MANIPAL INSTITUTE OF TECHNOLOGY

MOBILE APPLICATION DEVELOPMENT

MINI PROJECT

TOPIC: **CALCULATOR AND CURRENCY CONVERTER APP**

UI Sketch

By Team 5
Batch 4

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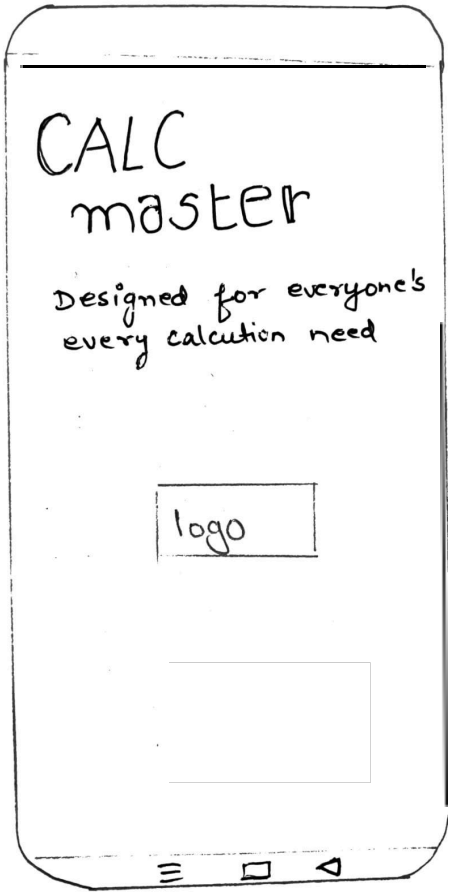
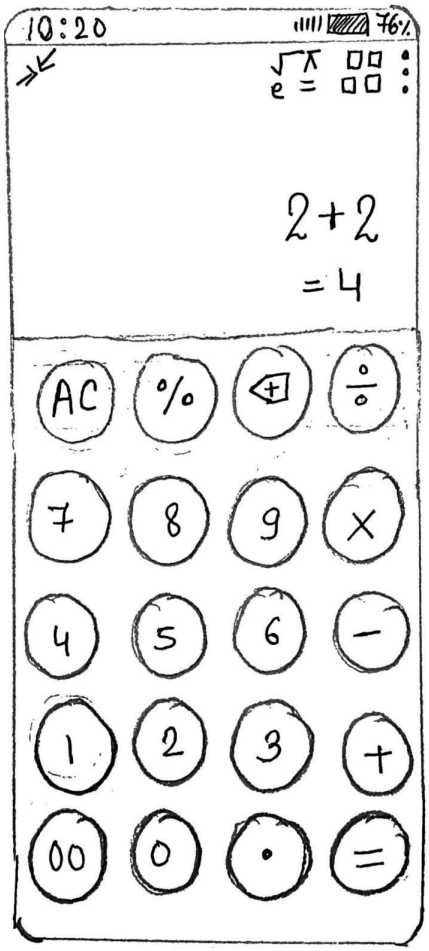


This page serves as both the introduction and the main entry point of the app. The app is named **"Calc Master"** (a name that emphasizes the app's versatility and expertise in handling various calculations). The tagline, **"Designed for Everyone's Every Calculation Need,"** is prominently displayed beneath the app name to convey the app's comprehensive utility for all types of users.

At the center of the screen, the **app logo** is featured, visually representing the app's identity and purpose. The overall design is clean and minimalistic, focusing on providing users with an immediate sense of the app's capabilities and user-friendly nature.

The Splash scree+n smoothly transitions into the Home Screen, where users are greeted with a user-friendly interface, ready to start their calculations.

2. Calculator:

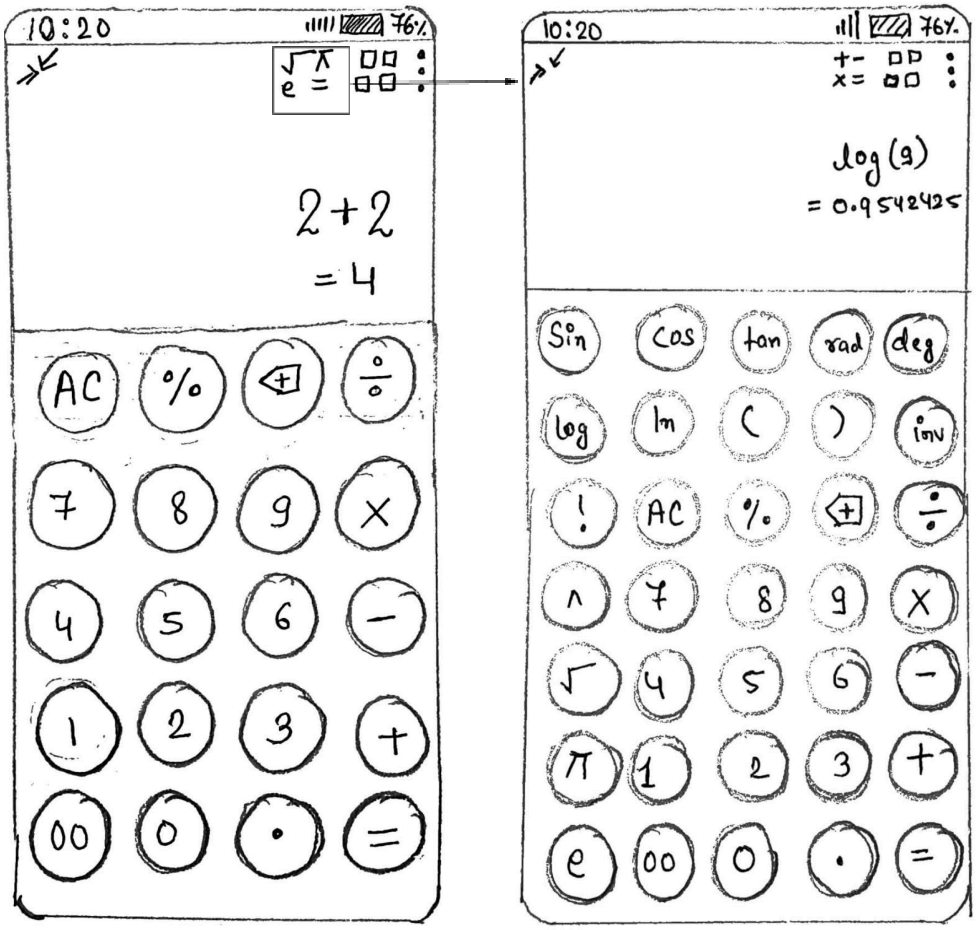


This page features a standard calculator layout with **20 buttons**. These include the digits 0-9, a double zero (00), a decimal point, and five operators: addition (+), subtraction (-), multiplication (*), division (/), and percentage (%). Additionally, there are buttons for clearing all input (AC), deleting the last digit (Back), and calculating the result (=).

At the top right corner, there's a navigation button that allows users to switch to the Scientific Calculator or the Converter Menu. This button is positioned above the edit text area where users enter or view their calculations.

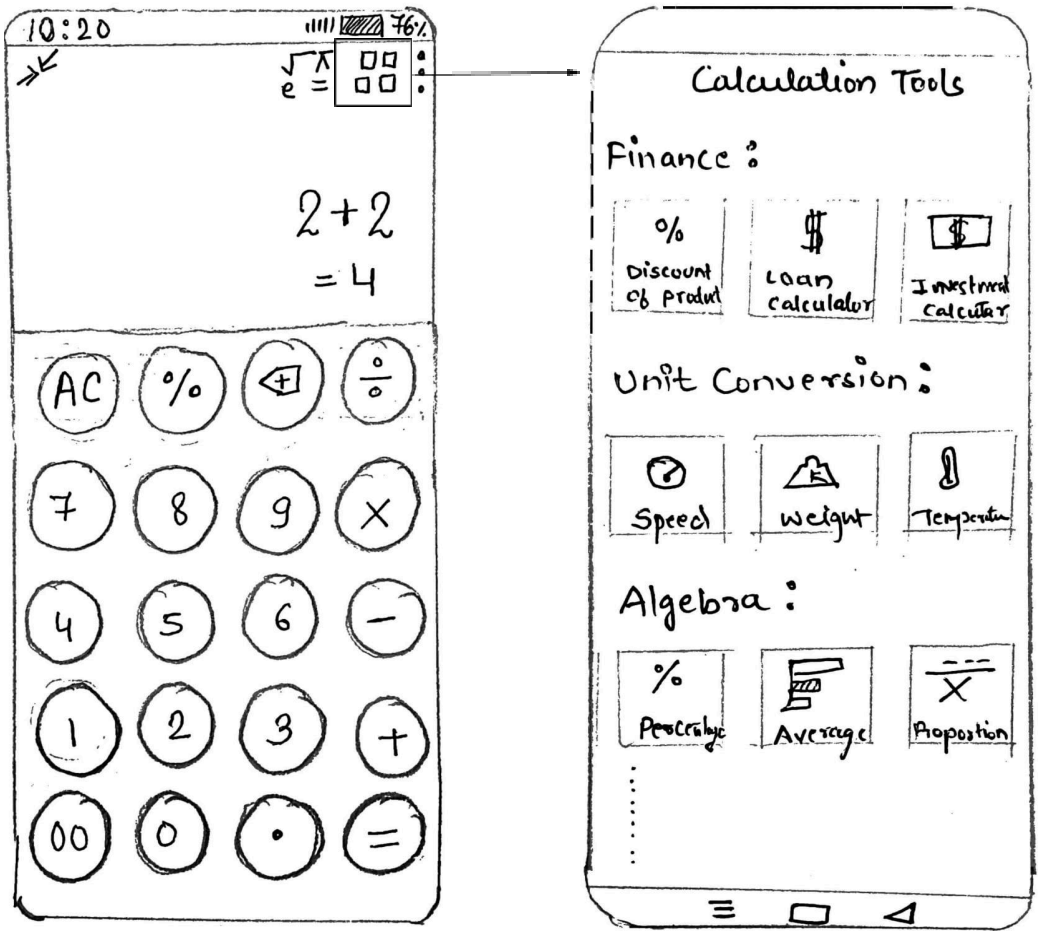
3. Scientific - Calculator:

This Android calculator project includes a comprehensive set of functions for both basic and scientific calculations. It features standard buttons for digits (0-9, 00), operations (+, -, *, /, %), a decimal point (.), and equals (=). The calculator also offers advanced functions, such as trigonometric operations (**sin, cos, tan**), **radian/degree modes, inverse functions, logarithmic operations (log, ln), parentheses, factorial (!), power (^), root, and constants like pi (π) and e**. These additions make it versatile for both simple and complex mathematical operations.



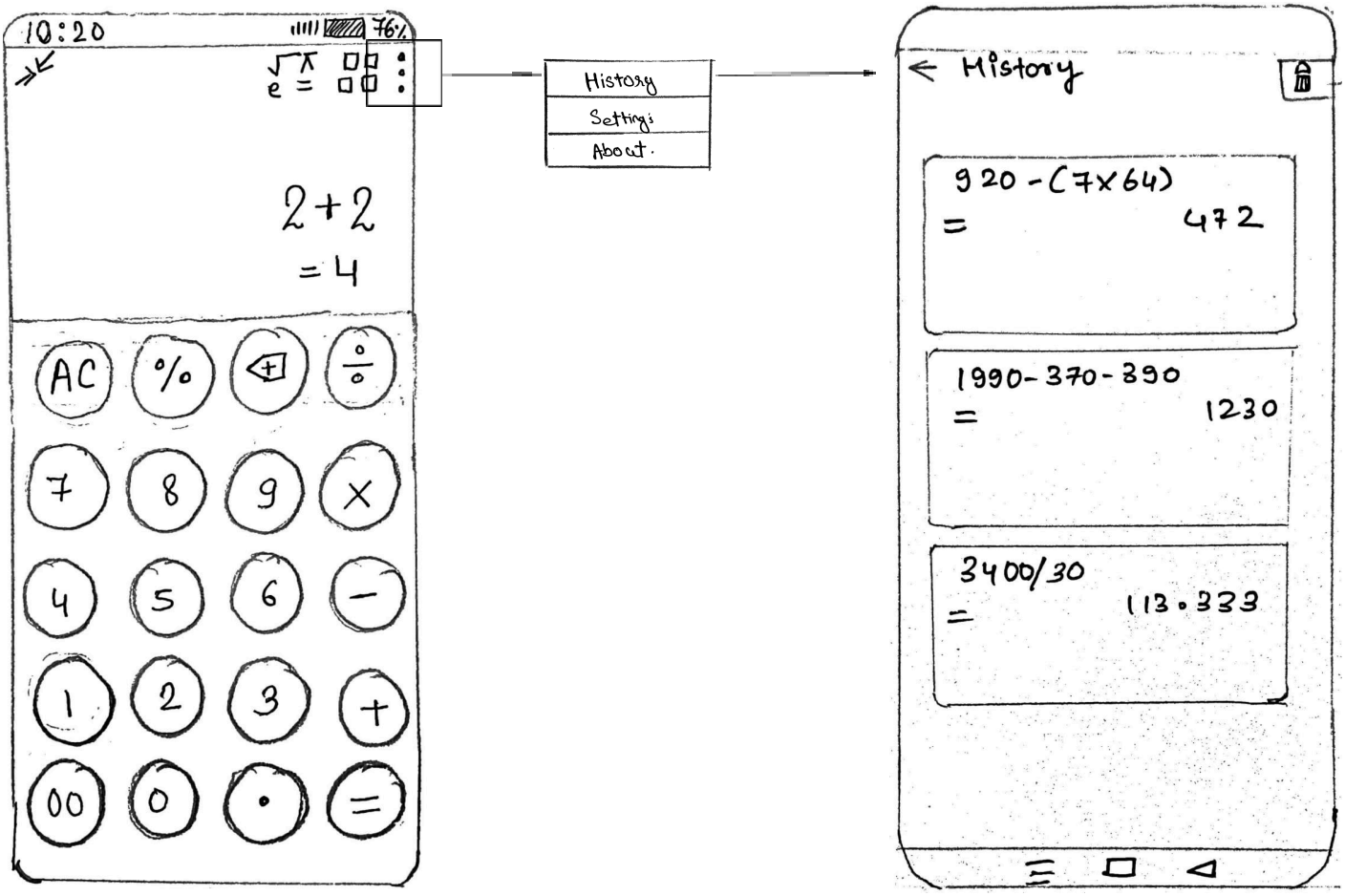
4. Converter Menu :

The image represents a sketched interface of the "**Calculation Tools**" menu for an Android application, organized into **three** distinct sections: **Finance, Unit Conversion, and Algebra**. The **Finance** section offers tools for calculating discounts on products, loan payments, and investment returns. The **Unit Conversion** section provides options to convert units of speed, weight, and temperature. Lastly, the **Algebra** section includes tools for computing percentages, averages, and proportions. The layout is designed with easy-to-recognize icons for each function, aiming to create a user-friendly experience for performing a variety of calculations and conversions within a single app.



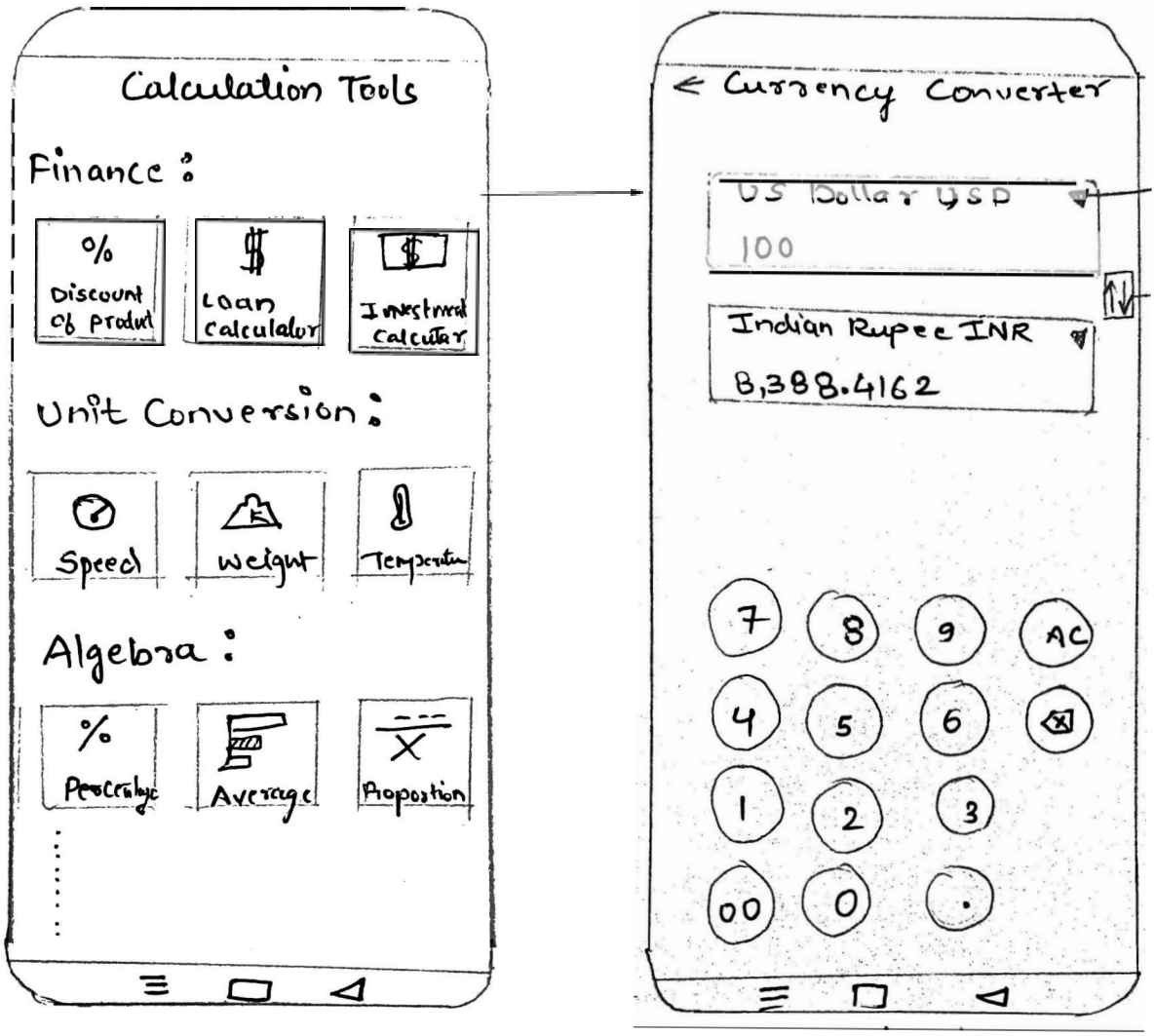
5. History Page :

This page displays a list of your last **20 to 30 calculations**. Users can view, edit, or delete individual calculations, or clear the entire history at once. This feature helps in tracking past calculations and making quick adjustments or reusing previous inputs.



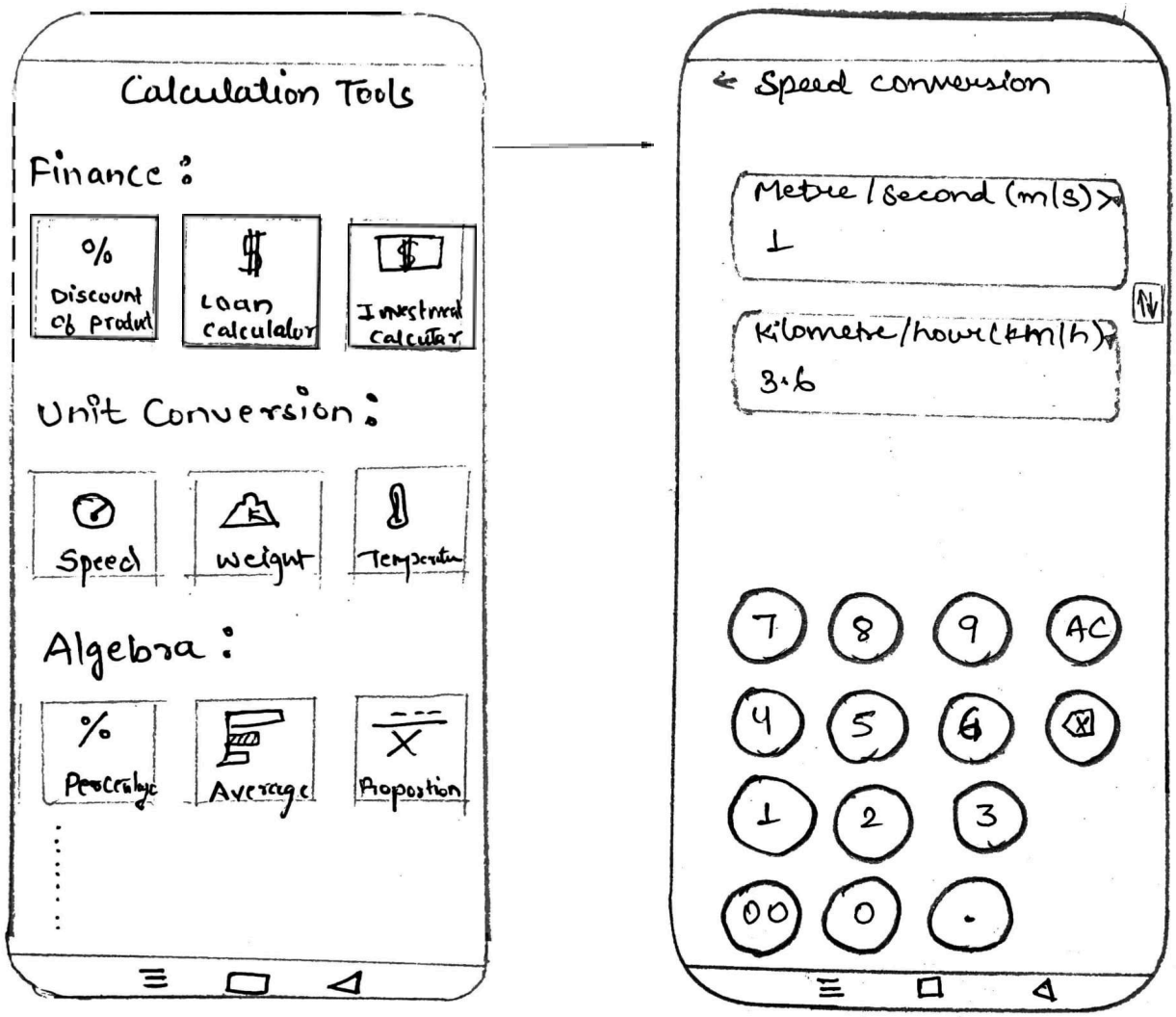
6. Currency Converter :

This page allows users to convert between **20 different currencies**, specifically from or to Indian currency. A toggle button or replace view feature lets users easily switch between different currency pairs, such as converting from INR to USD or INR to EUR, etc. The page includes a text view for input and a current currency rate display to show the latest conversion rates.



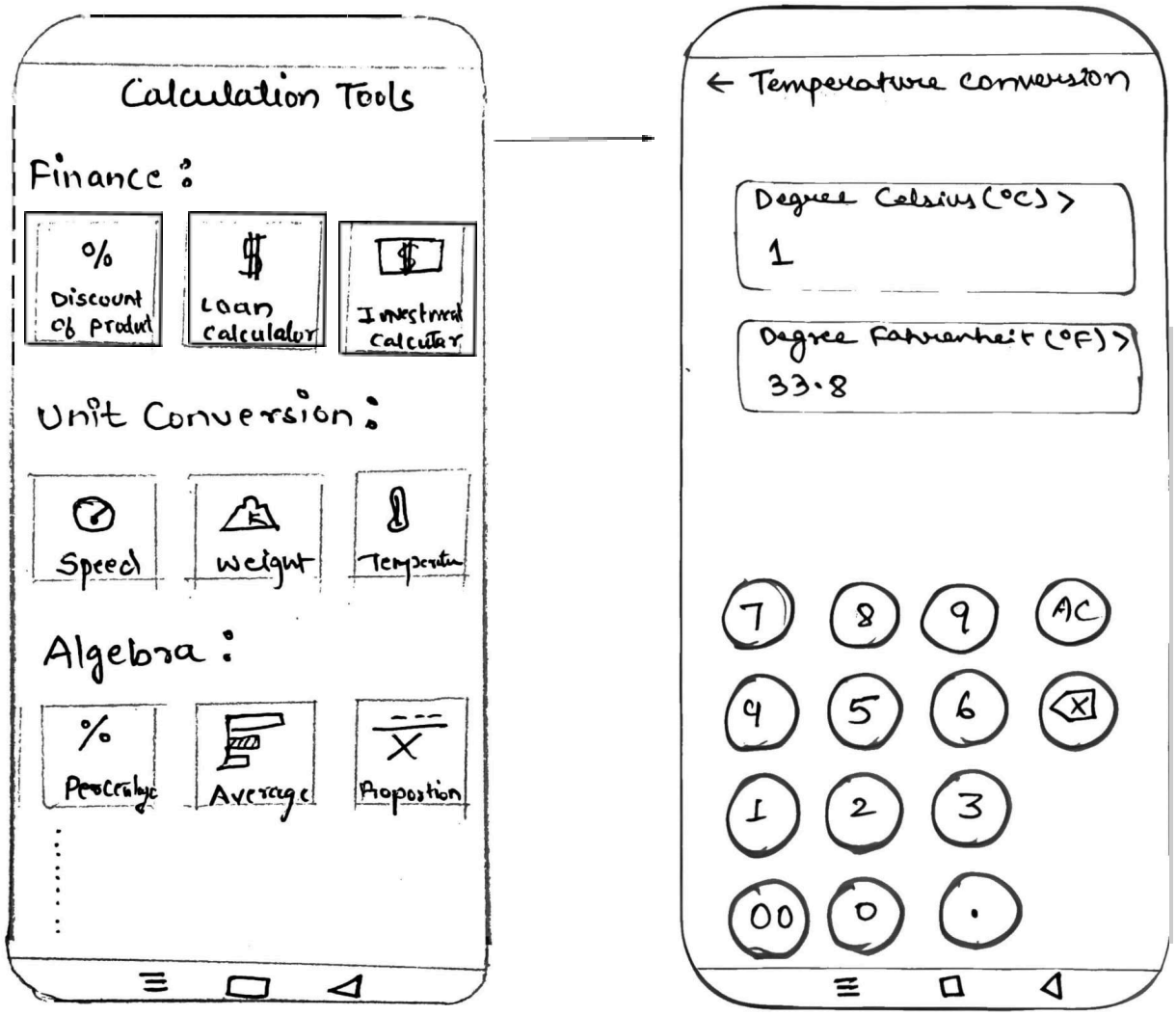
7. Speed Converter :

The design includes **two** input fields at the top: one for entering a **speed value** in meters per second (m/s) and another displaying the equivalent value in **kilometers per** hour (km/h). Below these fields is a numeric keypad with standard buttons (0-9), a decimal point (.), a double zero (00), and function keys like "AC" (All Clear) for resetting the input and a backspace button (X) for correcting mistakes. The layout is intuitive, allowing users to easily convert speed units by inputting values directly through the keypad.



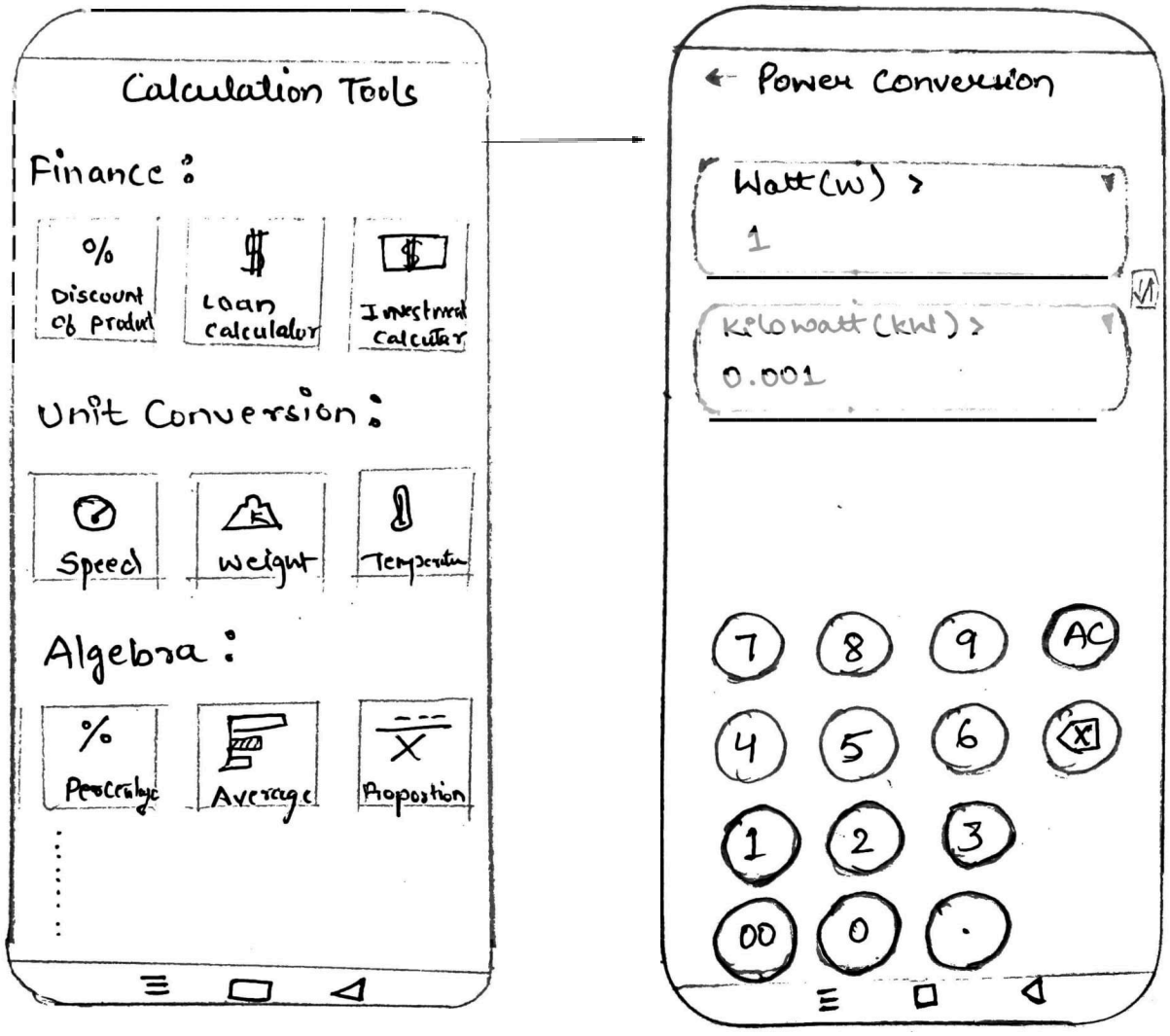
8. Temperature Converter :

The sketch illustrates a mobile app designed for temperature conversion. The app features a user-friendly interface with two input fields: one for **degrees Celsius (°C)** and the other for degrees **Fahrenheit (°F)**. Users can enter a **value in either field**, and the app will automatically convert it to the corresponding unit. Additionally, the app includes a basic calculator with numbers 0-9, a decimal point (.), and an AC button for clearing the input. The "Π" button suggests potential integration with mathematical functions or constants related to temperature. This app provides a convenient and efficient way to convert between temperature units, making it a valuable tool for various applications.



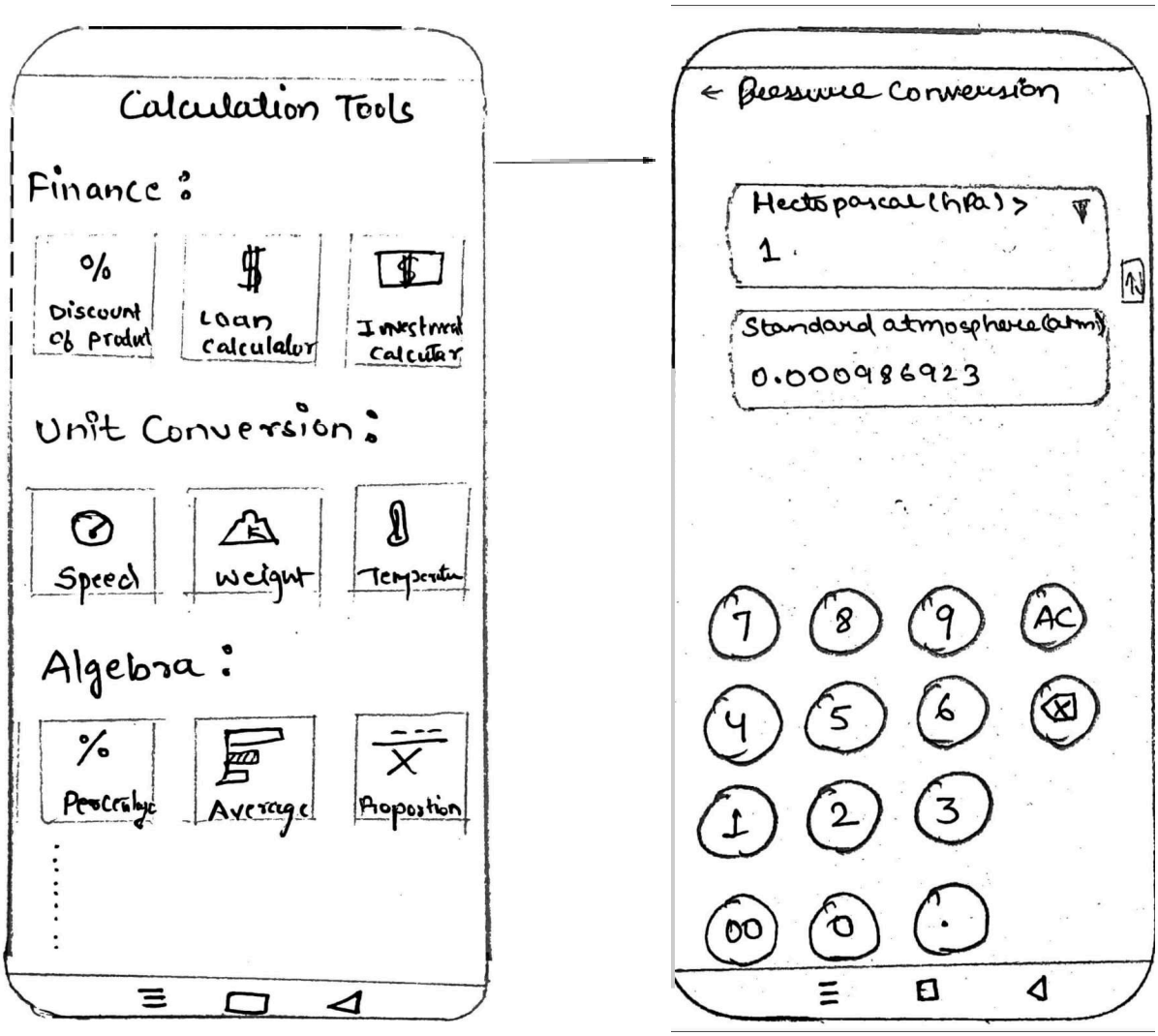
9. Power Converter :

This sketch depicts the user interface of a power conversion app for mobile devices. The layout includes a conversion input section at the top, where users can enter a value in **watts (W)** and see the equivalent in **kilowatts (kW**). Below the conversion fields is a numeric keypad, allowing users to input values directly. The keypad includes standard numeric buttons (0-9), a decimal point (.), a double zero (00), and function keys like "AC" (All Clear) to reset the input and a backspace button (X) to correct errors. The design is simple and user-friendly, facilitating quick and easy power conversions.



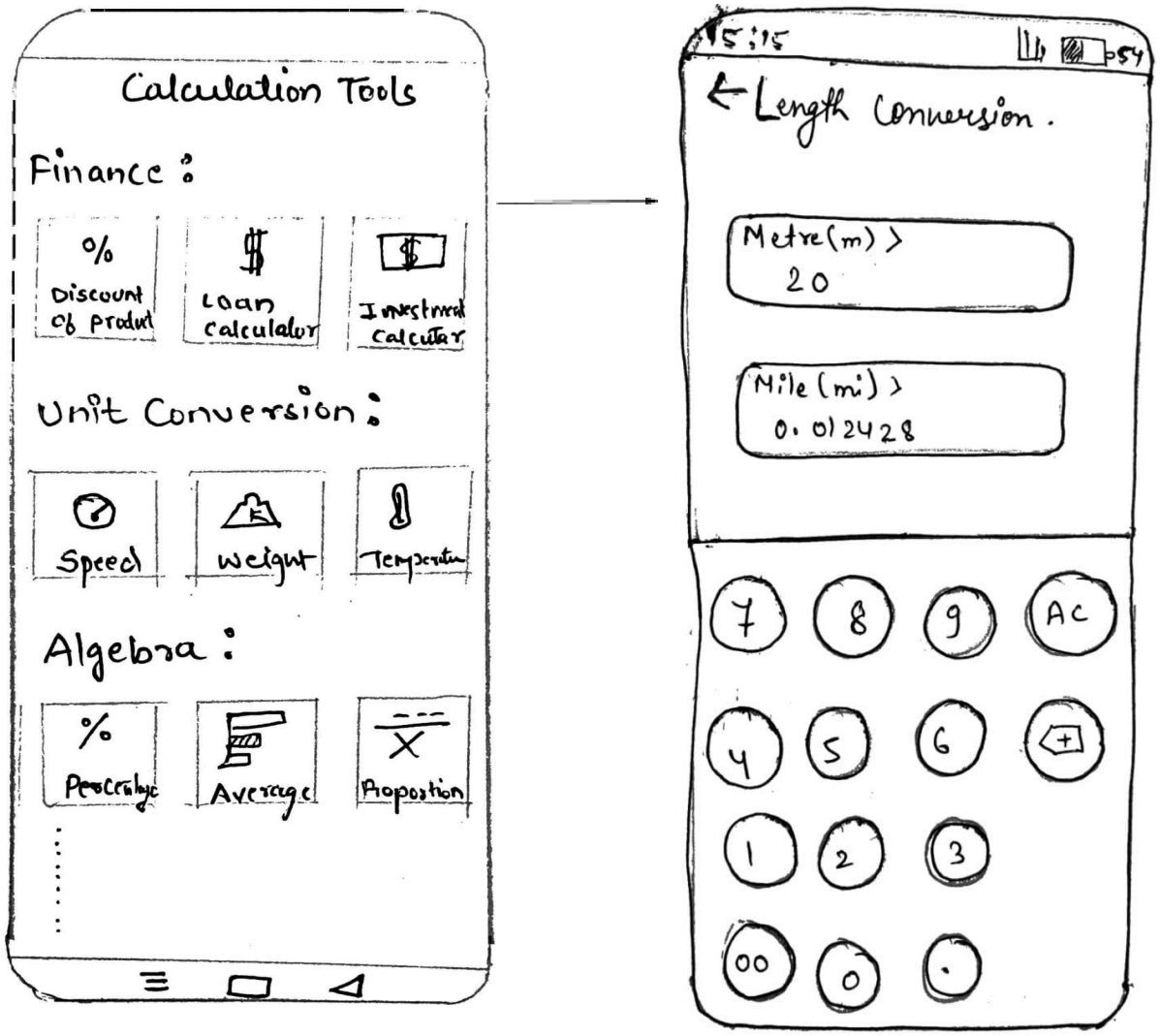
10. Pressure Converter :

The UI sketch depicts a mobile app designed for pressure conversion. The app features a clean and intuitive interface with a calculator-like layout. Users can input a value in **hectopascals** (hpa) and the app will automatically convert it to **standard atmospheres** (atm). The calculator includes a clear button (AC), backspace (←), and basic arithmetic operations (7-9, 4-6, 1-3, 0, .). Additionally, a "Π" button suggests potential integration with mathematical functions or constants related to **pressure**. The app's primary functionality is to provide a quick and easy way to convert between pressure units, making it a useful tool for various scientific and engineering applications.



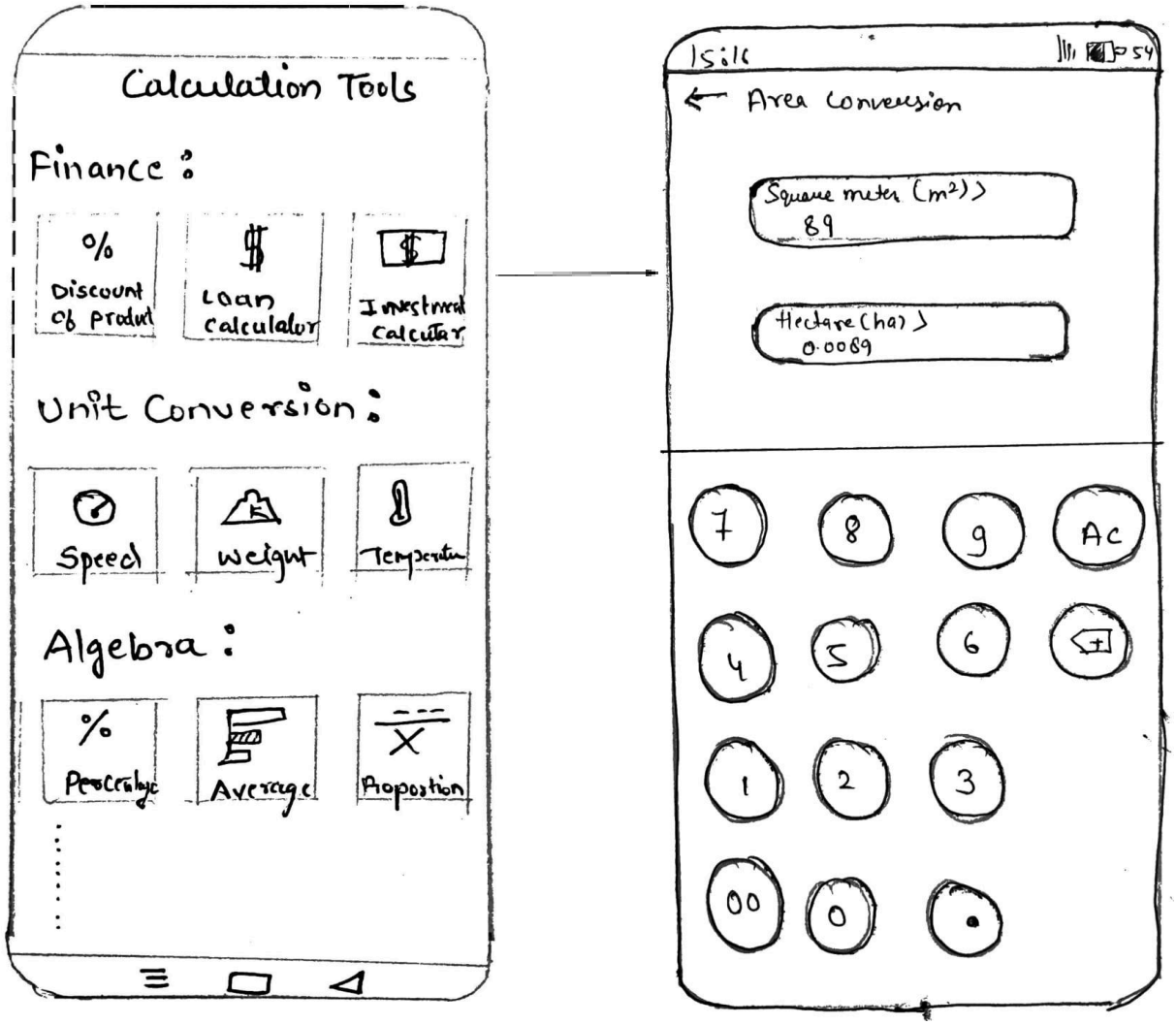
11. Length Converter :

On the newly **added length** conversion page, users can easily select and convert between various units. This extension adds versatility, allowing for quick and convenient unit conversions alongside mathematical functions



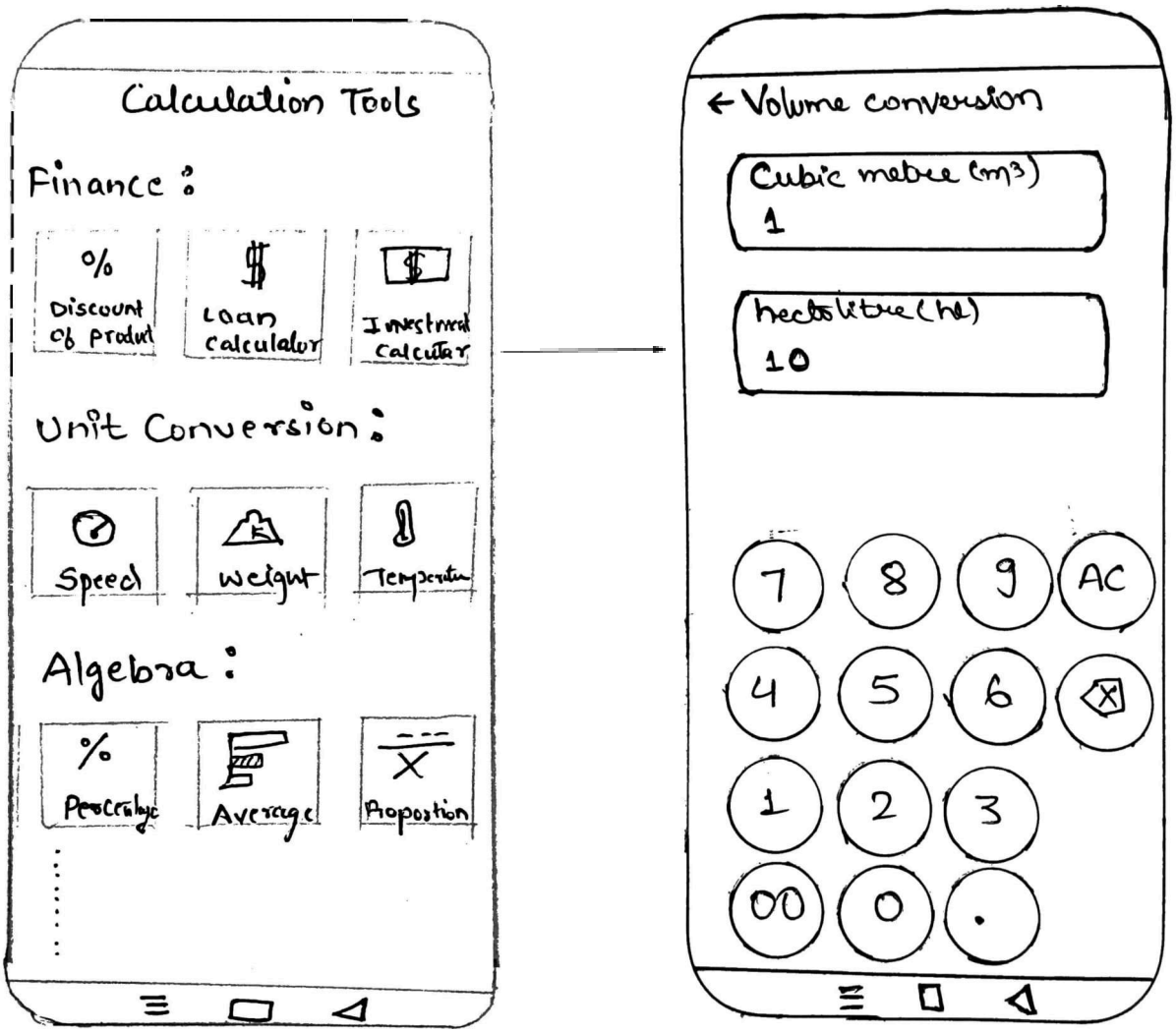
12. Area Converter :

Users can select and convert between various units of **area**, enhancing the calculator's functionality for different measurement needs. This addition makes it easy to perform accurate area conversions alongside mathematical calculations.



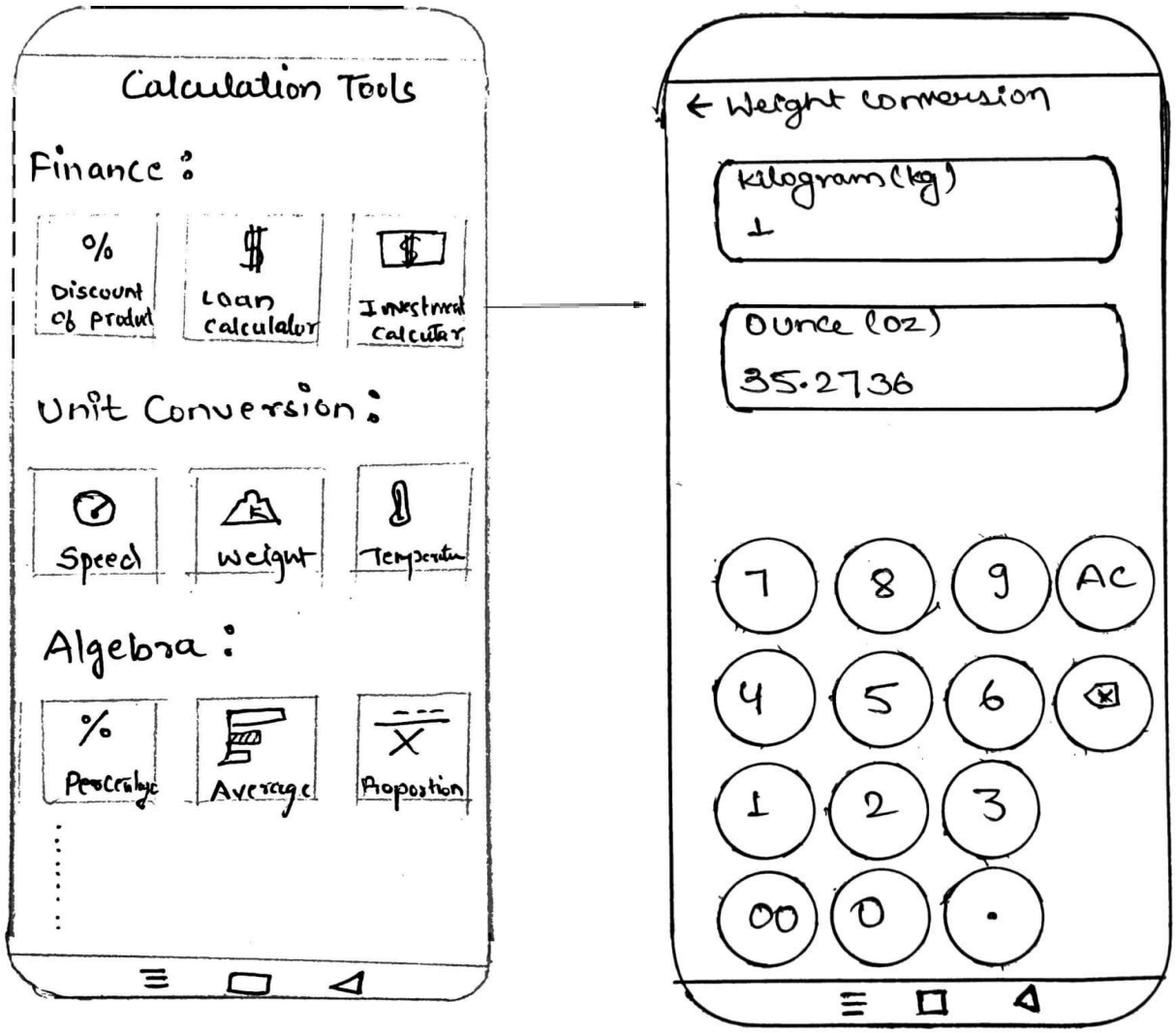
13. Volume Converter :

This sketch represents the UI design for a **volume conversion** feature within a mobile app. The interface allows users to convert between **cubic meters (m^3)** and **hectoliters (hl)**. The layout includes two input fields at the top for entering and displaying the conversion values. Below these fields, a numeric keypad is provided for input, featuring standard number buttons (0-9), a decimal point (.), a double zero (00), and functional keys like "AC" (All Clear) and a backspace button (X). This design maintains consistency with other conversion types within the app, providing a user-friendly experience for quickly converting volume measurements.



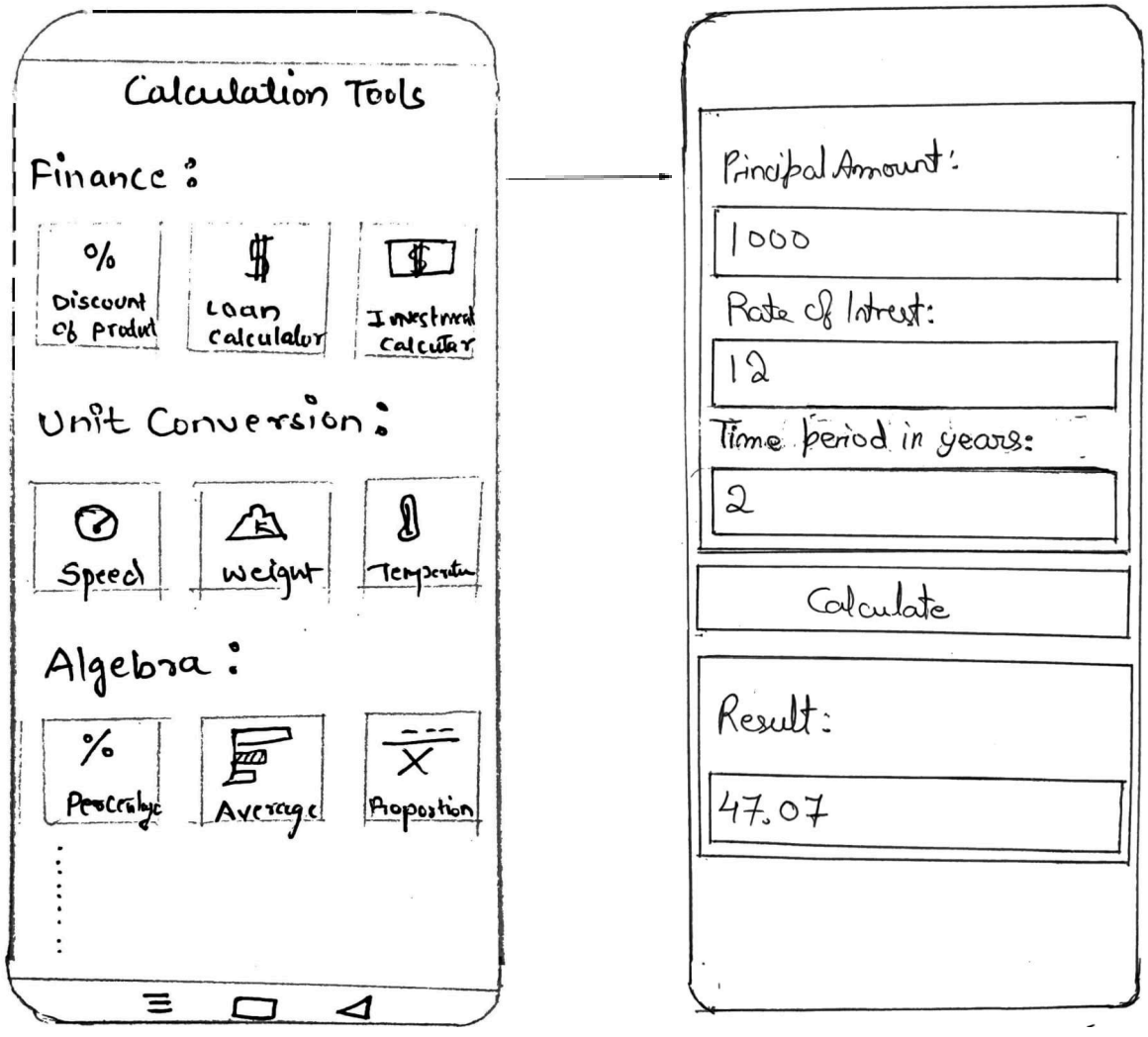
14. Weight Converter :

The sketch shows a weight conversion UI for a mobile app, featuring two input fields labeled "**Kilograms (kg)**" and "**Ounce (oz).**" Users can input values using a numeric keypad below the fields, which includes buttons for numbers (0-9), a decimal point, "00," "AC" (clear all), and backspace (X). The layout is consistent with other conversion tools, ensuring an intuitive user experience. The down arrow next to "Kilograms (kg)" suggests the possibility of selecting different units. Overall, the design is user-friendly, allowing quick and easy conversion between units.



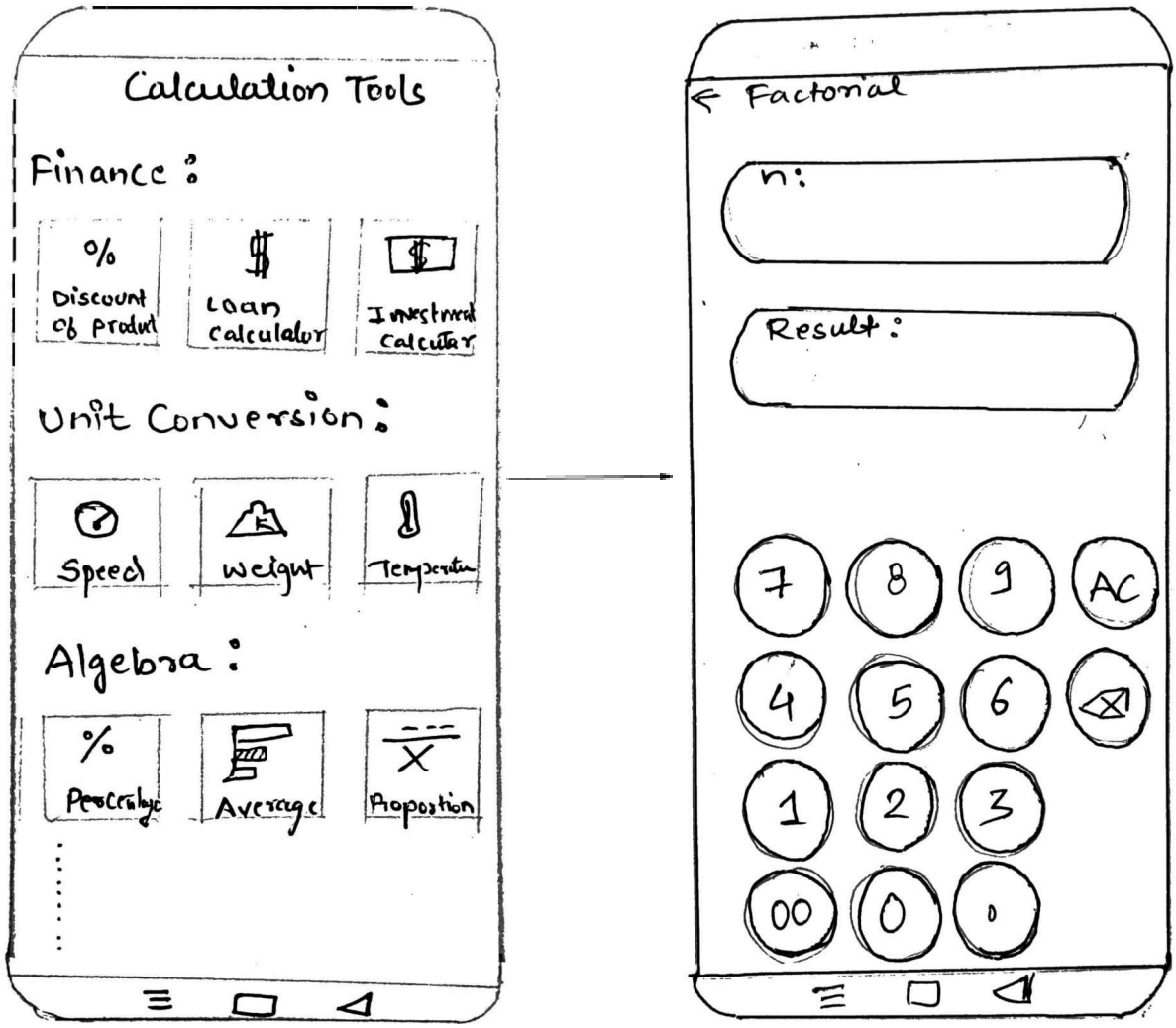
15. Loan Converter :

Loan calculators can help you figure out **your monthly payments** on different types of **loans**. These include mortgages, car loans, personal loans, and so on. They can also help you understand how much you can afford to borrow based on your income and other factors.
This UI Sketch is prepared with three EditText Input fields for:
Principal Amount, Rate of Interest & Time period in years for the input that is required to calculate loan. A "Calculate" button is added to calculate the result of the loan for the given amount. The calculate button holds all the mathematical equations and methods to calculate loans. An Output field labeled "Result" EditText is added to show the result of the calculated loan amount. All the input fields are labelled with TextView creation. And to "Copy" and "Share" the result, two Buttons are added.



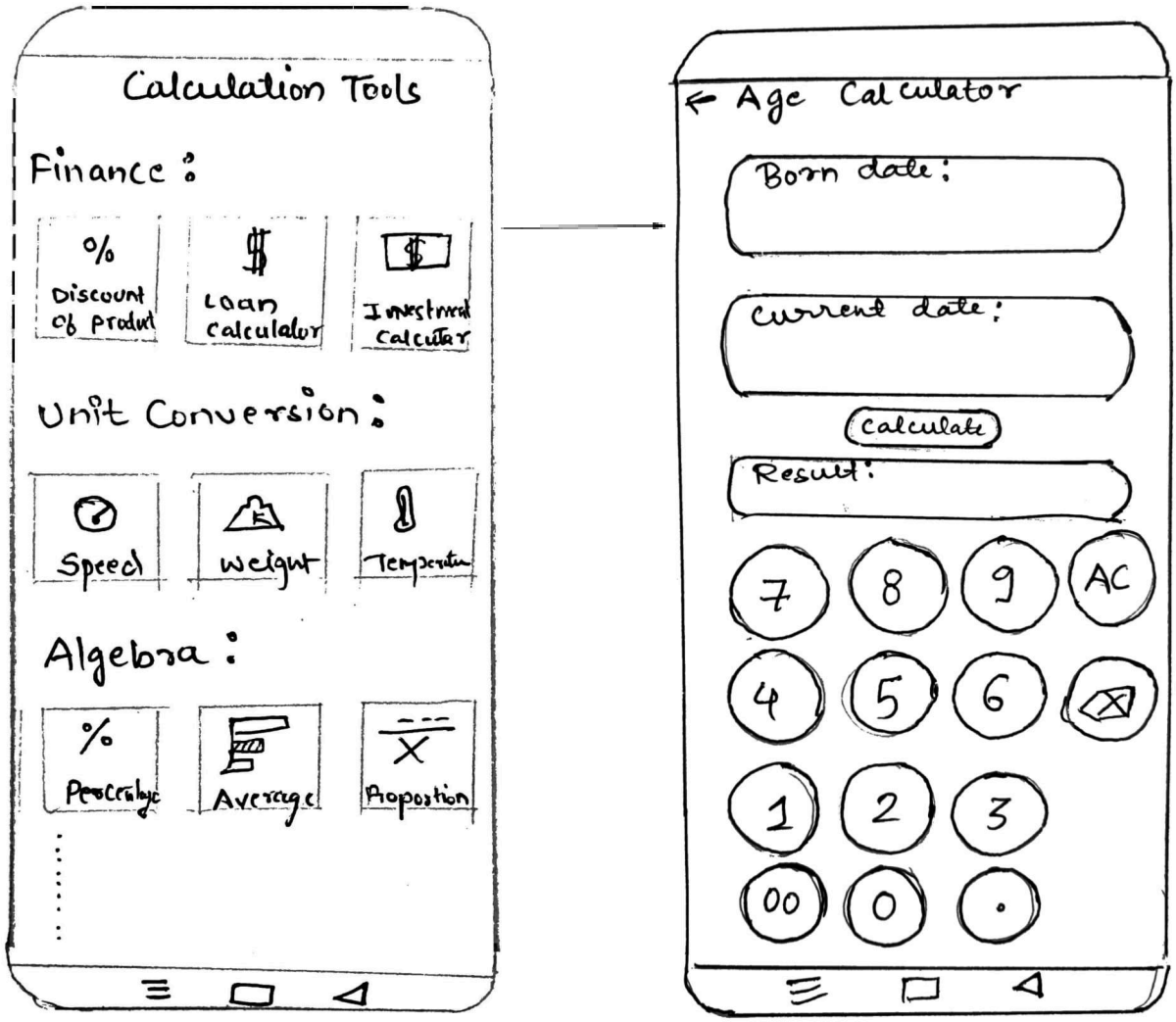
16. Factorial Converter :

The factorial calculator app offers a user-friendly interface that allows users to input a number into the designated field. Upon clicking the "Calculate" button, the app will compute the factorial of the entered number. The factorial is calculated by multiplying the number by **all positive integers** less than or equal to itself. For example, the factorial of 5 (denoted as 5!) is calculated as 5 * 4 * 3 * 2 * 1, resulting in 120. This tool is invaluable for various mathematical calculations and problem-solving tasks, particularly in fields such as combinatorics, probability, and statistics. The factorial calculator can be used to determine the number of permutations or combinations in a set, calculate probabilities, or solve complex mathematical equations. Its straightforward design and efficient calculations make it a valuable asset for students, researchers, and professionals alike.



17. Age Converter :

The age calculator app features a simple and user-friendly interface that allows users to **input their birth date**. Once the "Calculate" button is clicked, the app will automatically **determine their current age** based on the **user's input**. The app's primary functionality is to provide a **quick and easy way to calculate age**, making it a useful tool for various purposes, such as determining eligibility for certain activities or events, calculating age-related benefits, or simply satisfying curiosity. Additionally, the app's straightforward design ensures that users of all ages can easily navigate and use the tool, making it accessible to a wide range of individuals.



18. Percentage Converter :

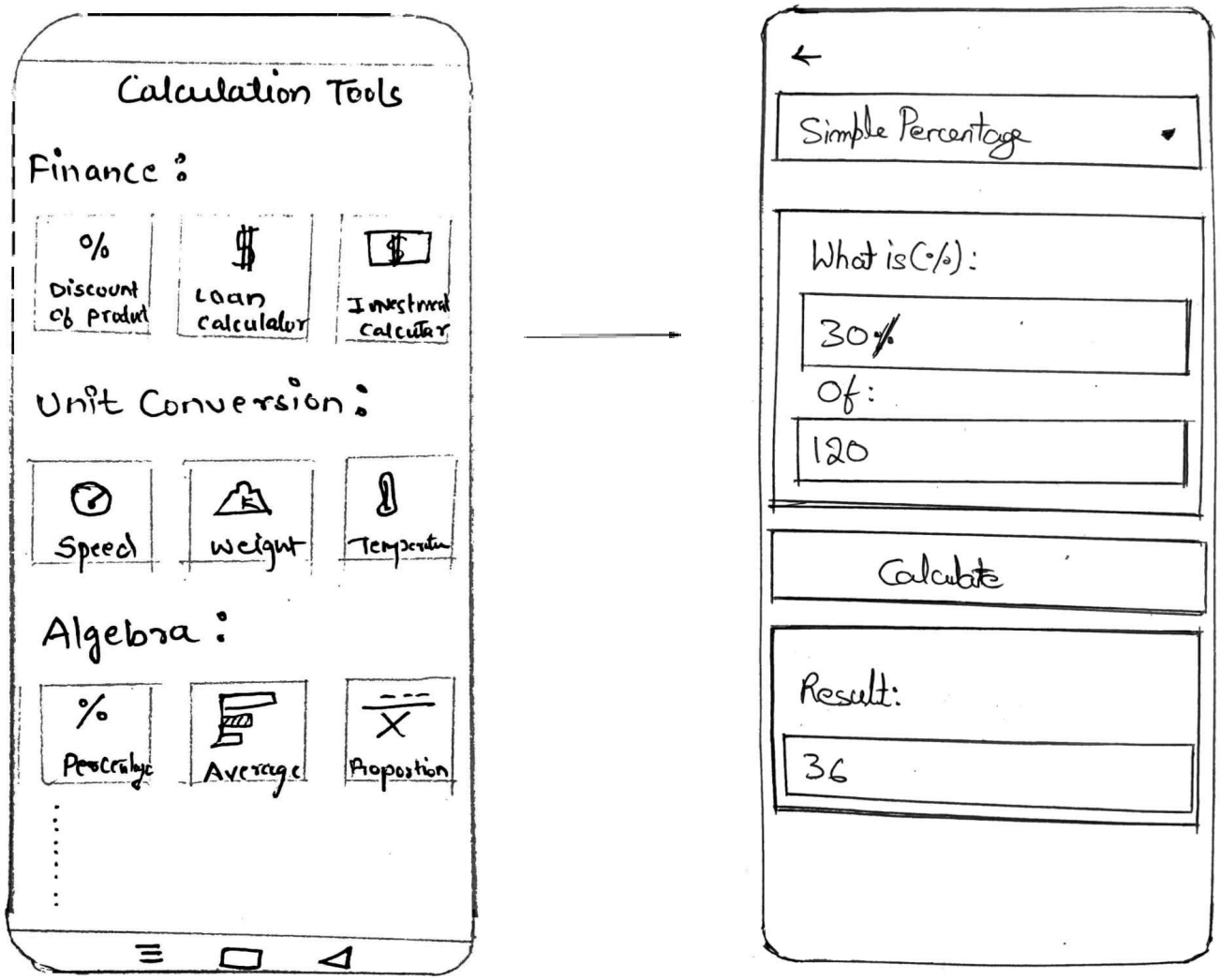
Percentage calculators can be a reliable resource for students and professionals, as they can simplify complex calculations into straightforward results, ensure accuracy and speed, and save time. Some percentage calculators are available online and can be accessed from any device.

Section labeled "Simple Percentage" TextView along with with input fields for:

"What is (%)" & "of" by using Edit Text for inputting data for calculation of percentage.

A "Calculate" button is added to calculate the percentage of the given Input.

The calculate button holds all the mathematical equations and methods to calculate loans. An Output field labeled "Result" EditText is added to show the result of the calculated percentage

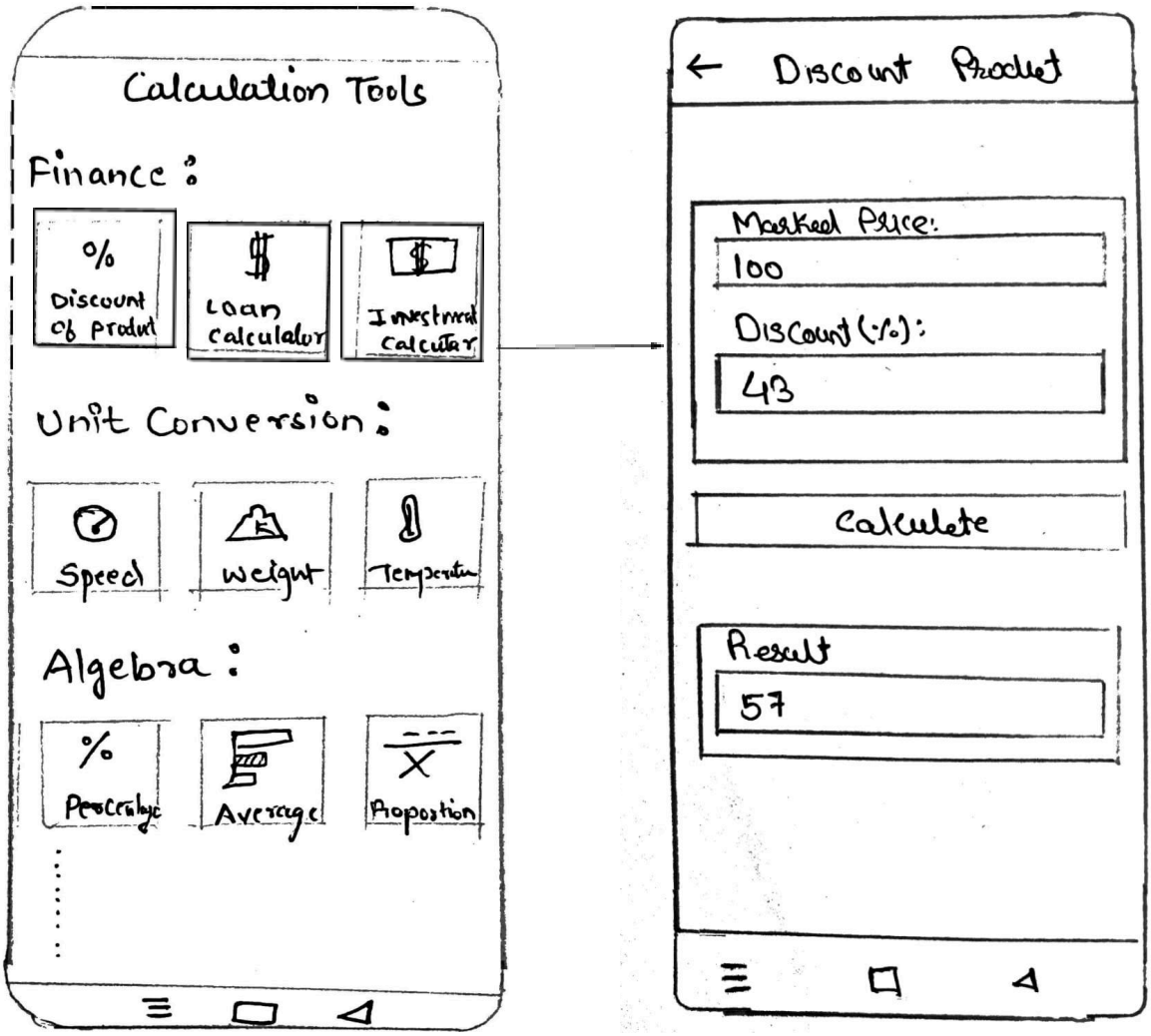


19. Discount Converter :

This page helps users quickly calculate discounts on any given market price. Users can enter the original price and the desired discount percentage. Below these input fields, a **Calculate** button triggers the computation, and the result is displayed in the result view at the bottom.

Time-Saving: Quickly determine the final price after applying a discount, avoiding manual calculations.

Convenience: Ideal for shoppers and sellers to evaluate discounts and make informed purchasing or pricing decisions



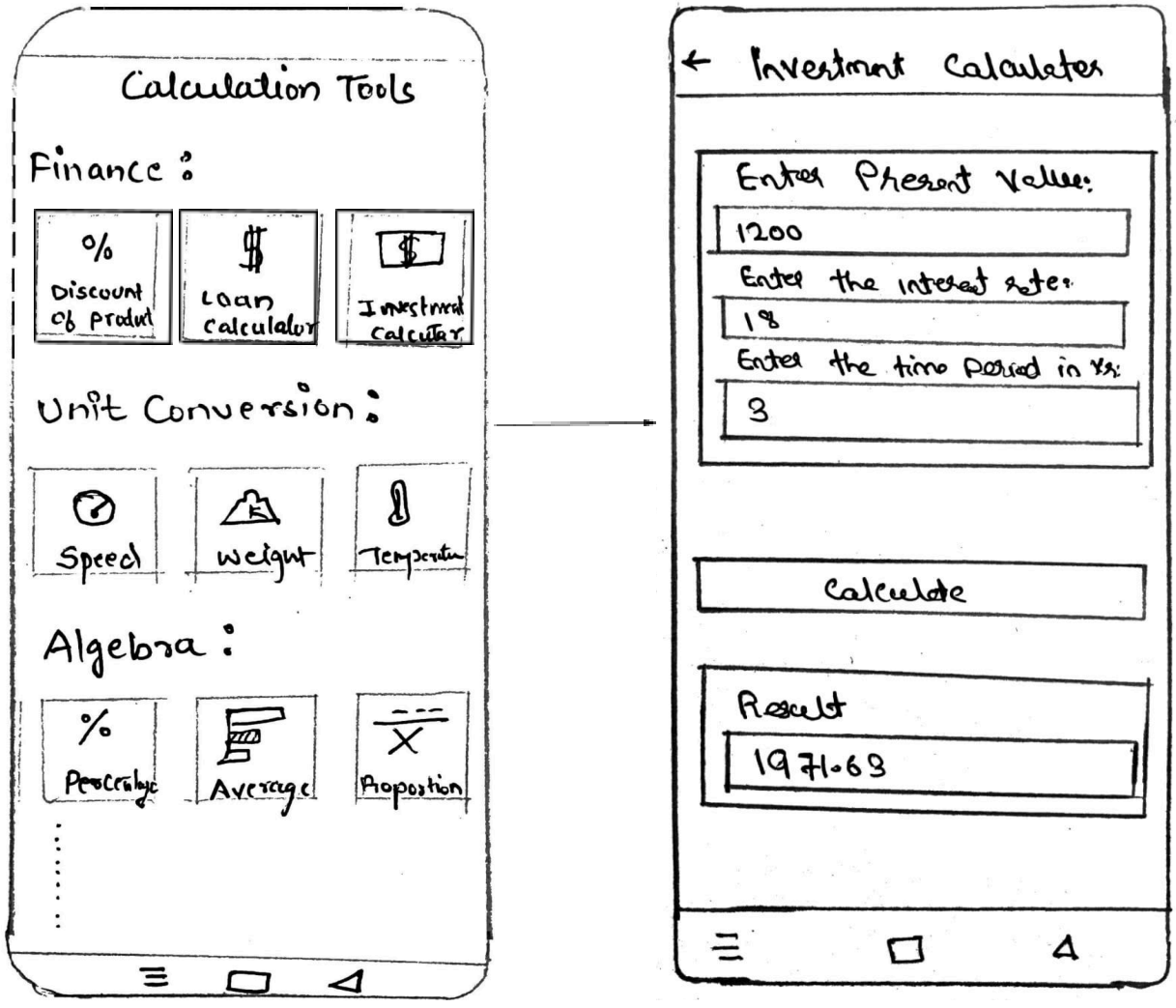
20. Investment Converter :

This page helps users calculate the future value of an investment. It includes three input sections: **Present Value**, **Interest Rate**, and **Time Period**. After entering the required details, users can click the **Calculate** button, and the result will be displayed in the result view below.

Financial Planning: Allows users to easily project the growth of their investments over time.

Informed Decisions: Helps in comparing different investment options by showing potential returns.

User-Friendly: Simplifies complex financial calculations, making it accessible to everyone, regardless of financial expertise.



21. Average Converter :

Average Calculator is an online tool used to find the average of the **given numbers**. The average is defined as the sum of all observations divided by the total number of observations. To use this average calculator, enter values, separated by a comma.
This UI Sketch is prepared with one EditText Input field for:
Entering series of numbers. A "Calculate" button is added to calculate the result of the Average for the given series of numbers. The calculate button holds all the **mathematical equations and methods to calculate Average**. An Output field labeled "Result" EditText is added to show the result of the calculated Average results. All the input fields are labelled with TextView creation. And to "Copy" and "Share" the result, two Buttons are added.