AMRITA VISHWA VIDYAPEETHAM

BINARY

DESTINATION PLANNER

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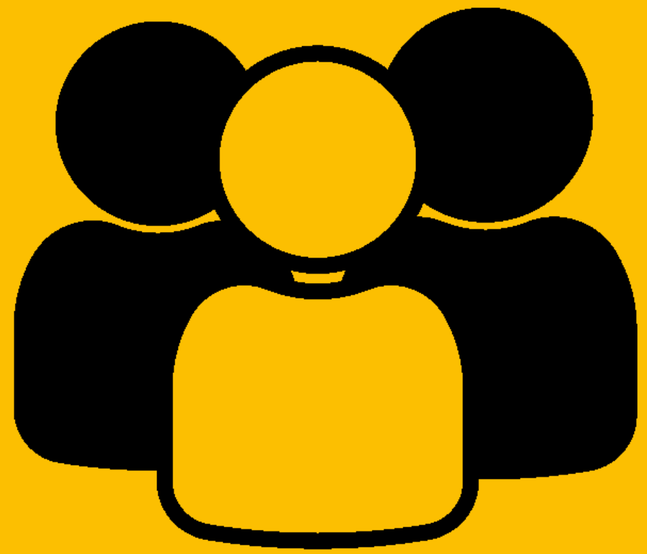

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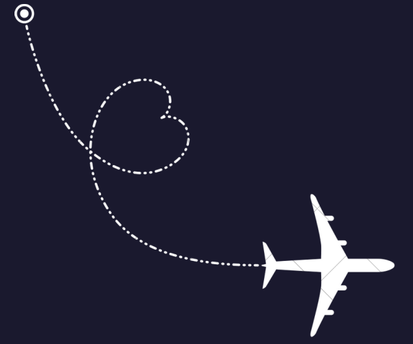
Introduction



Traveling is the most refreshing aspect for anyone. In this busy life any kind of refreshment is needed for everyone. Traveling fosters a medium to build human connections with one another by learning about culture, food, new sites, music, and the way people live their day-to-day lives in different parts of the world. It's the best on-site learning a person can get. The internet can only explain so much about a place. Even with virtual reality being a new and innovative option to take tours of places, there is still nothing like seeing a new place in person for the first time. One of the great benefits of traveling is the connections that are built, and the relationships made during one's stay. This **Destination Planning** system would help people in selecting among their interesting themes and get to their required destinations.

Challenge

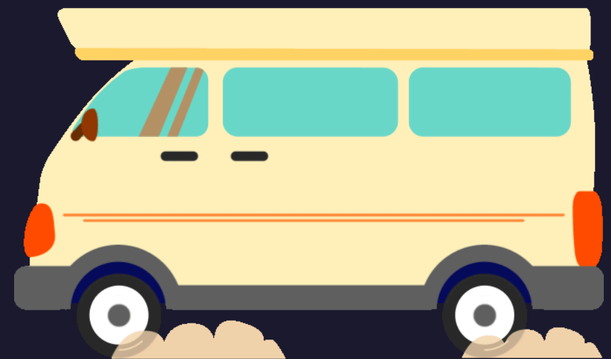
Everyone likes traveling but it would become a problem when people don’t have a clear idea of the places and themes they like to travel.
This destination planner mainly focuses on giving people the proper destinations of travel according to their interests. Predefined plans with respective themes would be given to the user. Then User can select a theme of his own interest such as trekking or beach partying or adventurous theme.
In this way proper solution for the problem of travelling with their interest can be obtained. This destination planning system would help people in selecting among their interested themes and get to their final destination.

Solution

- We have come up with a cross-platform application, where the user can choose through a varied number of trip themes according to their interest. With each theme, the user gets a series of binary options.

- These design of only asking two question to user helps them decide easily without being confused between dozens of options.

- Binary tree structure to makes the design of the plan very easy.

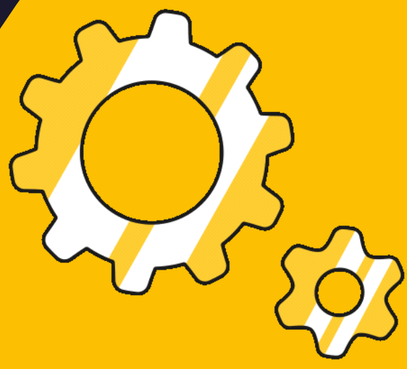


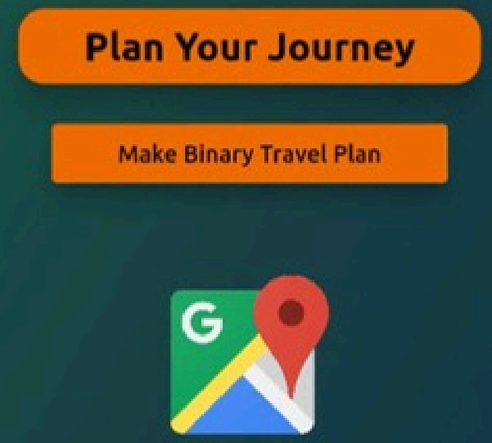
WORKING

- In this project, we implemented Binary trees and Linked List. This program not only aims at selecting the destination but also helps users in simulating the binary tree, which will extensively help people in understanding the working binary tree and makes trip design easy.
- The program is being hosted as a website by the platform called Netlify.

- Achieved Goals with the program:
  a. An interactive environment is created for the simulation of a Binary tree.
  b. User gets an easy and reliable destination plan based on their interests.
  c. This works as both web-based and app based, so the web-based doesn't require any installation, it can be directly accessed from a browser.
- Tech stacks that we used in it are

Flutter Dart

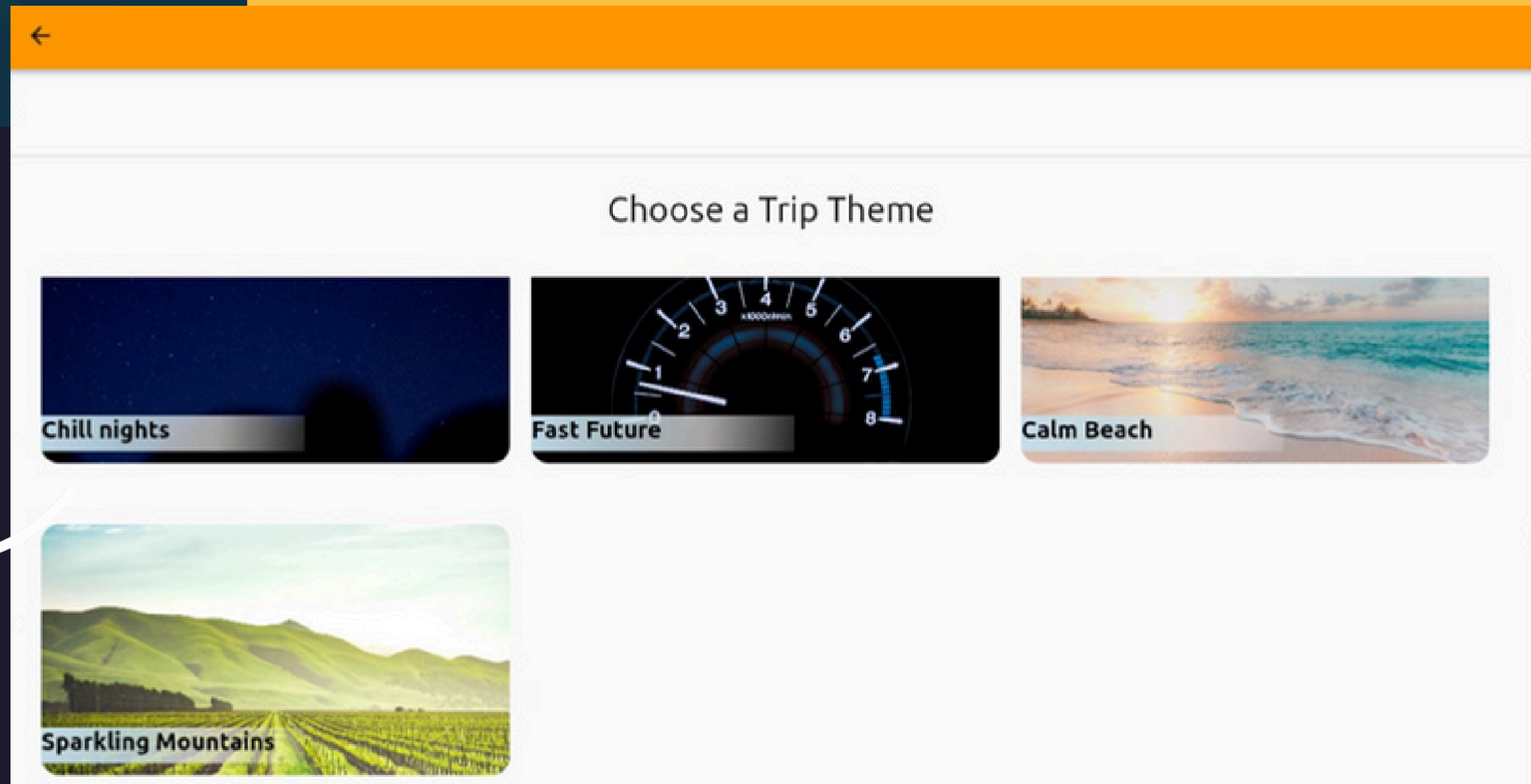


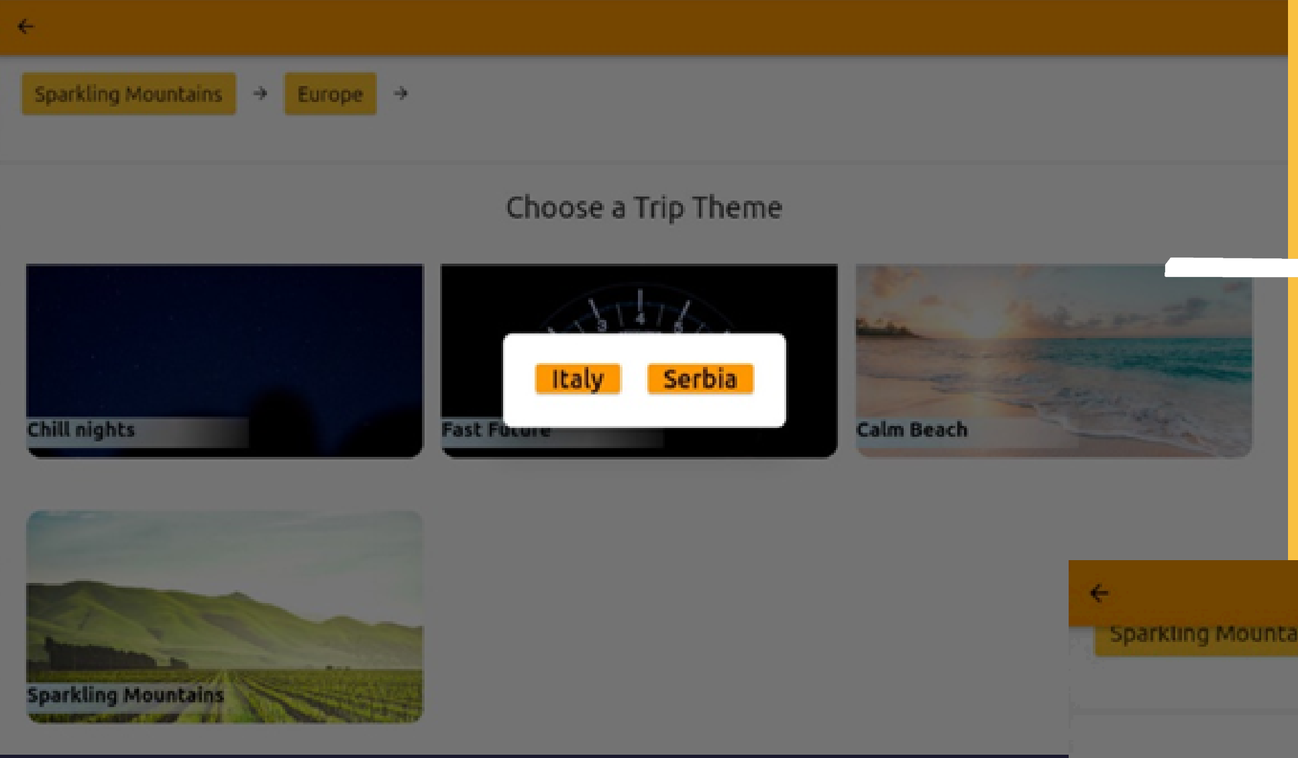


HOME PAGE

The created cross-platform app / website uses binary tree and linked list Data Structures implemented using Dart language in Flutter

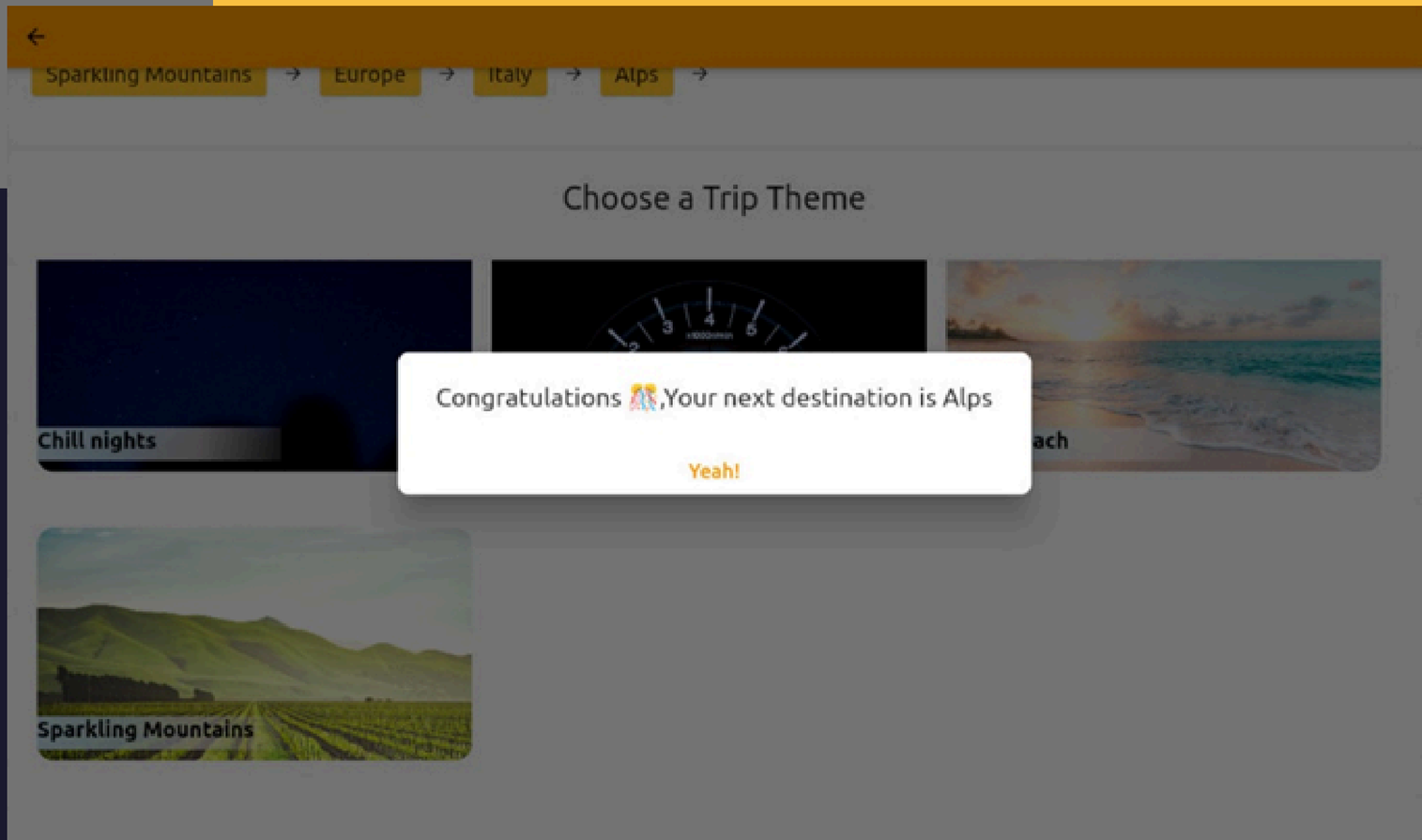
- User can select a theme based on his interest

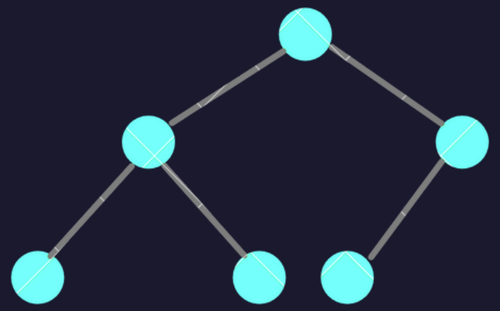




- After getting into the selection of themes user need to select between the provided options in the dropdown menu

- After selecting between the options the final destination would be planned and displayed at the top in the form of a linked list





DETAILS OF DATA STRUCTURES USED

Binary Tree:

- Binary trees are used to represent a nonlinear data structure.
- One of the most important applications of the Binary tree is in the searching algorithm.
- Binary Tree is used to as the basic data structure in Microsoft Excel and spreadsheets in usual.
- Binary trees can also be used for classification purposes. The binary tree data structure is used here to emulate the decision-making process.

Linked List:

- The linked list is a dynamic data structure.
- You can also decrease and increase the linked list at run-time.
- In this, you can easily do insertion and deletion functions.
- Unlike arrays, we do not have to allocate memory in advance.
- You can easily implement linear data structures using the linked list like a stack, queue.

Github Link for Source code

https://github.com/anshuman-8/binary_travel_planner

Website Link

https://benevolent-toffee-72d52c.netlify.app/#/

THANK YOU

AMRITA VISHWA VIDYAPEETHAM