different user inputs.

Bug Fixes and Refinements: Address all identified issues and improve the UI/UX based on test feedback.

Presentation Preparation (Post Jan 21):

Materials Preparation: Develop slides and a demo video for the presentation.

Rehearsals: Conduct rehearsals to ensure smooth presentation delivery.