UNIVERSITY OF SCIENCE ITEC

Project Management

Proof of Concept - Group D



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A. Introduction

Datetime booking requirement:

- Start time, end time match with each employee (1)
 - o Monday Tuesday: 10:00 19:00
 - o Tuesday Friday: 9:00 18:00
 - o Saturday: 9:00 15:00
 - o Sunday: 9:00 20:00
- Start time on current day should in the next 30-min of current time (2)
 - Current time is 10:20 => the earliest booking should be at 10:50
- Start time booking + Time of services should not later than End Time (3)
 - Booking at 15:00 with 2-hour services will not be available if the end time is 16:00
- New booking will not intersect the other booking (the most important) (4)
 - The ongoing booking at 14:00 with 2-hour services. Then the earliest available time should be from 16:00 to the end of time.

B. Source code for concept

Solve the (1) problem

```
function getTimeForDate($date, $sum_duration, $selected_employee, $isstartdate = false)

{
    global $conn;
    define("nexttimestep",30); //next time from now
    define("timestep",15); //booking time
    $appointment_date = date('Y-m-d', strtotime($date));

$day_id = date('N', strtotime($appointment_date));

$stmt = $conn->prepare("

    Select from_hour,to_hour
    from employees_schedule
    where employee_id = ?
    and day_id = ?

    ");

$stmt->bind_param("ss", $selected_employee, $day_id);

$stmt->execute();

$res = $stmt->get_result();

$time = $res->fetch_all(MYSQLI_ASSOC);

$open_time = date("H:i", strtotime($time[0]["from_hour"])); //can change open time in here
    $close_time = date("H:i", strtotime($time[0]["to_hour"]));
```

The (2) problem is solved with some basic formula

The (3) and (4) problems are solved by multiple queries to check the empty of the time slot, then add it to the array

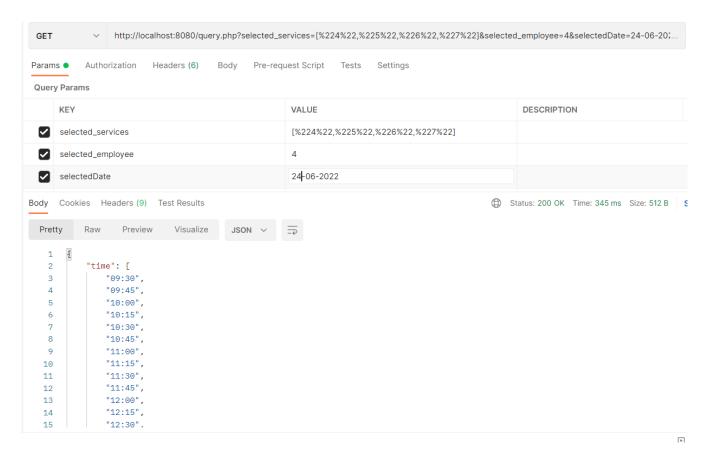
```
$start = strtotime("+15 minutes", strtotime($start));
$start = date('H:i', $start);

$secs = strtotime($sum_duration) - strtotime("00:00:00");
$result = date("H:i", strtotime($start) + $secs);
```

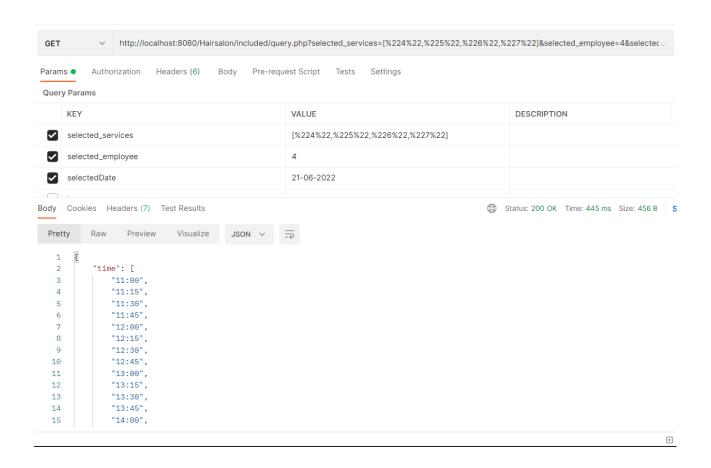
C. Proof of concept

We use Postman to test this function

There are time slots on a new day 24-06-2022 (current is 21-06-2022). All time slot is empty from open time to end time



There are time slots on the current day (current is 21-06-2022 10:25). The earliest time slot will be 11:00, later than at least 30mins from now.



After the customer books a 1-hour service from 12:00, the time slot from 12:00 to 13:00 will disappear, avoid intersecting appointment

