

## **Problem Statement**

Mr. Perez and his employees are being unfairly assigned to trips, and the firm does not have a fair way to determine the best fit employee for a trip.

Word count: 29

## **Description of Scenario**

My client, Mr. Perez is an international courier for the US Embassy in Bangkok that handles classified material to 41 different embassies<sup>1</sup>. Each service trip has a set duration and the Embassy has no concrete way of determining the best employee for the next trip<sup>2</sup>, therefore employees are inequitably chosen for certain trips.

Word Count: 53

## **Rationale:**

The reason for choosing a computer program instead of an algorithm is because the client would like additional features added into this solution. The Client would like to be able to input information<sup>3</sup>, and calculate the best courier for a trip<sup>4</sup>, and see the rankings visually<sup>5</sup>. This is so the rankings for next best couriers can be observed and noted down for the next set of trips. If the output was solely console based, the user would have to have knowledge of the program beforehand; it would make the program more new user friendly and extend its longevity. The user will also be constantly inputting new trip information and will need the dedicated storage of a program rather than a standalone algorithm. I decided to use Java because:

- I am most familiar with this programming language
- There are many free libraries available
- It runs on almost every platform, which is beneficial if my client uses different ones at work and at home

The Netbeans 11.1 IDE (Integrated Development Environment) will be used to develop the program because it features a built in GUI (Graphical User Interface) creator which will help in

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<sup>1</sup> Mr. Perez, interview 1 by author, November 15, 2020, [00:00:12]

<sup>2</sup> Mr. Perez, interview 1 by author, November 15, 2020, [00:01:31]

<sup>3</sup> Mr. Perez, interview 1 by author, November 15, 2020, [00:06:46]

<sup>4</sup> Mr. Perez, interview 1 by author, November 15, 2020, [00:01:27]

<sup>5</sup> Mr. Perez, interview 1 by author, November 15, 2020, [00:05:38]

the process of prototyping and making the program more user friendly. There are also many tutorials on the internet if I should run into any issues; this is because the IDE is still supported by Oracle and it is much older than other IDEs for example: IntelliJ

Word Count: 239

### **Interview 2 Summary:**

Mr. Perez suggested many changes to the prototyped GUI. Within the “Employee Information” tab, instead of a text field where the User inputs the destination, it should be a drop down menu. Within the “Next Best Courier” tab Mr. Perez would also like to see how frequently the post is serviced, as well as a calendar view of when that post will be serviced again. Within the “Upcoming trips” tab, Mr. Perez would like the calendar to show 2-3 months at a time as well as the duration of the trip and which courier will service it.

Word Count: 97

### **Success Criteria:**

Criteria for success are as follows:

- 1) The user will be able to log employee’s previous trips by selecting the date and destination it was completed.
- 2) The user will be able to see visually all upcoming trips and their assigned courier in 2 month increments.
- 3) The user will be able to see the history of their courier’s trips using a calendar.
- 4) The user will be able select a destination when wanting to calculate the best courier to send to that destination serviced.
- 5) The user will be able to see the date of the next servicing of the selected destination.

Employee Information
Upcoming Trips
Next Best Courier

Input Employee:

Item 1

Input Destination:

Destination

Input Date Travelled or Travelling

November
2020

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Done

Drop down instead of text field

Design Preview [MainGUI]

Employee Information
Upcoming Trips
Next Best Courier

Name Property
Choose Destination:

Item 1  
Item 2  
Item 3  
Item 4  
Item 5

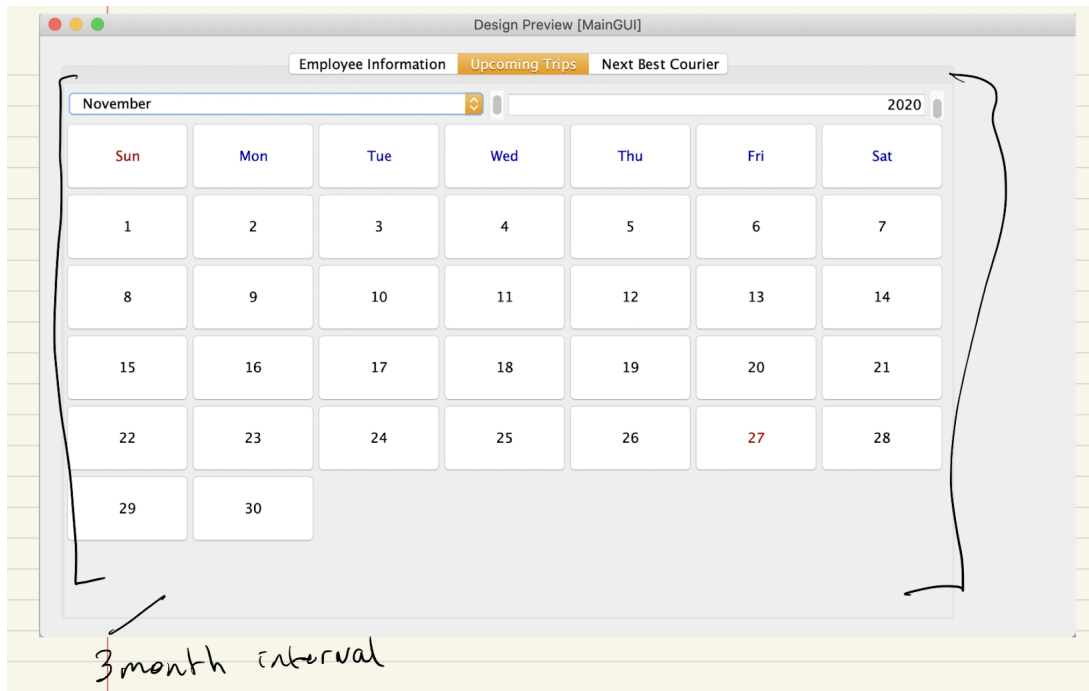
Best Courier For The Job:

Courier Name

Frequency of post service

Date of next trip (visual and text) with calendar

Calculate



**Total Word Count: 418**

grade