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Student to complete:

Student name and Mailing address:	Thomas Lambert 22 Magiltan Dve Strathbogie Vic 3666	**Curtin ID No.:**	22068271
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Unit name:	Web Design 2	**Unit code:**	DIG24
Tutor's name:	Anthony Raudino	**Assignment No.:**	1

Comments to Tutor or Open Universities Australia:

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Snowboarding Holiday Budget Calculator - Project Plan

Introduction

The Snowboarding Holiday Budget Calculator is an interactive web-based application designed to help users estimate their holiday costs. This project focuses on providing a user-friendly interface, dynamic calculations, and customizable options to suit various travel preferences. The following document outlines the pseudocode for the application's programming logic, the project scope and objectives, and the technical stack utilized.

Scope and Objectives

Scope

This project aims to develop a single-page application to calculate and manage snowboarding holiday budgets. Users can input their desired budget, select trip options, and receive a detailed breakdown of their expenses. The application accommodates both predefined and custom values, ensuring flexibility and inclusivity for unique scenarios.

Objectives

1. **User Interaction**: Enable users to input key details such as budget, location, travel dates, equipment preferences, and budget tier.
2. **Dynamic Calculation**: Provide real-time calculations based on user selections and predefined values.
3. **Customization**: Allow users to input custom cost details for greater flexibility.
4. **Visual Feedback**: Use engaging visuals to indicate budget compliance.
5. **Accessibility**: Ensure the application is responsive and user-friendly across devices.

Technology Stack

Frontend

- **HTML5**: For structuring the webpage elements.
- **CSS3**: For styling the application and ensuring a responsive design.
- **JavaScript (ES6)**: For implementing dynamic functionalities and user interactions.

Libraries and Tools

- **Flatpickr**: A lightweight date picker library for selecting travel dates.
- **Browser APIs**: For handling DOM manipulation and events.

Development Environment

- **Code Editor**: Visual Studio Code or equivalent.
- **Local Server**: Python's HTTP server for local testing.

Assets

- **Images**: Background and icons (e.g., happy face and sad face images) to enhance visual appeal.

Pseudocode

Inputs

1. Prompt user to select:
    - **Location**: Dropdown with options - AU Local, AU Interstate, Japan, Canada, Custom.
    - **Budget Tier**: Dropdown with options - Low, Mid, High, Custom.
    - **Equipment Option**: Dropdown with options - Hire, Gear Transport, N/A, Custom.
    - **Start Date**: Date Picker.
    - **End Date**: Date Picker.
2. If "Custom" is selected in any dropdown:
    - Display additional input fields:
        - Custom Accommodation Cost ($/day).
        - Custom Travel Cost ($).
        - Custom Lift Ticket Cost ($/day).
        - Custom Food Cost ($/day).
        - Custom Transfers Cost ($).
        - Custom Equipment Cost ($/day).

Actions

1. User clicks the "Calculate" button.

Processing

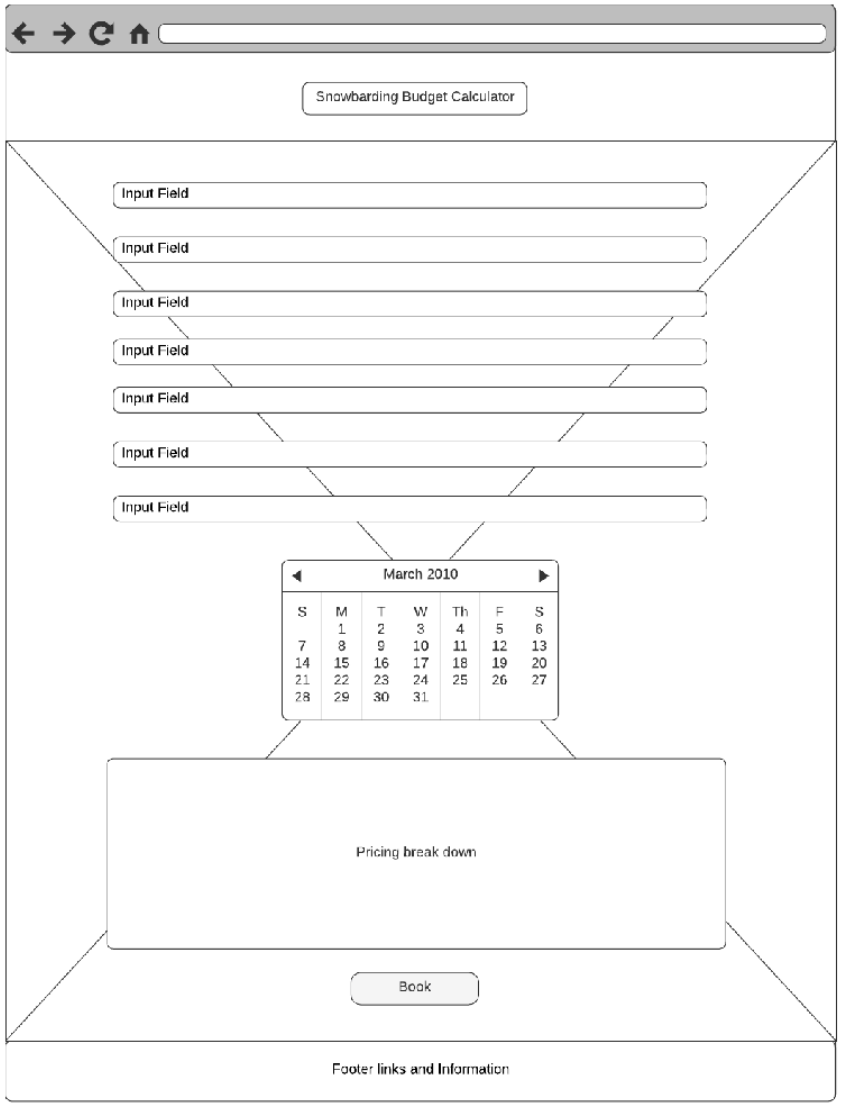
1. Validate inputs:
    - Ensure Start Date and End Date are selected, and End Date is after Start Date.
    - Validate that the Budget is entered and is a positive number.
2. Calculate trip duration:
    - `days = (End Date - Start Date)`
    - `skiDays = max(days - 2, 0)`
3. Calculate costs:
    - **Accommodation Cost**:
        - Custom value or `(days - 1) * predefined value`.
    - **Travel Cost**:
        - Custom value or predefined value.
    - **Lift Ticket Cost**:

        - Custom value or `skiDays * predefined value`.
    - **Food Cost**:
        - Custom value or `days * predefined value`.
    - **Transfer Cost**:
        - Custom value or `days * predefined value`.
    - **Equipment Cost**:
        - Custom value or `(days - 2) * predefined value + flat fee (if applicable)`.
4. Predefined values:
    - **Location**:
        - AU Local: Accommodation = 150/day, Travel = 250, Lift Tickets = 200/day.
        - AU Interstate: Accommodation = 150/day, Travel = 700, Lift Tickets = 200/day.
        - Japan: Accommodation = 150/day, Travel = 1800, Lift Tickets = 80/day.
        - Canada: Accommodation = 150/day, Travel = 4000, Lift Tickets = 100/day.
    - **Budget Tier**:
        - Low: Food = 20/day, Transfers = 30/day.
        - Mid: Food = 50/day, Transfers = 60/day.
        - High: Food = 100/day, Transfers = 100/day.
    - **Equipment**:
        - Hire: 80/day.
        - Gear Transport: Flat Fee = 200.
        - N/A: 0.
5. Calculate total expenses:
    - `totalCost = accommodationCost + travelCost + liftTicketCost + foodCost + transferCost + equipmentCost`.
6. Compare total expenses with user's budget:
    - `budgetDifference = userBudget - totalCost`.
    - Determine if under or over budget.

Outputs

1. Display each item in the results:
    - Accommodation: `$accommodationCost`.
    - Travel: `$travelCost`.
    - Lift Tickets: `$liftTicketCost`.
    - Food: `$foodCost`.
    - Transfers: `$transferCost`.
    - Equipment: `$equipmentCost`.
    - Total Cost: `$totalCost`.
    - User Budget: `$userBudget`.
    - Difference: Indicate if under or over budget and by how much.
2. Display visual feedback:
    - If under budget: Display a happy face image.
    - If over budget: Display a sad face image.

Wireframe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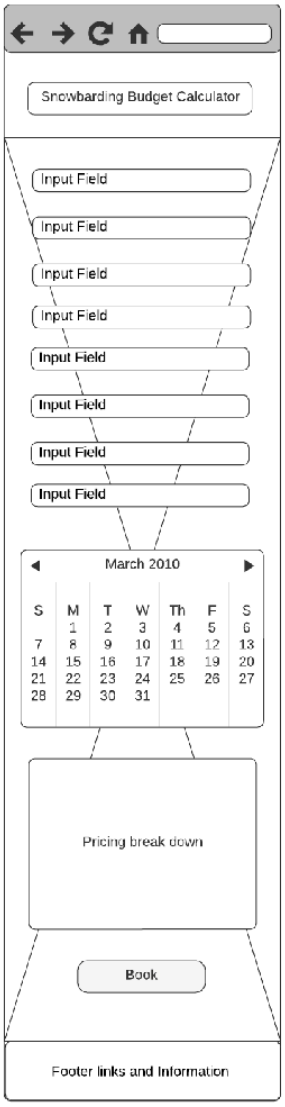
Pricing break down
Book
Footer links and Information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