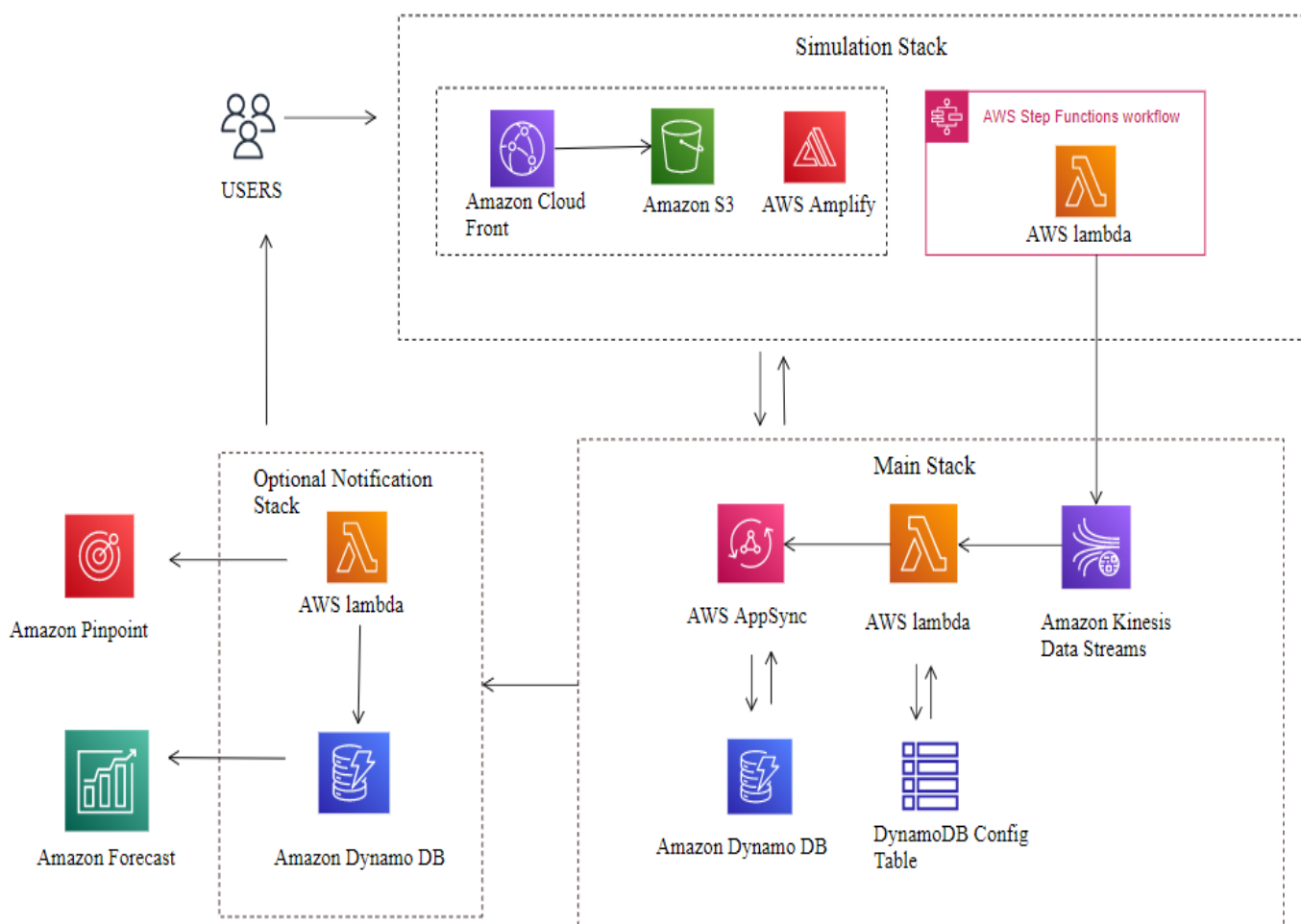


Problem Statement – 2:

You are required to curate the AWS architecture for an Indian Premier League management system, complete with a score predictor and attractive dashboard. Explain why that particular service has been used and draw a final flowchart with all the services you think are necessary.

AWS Architecture for IPL Management System



The services used are:

- **Amazon Cloud Front-**

Amazon CloudFront is a fast content delivery network (CDN) service that securely delivers data, videos, applications, and APIs to customers globally.

- **Amazon S3-**

It is an object storage service built to store and retrieve data. It is used to store the streamed data for processing.

- **AWS Amplify-**

Manage users and app content using Amplify Studio hosted outside AWS console.

- **Amazon Kinesis-**

It collects and processes large streams of data records in real time.

- **AWS Lambda-**

AWS Lambda polls the stream and, when it detects new records in the stream, invokes the Lambda function. Lambda runs code that generates hashtag data.

- **Amazon Dynamo DB-**

It captures a time-ordered sequence of item-level modifications in a DynamoDB table and durably stores the information for up to 24 hours.

- **Amazon Pinpoint-**

It is to engage with the customers across multiple messaging channels.

- **AWS App Sync-**

AWS Lambda function calls AWS AppSync to invoke a GraphQL mutation to save game events data into Amazon DynamoDB tables. After the mutation completes, AWS AppSync notifies subscribers in real-time that a new event is available.

- **Amazon forecast-**

It is to predict the match score.

Problem Statement – 3:

Explore the MakeMyTrip website “<https://www.makemytrip.com/>”. Write the minispecs and draw the top level DFD, first level decomposition and second level composition for the MakeMyTrip website

Minispecs:

(Functional)

1.Registration

- a) The Customer should be able to register with their details.
- b) The System should record following customer details into member database.
 - Name
 - Email
 - Password
 - Address
 - DOB

The system shall send verification message to email.

2.Log In

- Guest/Anonymous
- registered User/Customer

3.Reservation

- Flight
 - Place (Where to Where)
 - Date
 - Passenger number
 - Class
 - One way
 - Round Trip
 - Multicity
- Hotel
 - Date
 - Location
 - Price
 - Star category
 - User rating
- Holidays
 - Budget
 - Duration
 - Hotel choice
 - Travel option
 - Place
- Bus
- Car
- Train

4. Payment

- UPI
- Credit/debit cards
 - Card Number
 - Name mentioned in the card
 - Expiry date
 - Cvv code
- Net banking
- Mobile wallets
- Pay pal
- Gift card
- Citi bank rewards

5.MORE

- Flight + hotel
- International flight
- International hotel
- Contact for help
- Live chat
- Wallet etc...

6.Refer and Earn

7.Live/Upcoming live deals

8.My account

- My trips
- Print E-ticket
- Cancel booking
- Reschedule Booking
- Check refund status
- Make a payment
- Log out

(Non-functional)

1.Security: -

- Secure access of confidential data (user's details).
- All external communications between the data's server and client must be encrypted.
- Payment process should be in HTTP over Secure protocol to secure the Payment.

2.Reliability: -

- The system should be synced frequently to avoid data losing in case of System failure.

3.Portability: -

- The website should run on any browser/OS.

4.Capability: -

- Capability to withstand heavy incoming traffic, if sometimes.

5.Usability: -

- We can use 24*7.

6.Integrity: -

- System should focus on securing the customer information avoid data losing in case of system failure.

7.Maintainability: -

- The system should be maintainable.

8.Testability: -

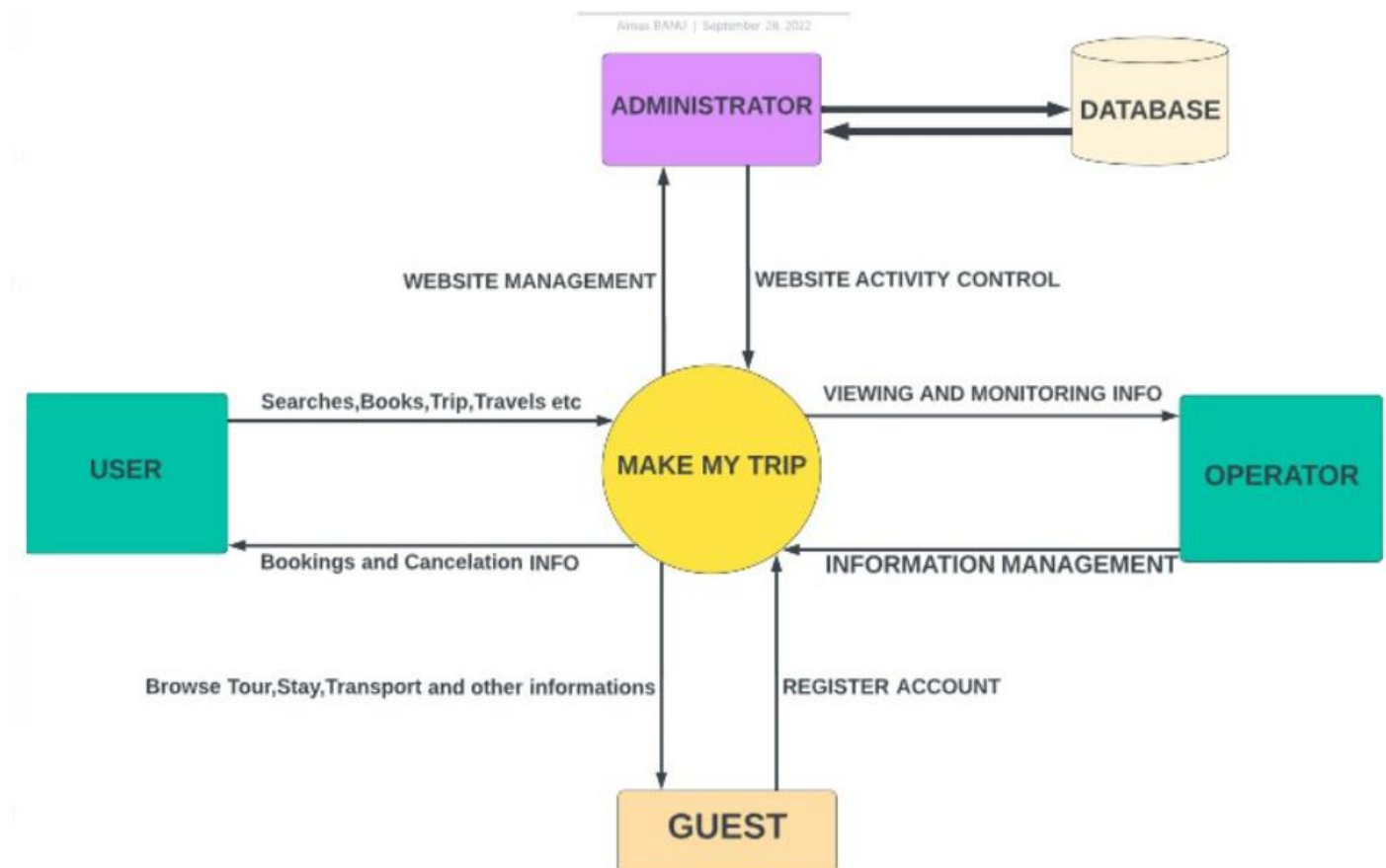
- The system should be able to be tested to confirm the performance and the clients.

9.Safety requirements: -

- Database should be backed up every hour.
- Under failure, system should be able to come back at normal operation under an hour.

10.Better component design to get better performance at peak time.

TOP LEVEL DATA FLOW DIAGRAM (DFD):



1.Administrator:

- Has access privileges that enable use of all functions for application management, monitoring, and viewing information.
- Has access functions for managing application user accounts.
- Manages website and its activities.

2.Operator.

- Has access privileges for monitoring and viewing information.
- Can manage the information.

3.User:

- All users registered on the system.
- After successful login, directed to home page.

❖ Personal Account

- Can access all the Functionalities provided on website.
- Have their own profile.
- Can book flights, trains, buses, cabs, hotels etc...
- Can plan holiday packages, homestays etc...
- Can apply for tourism visa.
- Can cancel any booked plan.
- Get a personalized experience according to our previous history.
- View refund status.
- View booking history.
- Live offers/deals.
- Use gift cards/coupons
- Can Refer and earn
- Use Make my trip wallet.

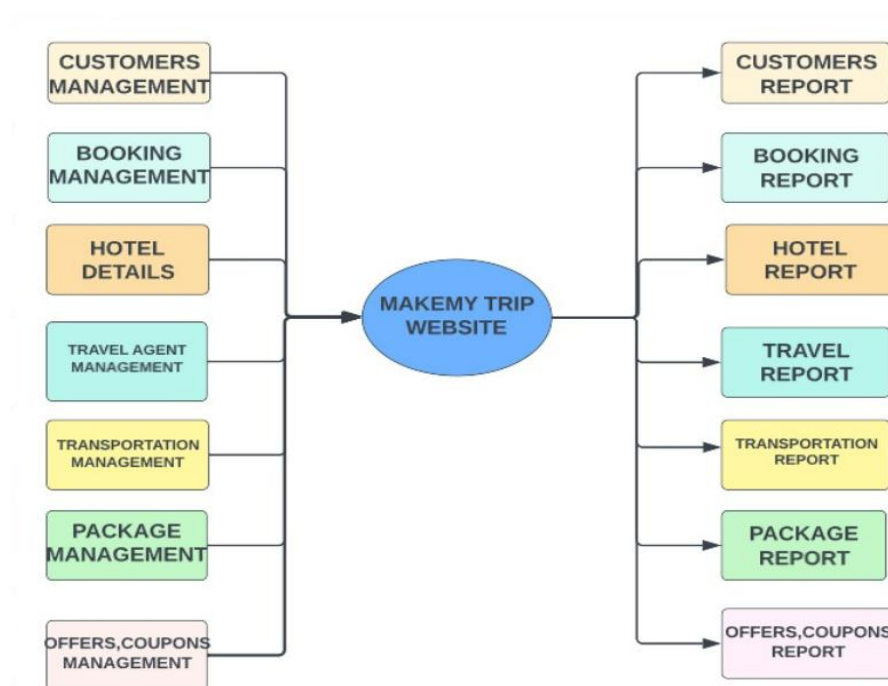
❖ Business Account

- Gets us free cancellations on major airlines.
- Makes the best deals, exclusive offers and Best Price Guarantee with awesome discounts like no other in the market, especially available for us.
- TAT Reduction for bookings done at an advance purchase window of less than 7 days, by faster automated real time single click approvals.
- enables companies to claim GST Credit and save up to 18 percent of the total travel transaction in a clear and transparent manner.
- makes travel booking efficient.
- makes booking experience seamless by moving complex offline processes like approval matrices, travel policies, payment options—online.

4.Guest (Anonymous Users):

- Will be able to visit the website and browse for the Hotels, Homestays, Holiday packages, Activities, Top destinations etc.
- Can view pricing for different hotels after selecting appropriate fields such as destination place, check-in and check-out date and number of people.
- Have to login and register to fully use website's services such as make payment, use coupons/gift cards, enable offers/deals and confirm booking.

FIRST LEVEL DECOMPOSITION:



SECOND LEVEL DECOMPOSITION:

