



SOMAIYA
VIDYAVIHAR UNIVERSITY
K J Somaiya College of Engineering



CSI-KJSCE
technext
2023



HACKERSTELLAR

StoneX

INTL FCStone Technology Services Private Limited



HACKTRONAUT DETAILS



Crew Leader

Aditya Ved



Crew Member

Uditi Sinha



Crew Member

Navya Shrivastava

Problem Statement

In a world where space tourism has become a reality, a new startup has emerged that offers space travel packages to tourists. The company has hired your team to develop a software that will help them manage the bookings and logistics of their space tours. Your job as a developer is to create a software that will allow customers to book their space trips, manage their travel itinerary, and make payments securely. You can also add features that will help the company manage their fleet of spacecraft and track the status of each trip. The company has promised to pay your team handsomely in space credits for your work.

Proposed Solution

❖ Users and Components of the system

1. User Privileges Section:

- We can create a web based application (with web and mobile interface) in which the customer will create their account and gain access to the exciting world of space travel.
- On our web app, customers can select from thrilling packages of various trips to unique merchandise.
- This application would test customers fitness reports to accept only healthy candidates, the customers on the edge of eligibility would be offered special fitness programme (paid service) to help them become eligible for the trip.
- This app seamlessly integrates with insurance policy web apps for a hassle free trip.
- The customer could buy exotic products like cosmic rocks, merchandise, space gear, etc.
- User can buy subscriptions that would give them access to the videos captured live by the company's spaceships.
- User will get notifications, notifying them about any new packages added, news about their trip, etc.
- User experience will be personalized by analysing (using AI/ML) user data such as browsing history, clickstream data, and search queries to offer tailored recommendations.
- Customer service will be provided, that allows users to contact support staff in case of any issues or queries.
- User will have a profile, which will contain a profile picture, name, age, space credits, etc. Space credits are gained when user goes to trips.

2. Packages:

- Each package will have a description, its own default itinerary, customer ratings and reviews, popularity and difficulty.
- Packages will include trip to planets, space stations, stars, nebulae, stellar groupings, exoplanets, etc.

3. Booking portal:

- The portal will have a booking calendar that displays the availability of the selected package on specific dates. Users will be able to select their preferred dates and book the package.
- After inputting the number of passengers that the user wants to book for, he/she can select spacecraft tickets and hotel rooms from available rooms in the spacecraft and hotel (if package offers that). User can also pre-book meals.

4. Transaction

- User can choose any payment method: Cards, Phone Payment (UPI) and cryptocurrency.
- If after booking a package, user updates the travel itinerary, he/she may again have to pay some revision fees.
- If user has cancelled a booking, refund will be enabled.

❖ We will use blockchain technology for transactions which will enable the following :

- The transaction information is recorded on the blockchain and it's decentralized, making it close to impossible for even admins to alter the data.
- Using cryptocurrency will be possible using blockchain. No intermediaries will be involved and no conversion has to be made, making the payment process much quicker.
- We will also use smart contracts (using Ethereum) , which can automate the transaction after certain conditions are met.

5. Admin privileges:

- Admin can view a dashboard that displays the status of each spacecraft (availability, maintenance schedule, and upcoming trips).
- Admin can view information of trips (like the number of passengers, their itinerary, and any issues that arise during the trip).
- Admin can Manage shops, offered packages
- Admins can get an overall view of the system based on the data generated.

Technical Architecture

TECHNOLOGIES YOU ARE PLANNING TO USE

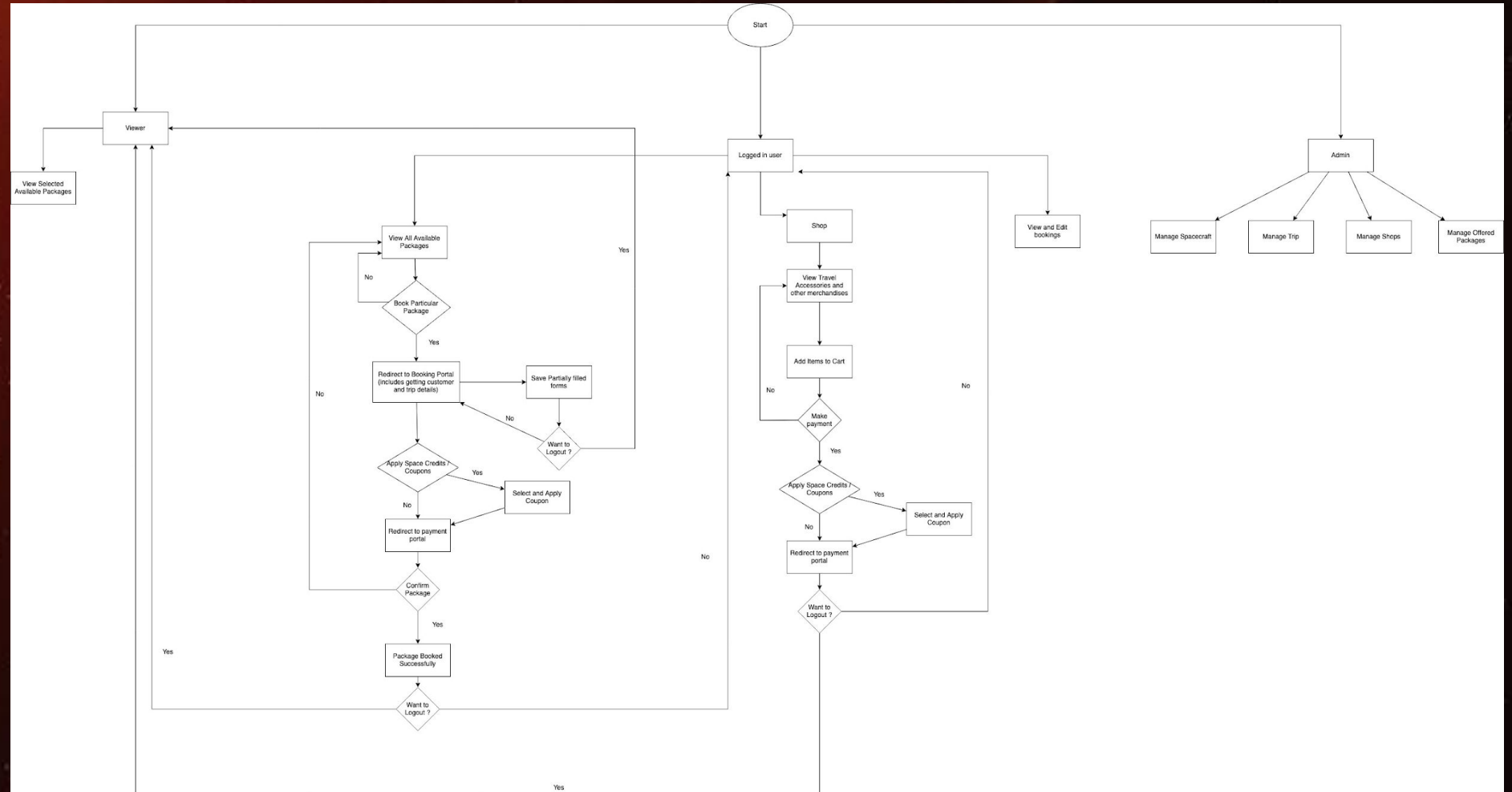
- YOU ARE NOT EXPECTED TO CREATE ANY WORKING PROTOTYPE OR SOLUTION,
- ONLY LIST THE TECH STACK/ FLOWCHART (IF YOU HAVE)

Components Operation Flowchart :

<https://drive.google.com/drive/folders/188Gg53Ew0ryqMUGHVw2StF75DuZAACqt>

Above link displays the
given flowchart

Enlarge to view clearly:



Software Stack:

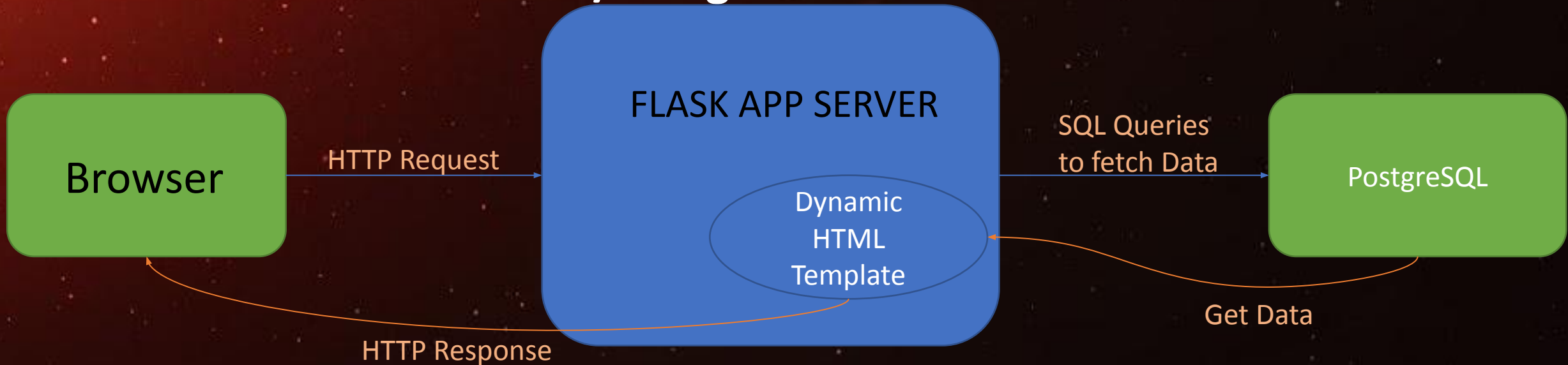
- Front End Development



- Backend Development



Basic Software Architecture/Design



Impact

WHAT PROBLEMS WILL YOUR SOLUTION SOLVE AND HOW IMPACTFUL WILL IT BE ACCORDING TO YOU?
-THIS SECTION IS TO EVALUATE YOUR IDEA SOLUTION SCALABILITY AND FARSIGHTEDNESS

Impact on Business:

- ❖ Boosting the space tourism industry: By creating a user-friendly software that facilitates the booking and management of space trips, the startup could attract more customers and boost the space tourism industry. This could have a positive impact on the economy and the development of space-related technologies.
- ❖ Improving space travel logistics: The software could help the startup manage their fleet of spacecraft and track the status of each trip, making the logistics of space travel more efficient and reliable.
- ❖ Promoting space exploration: By making space travel more accessible and user-friendly, the project could help promote the idea of space exploration and inspire more people to take an interest in space-related fields.
- ❖ Advancing technology: Developing a software that can handle the complexities of space travel requires cutting-edge technology and expertise. This project could push the boundaries of what is currently possible in terms of software development and space travel logistics.
- ❖ Stimulating the space economy: The startup's promise to pay the development team handsomely in space credits could create a new market for space-based currencies and stimulate the development of space-related businesses and services.

Impact on Society:

- Education: A space tourism company could inspire future generations to pursue careers in science, technology, engineering, and mathematics (STEM) by showcasing the possibilities of space exploration and the technologies used in space.
- Environment: A space tourism company could promote environmental awareness by highlighting the fragility of Earth and the need to protect the planet. It could also promote the use of sustainable technologies in space and on Earth.
- Cultural Exchange: A space tourism company could promote cultural exchange by bringing people from different countries and backgrounds together to share the experience of space travel. This could foster greater understanding and cooperation between nations.