[Runway_reservation_BST_boilerplate.py]

Greetings for the day Sir/Madam,

This is a brief document about the project which is week 7 & week 8 Mini project.

- → So in the Project first we need to import datetime
- → And then we start defining classes and there functions
- → Our first class will be Node where we are defining the start_time , end_time and flight_number with datetime strptime (date object) and the format which is "%H:%M".
- → We also declare left & right child's as None.
- → Now our second class will be ReservationBST where we need insert a node in the BST on key as start_time.
- → We define a class called insert where we pass root1 and key as start_time as parameters.
- → Now this insert checks the root is None or not , if root is none returns key , if root.start_time is < key.start_time then it stores in the right an if root.start_time is > key.start_time then it stores in the left.
- → Next we define runway_busy class where we pass root and request_interval. And this method checks if the requested interval overlaps any existing interval. Here we declare root.start_time,root.end_time and there datetime objects with variables(a,b,c,d) .
- → We use method to compare whether given start_time is less than the original start time similarly we check for end_time too.
- → If the condition is satisfied it will return None if not it will return "Runway is booked for flight number" and the list given below.
- → Now we define interval_validation class which is used to validates the interval duration to be 30 mins exact.
- → we just declare the two variables with datetime object and the method to validate the interval duration for 30mins.

→ Next we define make_reservation class by passing root, request_interval, flight_number as the parameters.

→ Now we just validates those methods and return the output.

With regards,

N Venkata Surya Bharadawj.