



Instructor's Names:

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Ms Reem Al-Shammari

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Ms Noura Al-Qahtani

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Ms Rajaa Al-Yafar

Team members:	ID student:
Nourah Al-Qahtani	2220004823
Lama Al-Qahtani	2220007321
Haifa Aldaej	2220004810
Batool Alaman	2220006556
Asayel Alghamdi	2220000203
Atheer Alansari	2220005309

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## Introduction

Welcome to our project! Our goal is to provide you with a plan that will help you create a customized itinerary for your travel trip. Based on the list of available cities, our software will help you create a list of special places worth visiting during your trip.

First, we ask you to set your budget and choose one of five cities on our list: Abha, Riyadh, Jeddah, Sharqiyah or Al-Awrah. Once you make your choice, we will create an exciting and unforgettable 7-day itinerary for you. In addition, our plans allow you to change and customize your schedule to suit your needs, with the ability to choose to add a driver or tour guide and display this in interfaces that make it easier for you as a user, while offering two budgets, high and low, to suit all users of our application. We place great emphasis on making your trip an unforgettable experience. So, let's start this fun journey.

## Objectives

- ❖ Facilitating people's decision-making process when choosing places to visit by providing them with an effective seven-day schedule. This schedule will help individuals plan their itineraries and make the most of their time during their trip to the Kingdom of Saudi Arabia.
- ❖ Contributing to the growth of the Kingdom's economy by promoting tourism. By attracting more visitors, we anticipate an increase in tourism-related revenue, job opportunities, and investments in infrastructure development.
- ❖ Streamlining the process of finding suitable places to visit by saving time and effort. Our project will provide comprehensive information about various tourist destinations, including their features, amenities, accessibility, and reviews, thus simplifying the decision-making process for travelers.
- ❖ Catering to the needs of all segments of society by offering options that suit different budgets. Whether individuals have limited financial resources or a higher budget, our project will provide a wide range of choices, ensuring that everyone can find suitable options for their preferences and financial capabilities.

## The Purpose of the program

The purpose of this program is to provide users with an effective itinerary planning tool that meets their travel needs, and preferences in all respects. By offering a range of effective features and functions, the program aims to help users create an unforgettable travel experience.

At the heart of the program is the ability to create a 7 custom days schedule based on the city chosen by the user from the list of available options, which includes Abha, Riyadh, Jeddah, Sharqia and Alula. This one the feature allows users to explore and learn about the unique attractions of Saudi Arabia and discover the landmarks and experiences that each city has to offer.

In addition, the program considers the user's budget, because financial considerations play an important role in travel and planning. Our program provides a trip plan by allowing users to set their budget, the program can suggest appropriate activities, accommodations, restaurant options, cafes, markets, and entertainment venues that correspond to Their financial capabilities.

Also, provides a private tour guide for the user if he wants to do so, in addition to a private driver and the user has the freedom to choose the appropriate car for him, which ensures a comprehensive experience that meets the needs of All segments of society.

Moreover, the program aims to simplify the process of searching for places to visit by providing a curated list of special destinations within the chosen city. This saves users valuable time and effort that would otherwise be spent on extensive research and planning. The program offers comprehensive information about each suggested place, including its features, amenities, accessibility, and user reviews, enabling users to make informed decisions about their itinerary.

Ultimately, the program aims to elevate the overall travel experience by optimizing the enjoyment and satisfaction of travelers. By facilitating efficient itinerary planning, suggesting unique destinations, considering budget constraints, and offering customization options, the program ensures that travelers.

## Target group

The target group of this project are tourists and citizens interested in visiting the Kingdom of Saudi Arabia, whether they are foreigners or Arabs, with a focus on the period between 2023 and 2030, and we see that the country has already gained great interest from tourists in the region, as evidenced by the growing interest in recent years. This increased interest had a positive impact on the country's economy during this period.

## Difficulties

We had some challenges in designing and implementing the user interface, as we had to learn how to use the Java Swing library, and how to create and arrange the components, such as buttons, labels, text fields, and panels. We also had to make sure that the user interface was user friendly, responsive, and consistent.

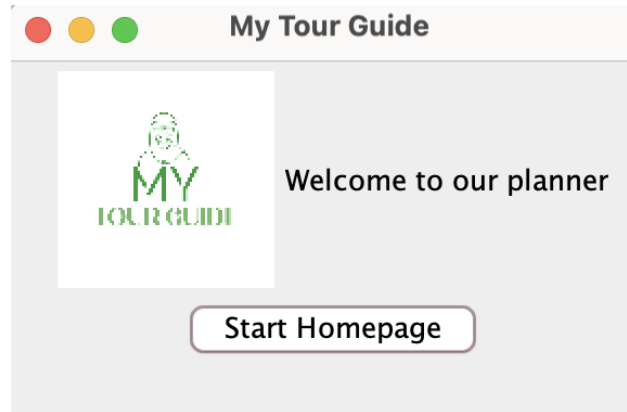
We had some difficulties in testing and debugging the program, as we had to check for any errors, exceptions, or bugs in the code, and fix them accordingly. We also had to make sure that the program was robust, reliable, and secure, and that it could handle different inputs and scenarios from the user.

We had some issues in collaborating and communicating with each other, as we had to divide the tasks and responsibilities among the team members and coordinate the progress and updates of the program. We also had to use online tools and platforms, such as Zoom, and Google Docs, to share and discuss the code, the design, and the documentation of the program.

## Results & output screens

### GUI part

First, an interface appears to welcome the user. The user presses the Start button and the program interfaces begin to appear.



*Figure 1: First interface*

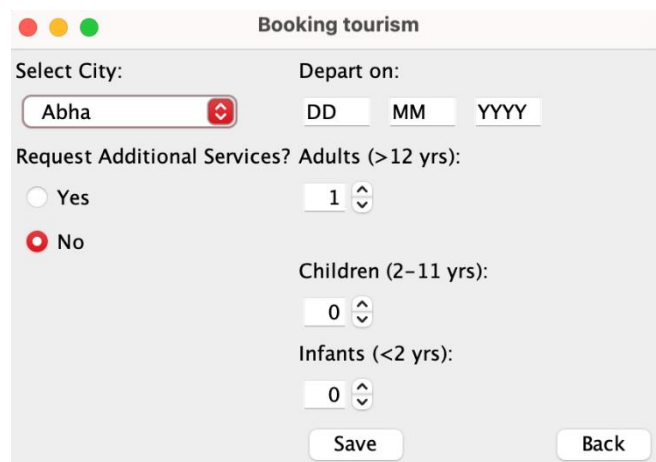
After clicking Start, this interface appears, and the user must choose the type of service he wants. From these buttons

- 1- A trip: Available tourism schedules (reading from database)
- 2- orders: Previous orders (read query from database)
- 3- 4-User information: User data + the ability to modify, of course, from the database
- 4- Price list: Price table for all available tourist services, additional services, etc. (reading from the database)
- 5- Offers: Discounts that will be shown to the user
- 6- Transportation: Transport - additional services in short (not the GUI) (read query from database)
- 7- Password history: Modify password from user data
- 8- Help: Send a maintenance note or problem you are experiencing to technical support



*Figure 2: service interface*

If the user chooses a new trip, the booking interface appears for the user to choose one of the cities we have, choose if he wants to add people, and choose if the person is an adult, child, or infant.

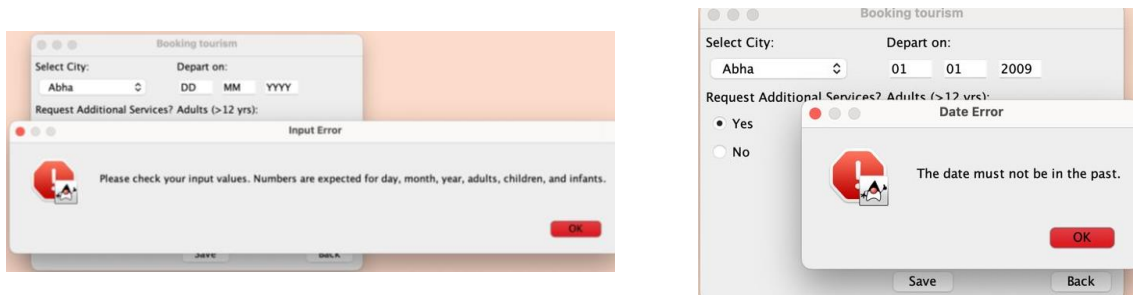


The 'Booking tourism' window contains the following elements:

- Select City:** A text field with 'Abha' and a dropdown arrow.
- Depart on:** Three input fields for 'DD', 'MM', and 'YYYY'.
- Request Additional Services? Adults (>12 yrs):** Radio buttons for 'Yes' and 'No' (selected), and a spinner box with the value '1'.
- Children (2-11 yrs):** A spinner box with the value '0'.
- Infants (<2 yrs):** A spinner box with the value '0'.
- Buttons:** 'Save' and 'Back' buttons at the bottom right.

*Figure 3:* booking interface

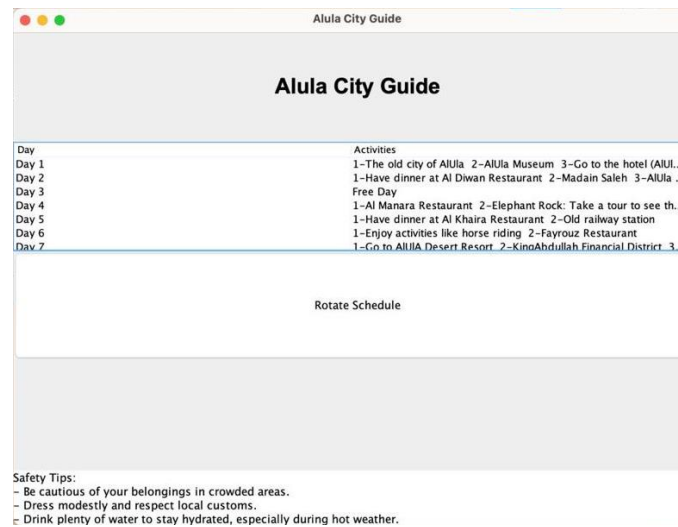
An error interface appears to the user if he entered an incorrect value or an old date, or if there was data added, and it is not possible to set a date from the future.



*Figure 4:* error interface

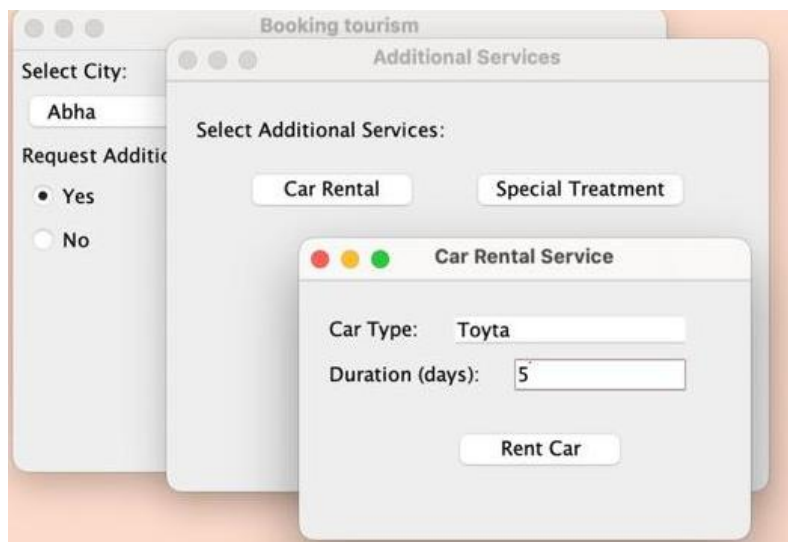


After the user chooses the city he wants, the city events schedule interface automatically appears for him to view.



*Figure 5: schedule interface*

When the user selects the city, there is an optional button if the user wants additional services. If the user clicks on Yes, the additional services interface appears for him and he clicks on the type of additional service he wants.



*Figure 6: Additional services interface*

Then the personal information interface appears for the user who must fill it out, and it appears according to the number of people for whom the user has reserved.

Booking tourism

Select City: Abha Depart on:

Personal Information - Adult 1

Request Name: Amal Abdullah

☒ Yes ☐ No

Age: 28

ID: 1101001827

Birth Date (yyyy-mm-dd): 1996-02-01

Gender: ☐ Male ☒ Female

Submit

*Figure 7: Personal information interface*

Then the invoice interface appears, and the user can add the name, address, and contact information to it. The payment information will appear automatically as fixed.

Billing

OR ID: MTG 292-5

Order Details

Firstname: amal

Lastname: abdullah

Address: alkhobar

Contact: amal@gmail.com

Bill Date: 2024-05-13

Bill ID: 98844

Subtotal: 3077

TOTAL: 3538.55

Add Cancel Make Sure that Your billing info is correct

*Figure 8: invoice interface*

The payment interface then appears. The user can modify the card number only if the payment method is fixed. Then the payment interface appears. The user can add his own payment number and choose the payment method from the available options.

The screenshot shows a 'Payment' modal window overlaid on a main form. The modal contains the following fields and values:

- Payment ID: 2001-2388-9983-4402
- Amount: 3538.55
- Payment Method: VisaCard (with a dropdown arrow)

At the bottom of the modal are two buttons: 'Process Payment' and 'Next'. The background form includes fields for 'OR ID', 'Order Details', 'Firstname', 'Lastname', 'Address', 'Contact', 'Bill Date', 'Bill ID' (98844), 'Subtotal' (3077), and 'TOTAL' (3538.55). At the bottom of the background form are buttons for 'Add', 'Cancel', and a note 'Make Sure that Your billing info is correct'.

*Figure 9: payment interface*

After that the two interfaces show the payment completed successfully

The screenshot shows a 'Success' modal window overlaid on the same background form as Figure 9. The modal contains the following elements:

- A checkmark icon inside a circle.
- The text 'Payment processed successfully!'.
- An 'OK' button.

The background form is partially visible behind the modal, showing the same fields as in Figure 9.

*Figure 10: Payment interface*

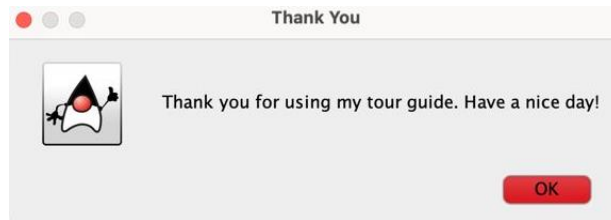
After completing the payment and its success, an interface will appear to evaluate the application services.

The screenshot shows a 'Rate Your Experience' window. It contains the following elements:

- The title 'Rate Your Experience'.
- The text 'Please rate your experience (1-5):' followed by five radio buttons labeled 1, 2, 3, 4, and 5.
- A 'Submit Rating' button at the bottom.

*Figure 11: Evaluate the application services.*

At the end, an interface appears thanking the customer for using the application and completing the procedures successfully.



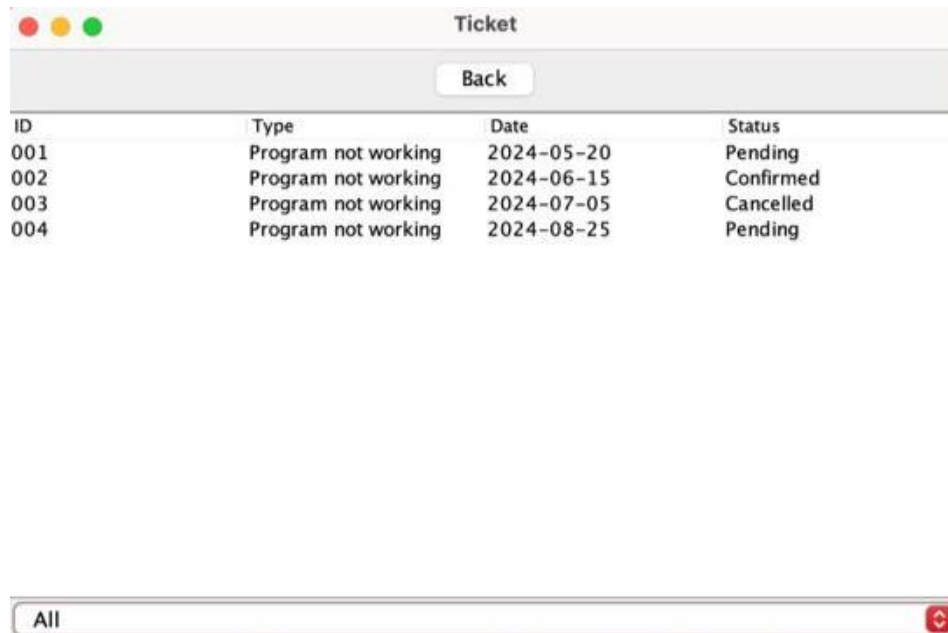
*Figure 12: Last interface*

## Results & output screens

### 2-Data part

#### Database

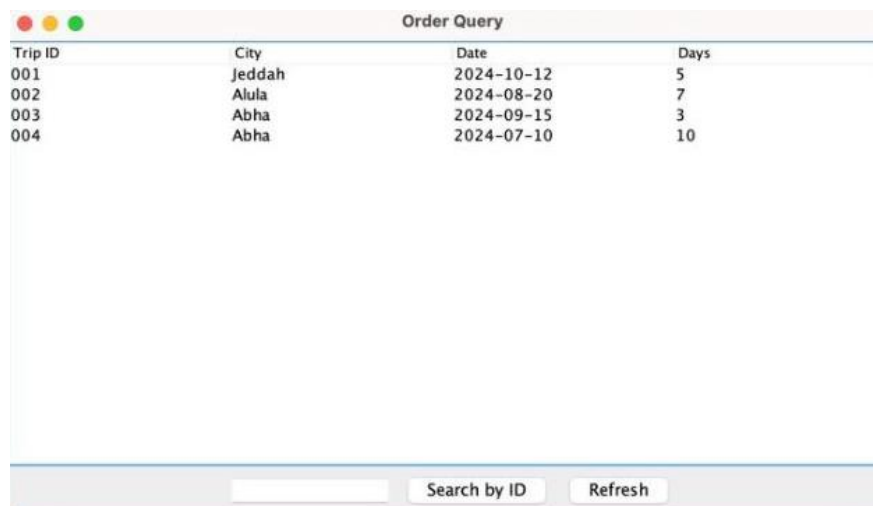
In the ticket interface query, the user can choose all types of tickets or choose pending, confirmed, or canceled which will display the ID of the tickets, type, Date, and status.



ID	Type	Date	Status
001	Program not working	2024-05-20	Pending
002	Program not working	2024-06-15	Confirmed
003	Program not working	2024-07-05	Cancelled
004	Program not working	2024-08-25	Pending

*Figure 13:* ticket interface query

In Trip interface query, will display all information about the available trip.



Trip ID	City	Date	Days
001	Jeddah	2024-10-12	5
002	Alula	2024-08-20	7
003	Abha	2024-09-15	3
004	Abha	2024-07-10	10

*Figure 14:* Trip interface query

In Tour price interface query, that will display all information about tour guides, and we have a button to filter the cost of the tour guides from smallest to highest, the tourist guides are all Arabs, but they can speak other languages with foreigners



ID	City	Tour Name	Language	Cost
1	Abha	Ahmed	English	50
2	Riyadh	Mousa	French	40
3	Jeddah	Ameera	Spanish	60
4	Riyadh	Yara	German	45
5	Riyadh	Sara	Arabic	70
6	Jeddah	Lama	Arabic	55
7	Abha	Yasser	Arabic	75
8	Alula	Amal	Arabic	65

Back Filter

Figure 15: Tour price interface query

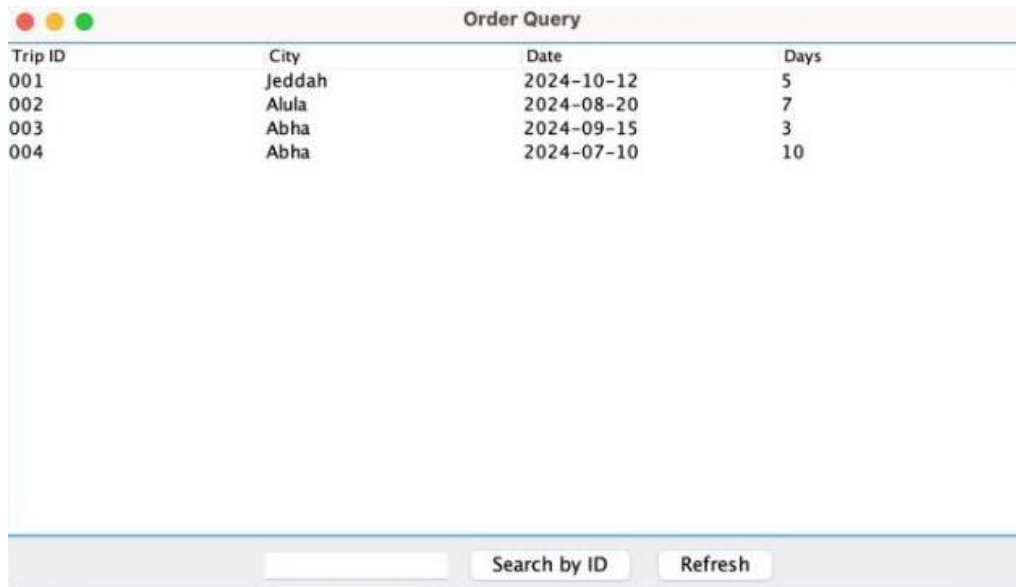


ID	City	Tour Name	Language	Cost
2	Riyadh	Mousa	French	40
4	Riyadh	Yara	German	45
1	Abha	Ahmed	English	50
6	Jeddah	Lama	Arabic	55
3	Jeddah	Ameera	Spanish	60
8	Alula	Amal	Arabic	65
5	Riyadh	Sara	Arabic	70
7	Abha	Yasser	Arabic	75

Back Filter

Figure 16: Tour price interface query

In the order interface query, the user enters the query to show the data in SQL and can search by entering the id of the order also the user can press the button to refresh the data or press the button back to cancel the query.

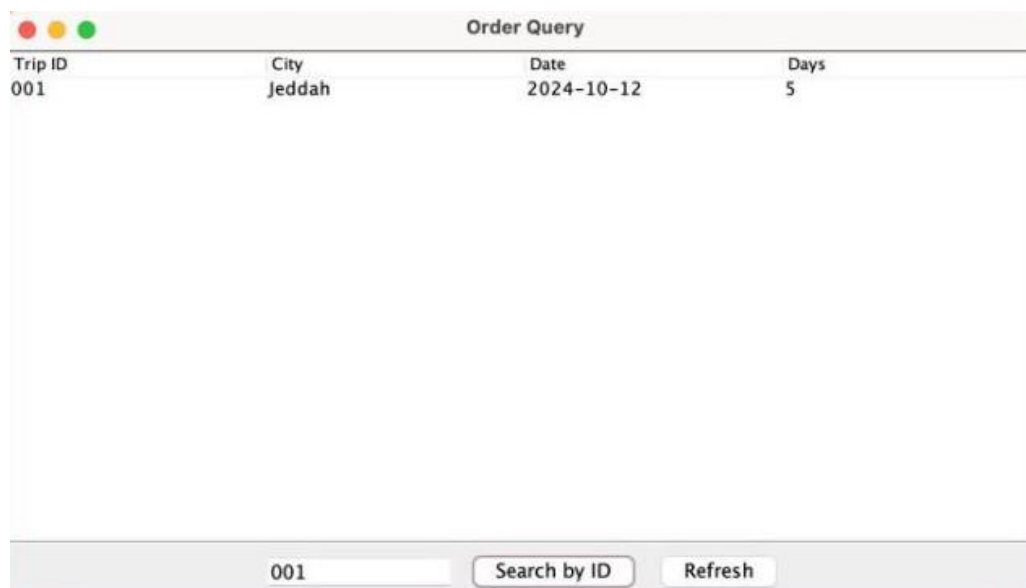


The screenshot shows a window titled "Order Query" with a table containing the following data:

Trip ID	City	Date	Days
001	Jeddah	2024-10-12	5
002	Alula	2024-08-20	7
003	Abha	2024-09-15	3
004	Abha	2024-07-10	10

Below the table, there is a search bar with the text "Search by ID" and a "Refresh" button.

*Figure 17:* order interface query



The screenshot shows a window titled "Order Query" with a table containing the following data:

Trip ID	City	Date	Days
001	Jeddah	2024-10-12	5

Below the table, there is a search bar with the text "001" and a "Search by ID" button, and a "Refresh" button.

*Figure 18:* order interface query

In the customer interface query, the user can enter her information and click on the add, search, edit, or delete button.

The screenshot shows a form titled "My Information" with input fields for First Name, Last Name, Sex (radio buttons for Male and Female), Age, Phone, and Additional Services. Below the form is a table with the following data:

First Name	Last Name	Sex	Age	Phone	Additional Services
Amal	Abdullah	Female	28	555-0123	Car
Ahmed	Abdullah	Male	45	555-1234	None
Yara	Abdullah	Female	34	555-5678	None
Yasser	Abdullah	Male	29	555-8765	None

At the bottom of the window are buttons for Add, Search, Edit, and Delete.

*Figure 19: Customer interface query*

In the Delivery service interface query, the user enters the query to show the data in SQL and can search by entering the car name of the delivery.

The screenshot shows a window titled "Delivery Query" containing a table with the following data:

ID	Company Name	Type	Cost Per Day
001	Toyota	Camry	120
002	Toyota	Corolla	70
003	Honda	Accord	60
004	Honda	Civic	300

At the bottom, there is a search bar with the text "Search By Company".

*Figure 20: Delivery service interface*

The screenshot shows the same "Delivery Query" window, but with a search filter applied. The search bar contains the text "Honda", and the table only displays the rows for Honda vehicles:

ID	Company Name	Type	Cost Per Day
003	Honda	Accord	60
004	Honda	Civic	300

The search bar still shows "Honda" and the "Search By Company" button is visible.

*Figure 21: Delivery service interface*



## Results & output screens

### 2-Data part

#### Files

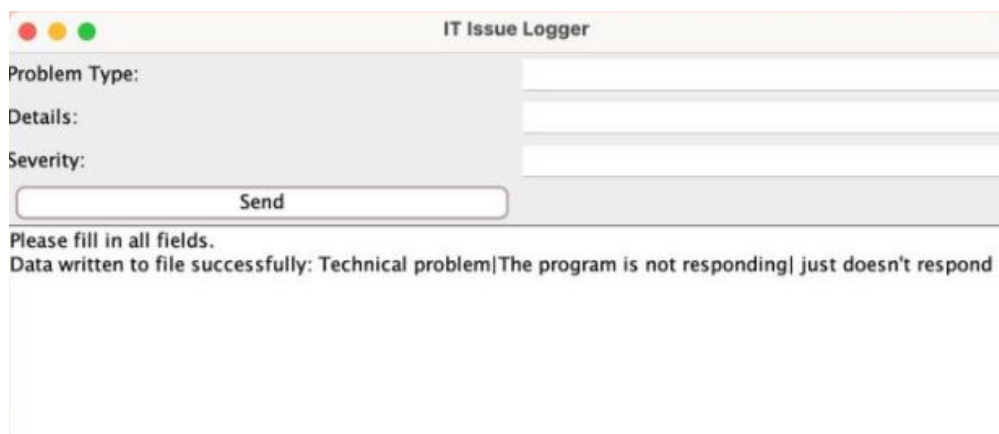
A file of offers from which the available offers are reviewed for each city (the user can search for them at the beginning only).



The screenshot shows a window titled "Discount Calculator". It has a "Select Destination:" label with a text input field containing "Riyadh" and a red clear button. Below this is an "Enter Amount (SAR):" label with a text input field containing "2399". A "Generate Discount" button is positioned below the amount field. Underneath the button, the text "Offers for Riyadh:" is displayed, followed by a list of three offers: "- 500 and less: RIYADH5", "- Between 500 and 1000: RIYADH10", and "- For 1000 and more: RIYADH15".

*Figure 22:* Available offers

will add the technical problem as a note of the file.



The screenshot shows a window titled "IT Issue Logger". It contains three labels: "Problem Type:", "Details:", and "Severity:", each followed by a text input field. A "Send" button is located below these fields. Below the button, a message reads: "Please fill in all fields. Data written to file successfully: Technical problem|The program is not responding| just doesn't respond".

*Figure 21:* technical problem



## conclusion

In conclusion, we have successfully developed a program that can help the user to plan a trip to different cities in Saudi Arabia, based on their budget and preferences. The program can provide the user with a customized schedule, a currency conversion, and a user interface. The program can also allow the user to rotate, save, load, rate, and review their schedule. The program can be useful for travelers who want to explore the culture and attractions of Saudi Arabia and have a memorable and enjoyable experience.

## References

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[2] Walrath, K. (2004). *The JFC Swing tutorial: a guide to constructing GUIs*. Addison-Wesley Professional.

[3] Aho, P., Menz, N., & Rätty, T. (2011, September). Enhancing generated Java GUI models with valid test data. In *2011 IEEE Conference on Open Systems* (pp. 310-315). IEEE.