FACULTY OF COMPUTER & INFORMATION TECHNOLOGY
DEPARTMENT OF COMPUTER INFORMATION SYSTEMS

ONLINE BOOKING SYSTEM FOR JORDANIAN TOURIST DESTINATIONS

حَيّاكْ
HAYYAK

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COURSE NAME
System Analysis and Design

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1.1 BRIEF DESCRIPTION ABOUT THE PROJECT

Hayyak (حَيّاكْ) is an online reservation system for Jordanian tourist attractions that aims to give users a simple and convenient experience.

Visitors may simply book hotels, tours, and activities in Jordan through our website and mobile application while also collecting useful details like the area's weather and suggested wardrobe.

To assist customers in finding their route to their chosen destination, our system also offers transit choices and directions.

Hayyak aspires to become the go-to platform not only for tourists visiting Jordan but also for Jordanians interested to experience their own country through a priority on user-friendliness, security, and scalability.

1.2 SCOPE OF THE PROJECT, THE BOUNDARIES IN OTHER WORDS WHAT IS THE PROJECT GOING TO ACCOMPLISH

1. It will have a search engine that enables users to look up and contrast Jordanian lodging options and activities.

2. It will have a section where guests book accommodations such as hotels and guesthouses as well as tours and activities.

3. It will include a payment gateway that takes a range of payment options, including online banking and credit cards.

4. Also a review and rating system that enables users to communicate with other visitors and share their experiences.

5. There will be a feature of customer support that offers guidance and support to users before, during, and after their trip.

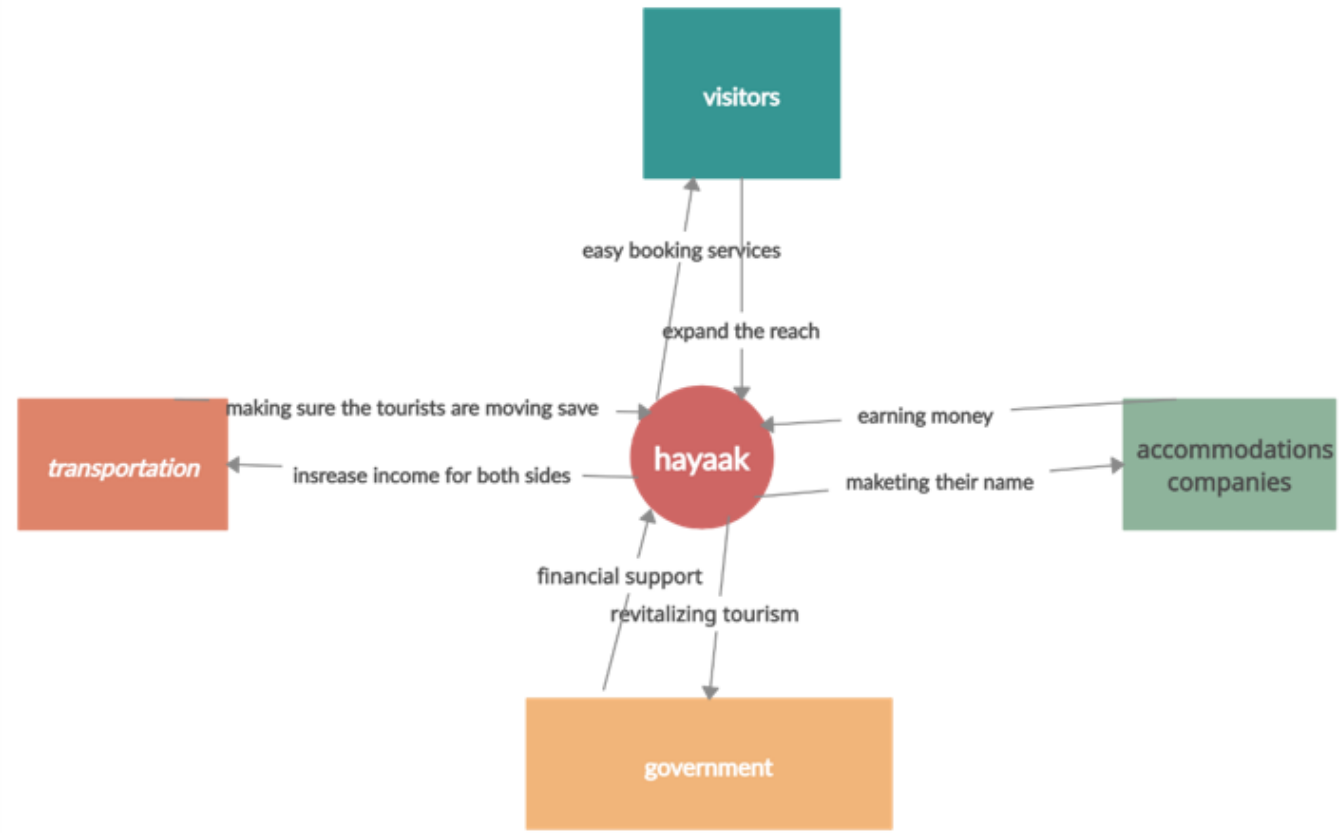
6. Our main focus will be on creating the online booking system, not on creating the necessary physical infrastructure, such hotel rooms or tour guides, to support it.

7. It will not include other nations or regions; it will only cover tourism spots within Jordan.
8. Our project's main objective will be to offer a simple and dependable booking system for people who are already interested in visiting Jordan; it will not contain any marketing or advertising campaigns to draw tourists to the country.

9. The project will not address any legal or regulatory concerns pertaining to Jordanian tourism, such as taxes or visa requirements.

10 .Local rules and regulations governing data privacy will be provided to the visitor.

1.3 CONTEXT DIAGRAM



1.4 FEASIBILITY STUDY, IS THIS PROJECT ACHIEVABLE (DOABLE), FINANCIALLY, TECHNICALLY….ETC

- ***TECHNICAL FEASIBILITY:***

We need to use multiple software in our system such as

1. Booking software: This software is essential for our system as it allows customers to book flights, hotels, tours, and other activities.

2. Customer Relationship Management (CRM) software: This software helps us to manage customer interactions and data. We must implement this software so we can track our customers and getting their complaints as a feedback.

3. Payment gateway: We need a gate to generate the online payment process for bookings and other transactions.

4. Social media management software: We need this software to manage social media accounts, schedule posts, and engage with customers.

This mission needs hardware's such as servers, mobile phones, and security systems as well as networking equipment's.

- ***ECONOMIC FEASIBILITY:***

The economic feasibility will depend on various factors, including the initial investment, operating costs, and potential revenue.

1. Market demand: One of the primary drivers of economic feasibility is the level of demand for our system. Our system is designed to meet the needs of the target market and it offers features and services that are attractive to potential customers.

2. Competitive landscape: Since we are not the only company for tourism, so it's important to be able to compete, because of that we differentiate our system by enabling it to study the weather of aimed destination and giving the traveler suggestions what to wear and providing them the safest road to take.

3. Operating costs: The ongoing operating costs of the system, including maintenance, upgrades, and staffing. Our system should be designed to be efficient and cost-effective to operate.

4. Return on investment: Ultimately, the economic feasibility of the system will depend on the return on investment (ROI). This should be calculated based on the initial investment, ongoing operating costs, and projected revenue over a specified period of time.

- ***OPERATIONAL FEASIBILITY:***

Operational feasibility is a measure of how well a proposed system solves the problems.
Our system is designed to meet the needs of the users. This includes considering the workflows and processes required to effectively manage bookings, reservations, weather suggestions, roads suggestions.
Training and support: Staff training and ongoing support are critical to the success of any system. The system should be designed to be user-friendly

Benefits

Tangible:

1. Increased revenue thanks to upselling.
2. Reduced resource costs.

Intangible

1. Payment is easier and faster.
2. Cut the workload.
3. Increased efficiency.
4. Improve customer experience.
5. Increase competitive advantage.

Cost	Value	Benefits	Value
System Cost	60.000 $	partnerships	70.000 $
Marketing	10.000 $	Commission from booking	50.000$
Training	5.000 $	Advertising	10.000 $
Implementation	25.000 $		
Total	100.000$		120.000$

1.5 RISKS THE PROJECT MAY FACE

- ***Operational risk:***

1.Lack of data about tourist destinations in Jordan or inaccurate information.

2.Lack of pictures about tourist destinations.

3.Lack of data about tourists themselves and their preferences.

4.The risk of outdated data that may let the system provide inaccurate information for tourists.

5.Lack of data about the roads of tourist destinations and the infrastructure of those roads.

6.Lack of data about tourist destinations' weather.

7.Misuse of the feedback feature for taking pictures of individuals rather than tourist destinations.

- ***Technical risk:***

1.Lack of experience in designing user-friendly systems.

2.Lack of knowledge and experience to develop mobile applications, particularly in the Java programming language.

3.Lack of knowledge and experience in developing a recommendation system for suggesting appropriate clothing based on the weather conditions of tourist destinations.

- ***User acceptance risk:***

1. Users may not find the interface of the system user-friendly, leading to user dissatisfaction.
2. Lack of trust in the system due to unreliable or inaccurate feedback sources.

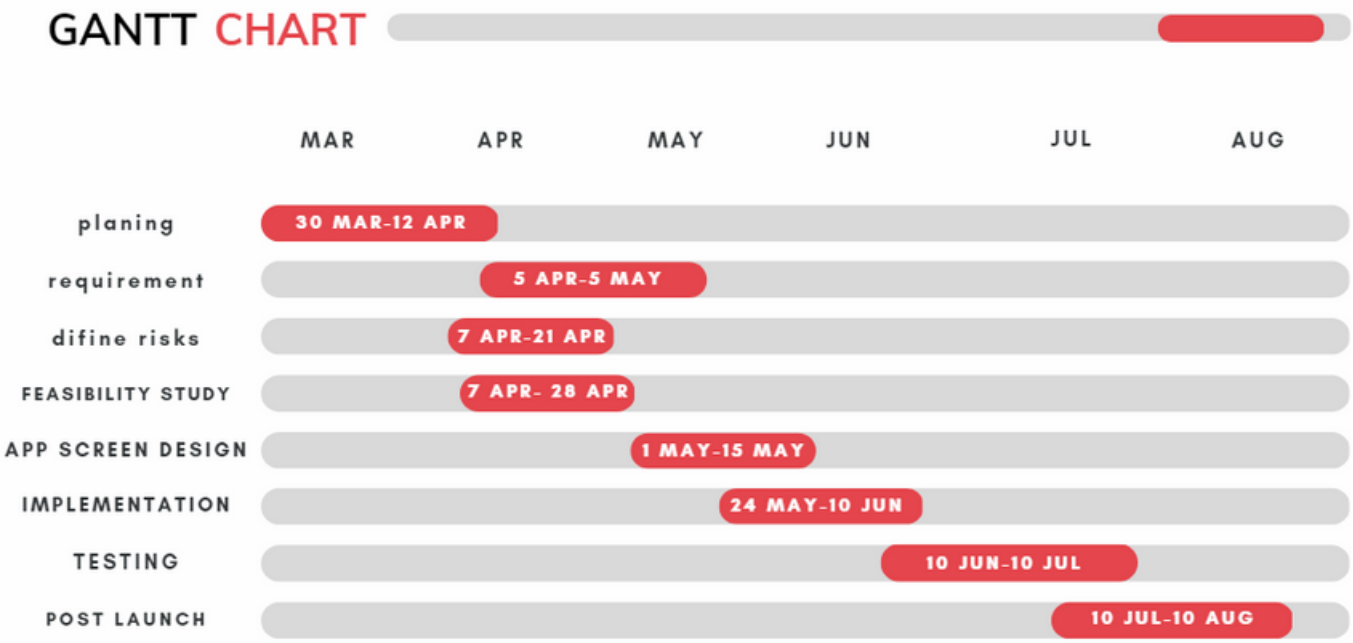
- ***Competitive risk:***

New system with more advanced features, better user-friendliness and more accurate data may attract users away from our system.

- ***Security risk:***

The potential for hackers to access and steal users' data for their own purposes.

1.6 GANTT CHART



Phase 2

Analysis & design

2.1 TECHNIQUES WE USED ELICIT REQUIREMENTS

- **INTERVIEWING: INTERVIEWS STAKEHOLDERS, TO GATHER INFORMATION ABOUT THEIR NEEDS, EXPECTATIONS, AND PREFERENCES RELATED TO THE SYSTEM.**

- **SURVEY FORM: UTILIZE ONLINE PLATFORMS AND SOCIAL MEDIA TO COLLECT RESPONSES.**

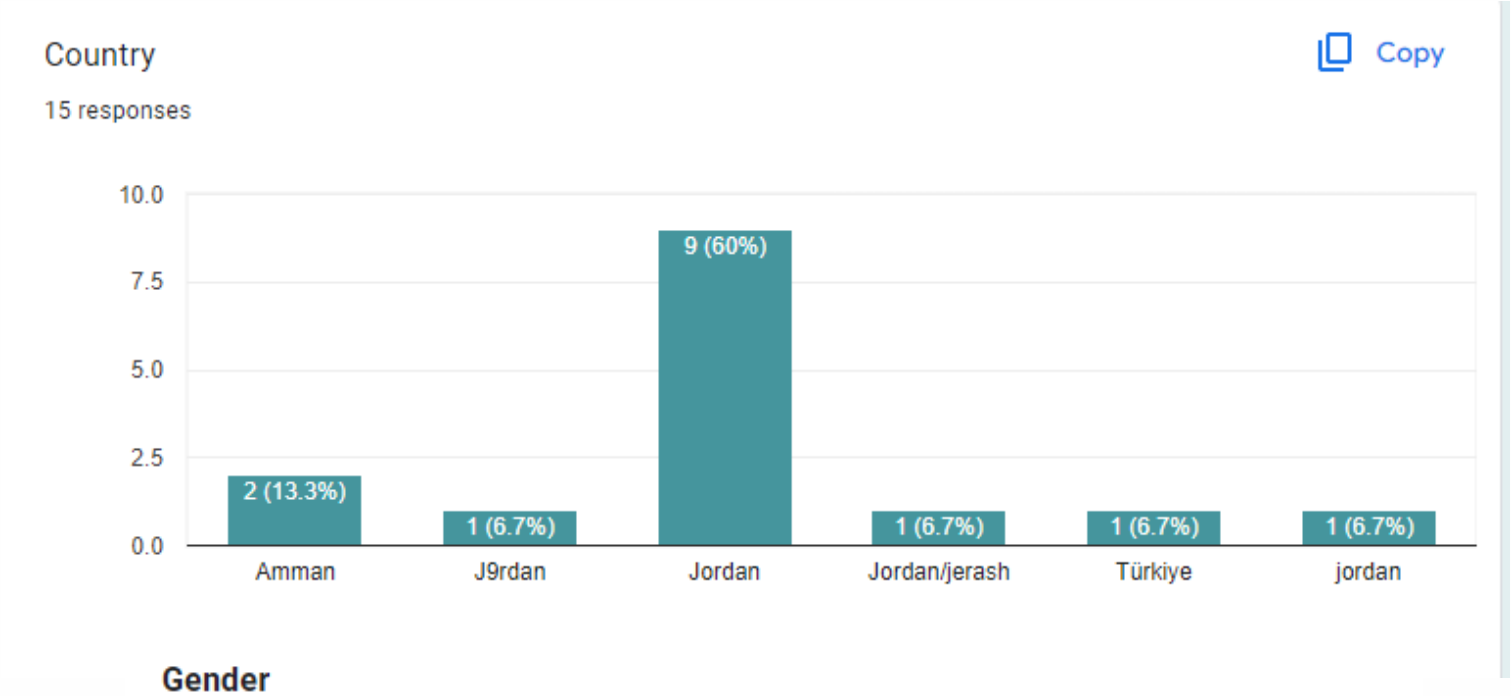
SAMPLE:

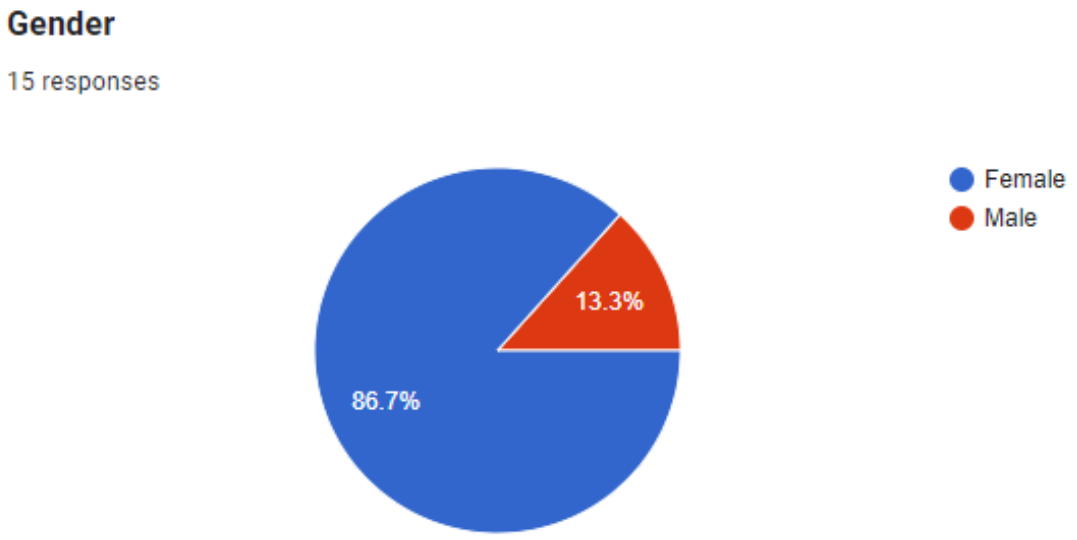
HTTPS://DOCS.GOOGLE.COM/FORMS/D/E/1FAIPQLSCJCHIS8NI6-BWNZ-54USXWU1JWKFZPHZCPYCPMFXPFVWBLWW/VIEWFORM?USP=PP_URL

2.2 SURVEY RESULTS

WE MADE A SURVEY TO SEE WHAT THE PEOPLE SEARCH AND NEED IN AN ONLINE BOOKING SYSTEM,THE SURVEY WAS TOTALLY ONLINE, ALLOWING PARTICIPANTS TO PROVIDE THEIR RESPONSES CONVENIENTLY,WE WANTED TO BE A COMPREHENSIVE SURVEY

HERE ARE THE RESULTS

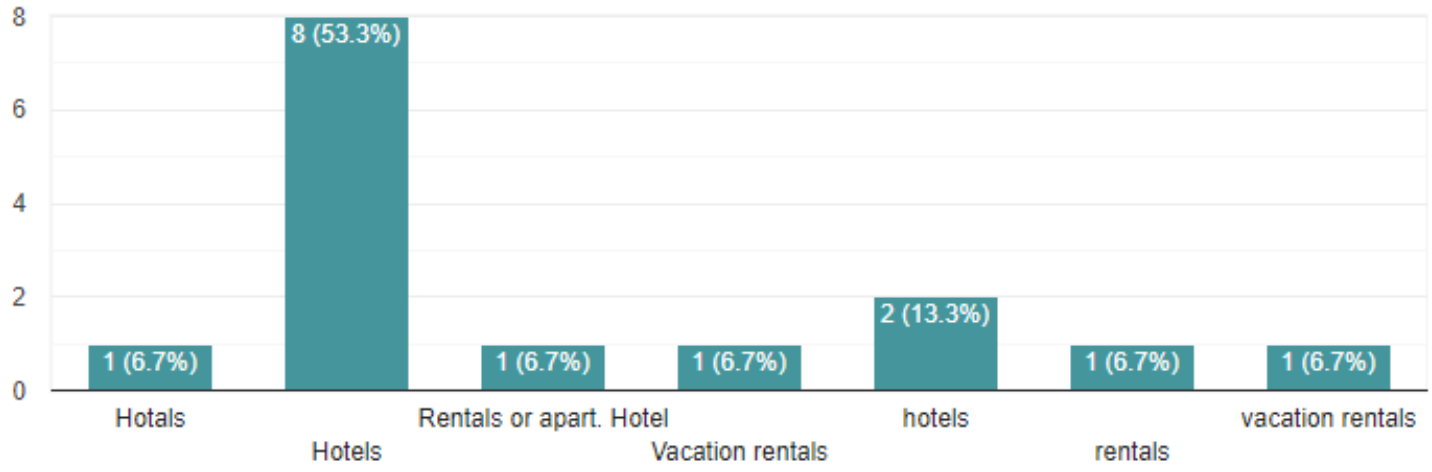




What types of accommodations do you usually prefer (hotels, vacation rentals)?

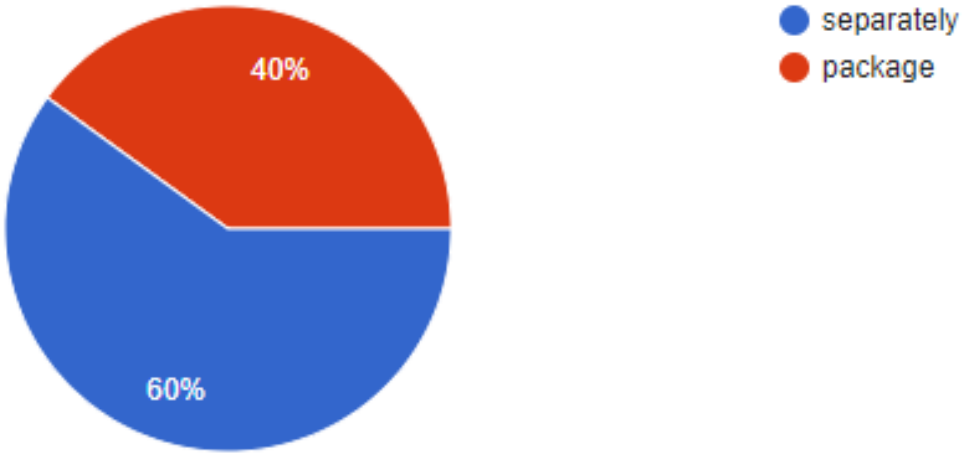
Copy

15 responses



How you prefer booking flights and accommodations s?

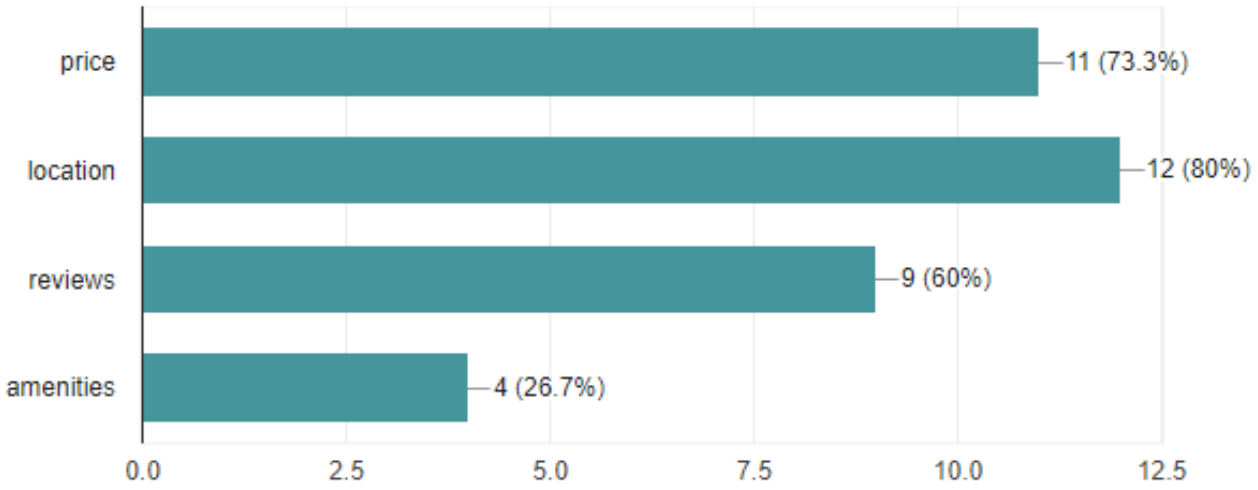
15 responses



What factors are most important to you when making a booking decision ?

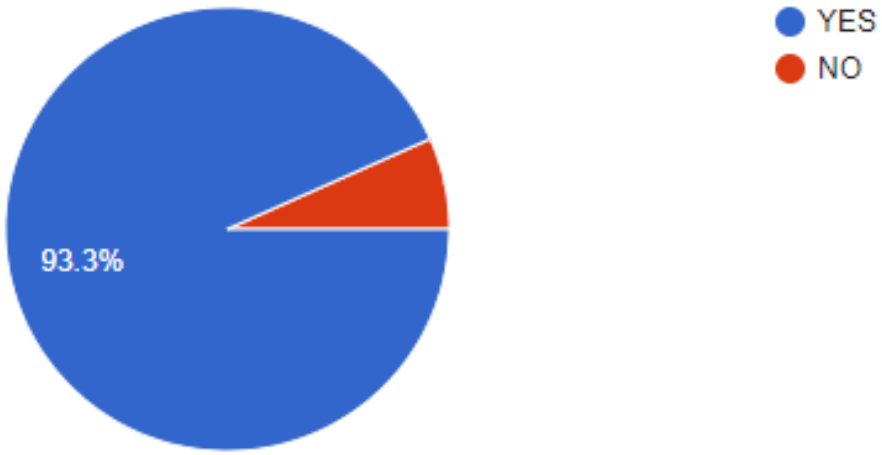
Copy

15 responses



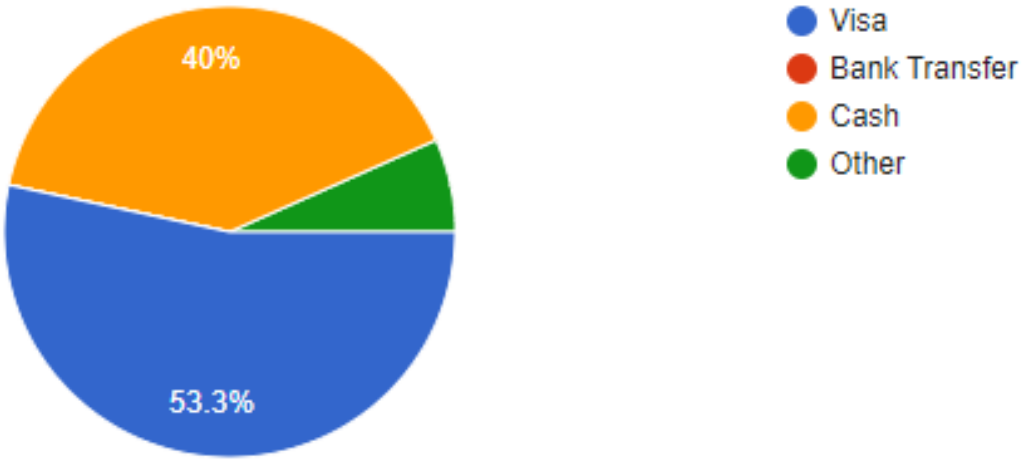
Would you find it beneficial to have a review and rating feature for accommodations and activities?

15 responses



What payment methods do you prefer when making travel bookings?

15 responses



Is there anything else you would like to share about your experiences, needs, or suggestions for a better booking platform?

12 responses

No

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To be more secure

Wego is the better booking platform

refundable reservation (in cancellation case)

Use skyscanner before book a flight to see what is the cheapest option and in what time

No

no

2.3 FUNCTIONAL AND NON-FUNCTIONAL REQUIREMENTS

FUNCTIONAL REQUIREMENTS:

REQ 1 : USER REGISTRATION: THE SYSTEM SHOULD ALLOW USERS TO CREATE ACCOUNTS BY ENTERING INFORMATION SUCH AS THEIR NAME, EMAIL ADDRESS, AND PASSWORD.

REQ 2 : USER AUTHENTICATION: USERS MUST BE ABLE TO SAFELY LOG IN TO THE SYSTEM USING THEIR CREDENTIALS.

REQ 3 : USERS SHOULD BE ABLE TO SEARCH FOR AVAILABLE SERVICES OR PRODUCTS BASED ON A VARIETY OF FACTORS SUCH AS LOCATION, DATE, PRICE RANGE, AND SO ON.

REQ 4 : MANAGEMENT OF BOOKINGS: USERS SHOULD BE ABLE TO PICK AND BOOK DESIRED SERVICES OR ITEMS. THE SYSTEM SHOULD HANDLE BOOKING CONFLICTS AND OFFER THE USER WITH CONFIRMATION.

REQ 5 : PAYMENT PROCESSING: TO COMPLETE BOOKING TRANSACTIONS, THE SYSTEM SHOULD SUPPORT SECURE ONLINE PAYMENT METHODS SUCH AS CREDIT CARDS OR DIGITAL WALLETS.

REQ 6 : NOTIFICATIONS: USERS SHOULD RECEIVE EMAIL OR SMS NOTIFICATIONS FOR BOOKING CONFIRMATIONS, UPDATES, AND REMINDERS.

REQ 7 : USER FEEDBACK AND RATINGS: USERS SHOULD BE ABLE TO SUBMIT FEEDBACK AND RATINGS FOR THE SERVICES OR PRODUCTS THEY HAVE RESERVED.

NON-FUNCTIONAL REQUIREMENTS:

REQ 8 : PERFORMANCE: THE SYSTEM SHOULD BE ABLE TO HANDLE A LARGE NUMBER OF CONCURRENT USERS WHILE ALSO PROVIDING QUICK RESPONSE TIMES FOR SEARCH, BOOKING, AND PAYMENT OPERATIONS.

REQ 9 : ***SECURITY:*** TO SAFEGUARD USER DATA AND FINANCIAL TRANSACTIONS, THE SYSTEM SHOULD USE ROBUST ENCRYPTION MECHANISMS. IT SHOULD ALSO PUT IN PLACE SAFEGUARDS TO PREVENT UNWANTED ACCESS OR DATA BREACHES.

REQ 10 : ***USABILITY:*** THE USER INTERFACE SHOULD BE INTUITIVE, USER-FRIENDLY, AND ACCESSIBLE ACROSS SEVERAL DEVICES (FOR EXAMPLE, DESKTOP, MOBILE, AND TABLET). TO GUIDE CONSUMERS THROUGH THE BOOKING PROCESS, CLEAR INSTRUCTIONS AND ERROR NOTIFICATIONS SHOULD BE PROVIDED.

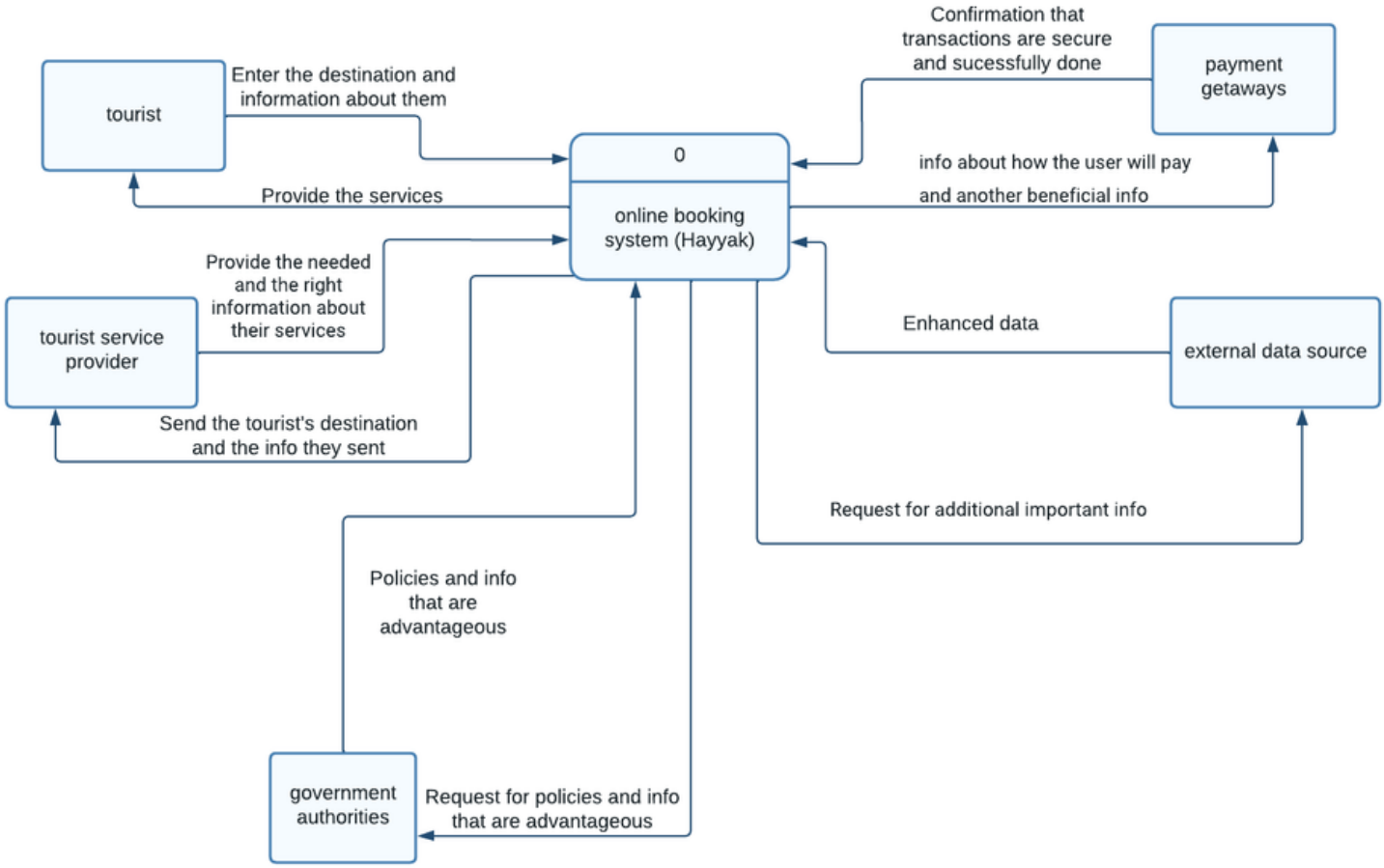
REQ 11 : ***RELIABILITY:*** THE SYSTEM SHOULD BE DEPENDABLE AND AVAILABLE 24 HOURS A DAY, SEVEN DAYS A WEEK, WITH LITTLE DOWNTIME OR REGULAR MAINTENANCE WINDOWS. IT SHOULD HAVE BACKUP AND RECOVERY SYSTEMS IN PLACE TO DEAL WITH SYSTEM FAULTS.

REQ 12 : ***SCALABILITY:*** THE SYSTEM SHOULD BE DESIGNED TO MANAGE RISING USER DEMAND AND FUTURE EXPANSION. IT SHOULD BE SCALABLE IN ORDER TO ACCOMMODATE ADDITIONAL SERVICES, PRODUCTS, AND CONSUMERS.

REQ 13 : ***INTEGRATION:*** TO ENSURE A SEAMLESS EXPERIENCE FOR USERS, THE SYSTEM SHOULD BE ABLE TO INTEGRATE WITH EXTERNAL SERVICES SUCH AS PAYMENT GATEWAYS OR THIRD-PARTY BOOKING PLATFORMS.

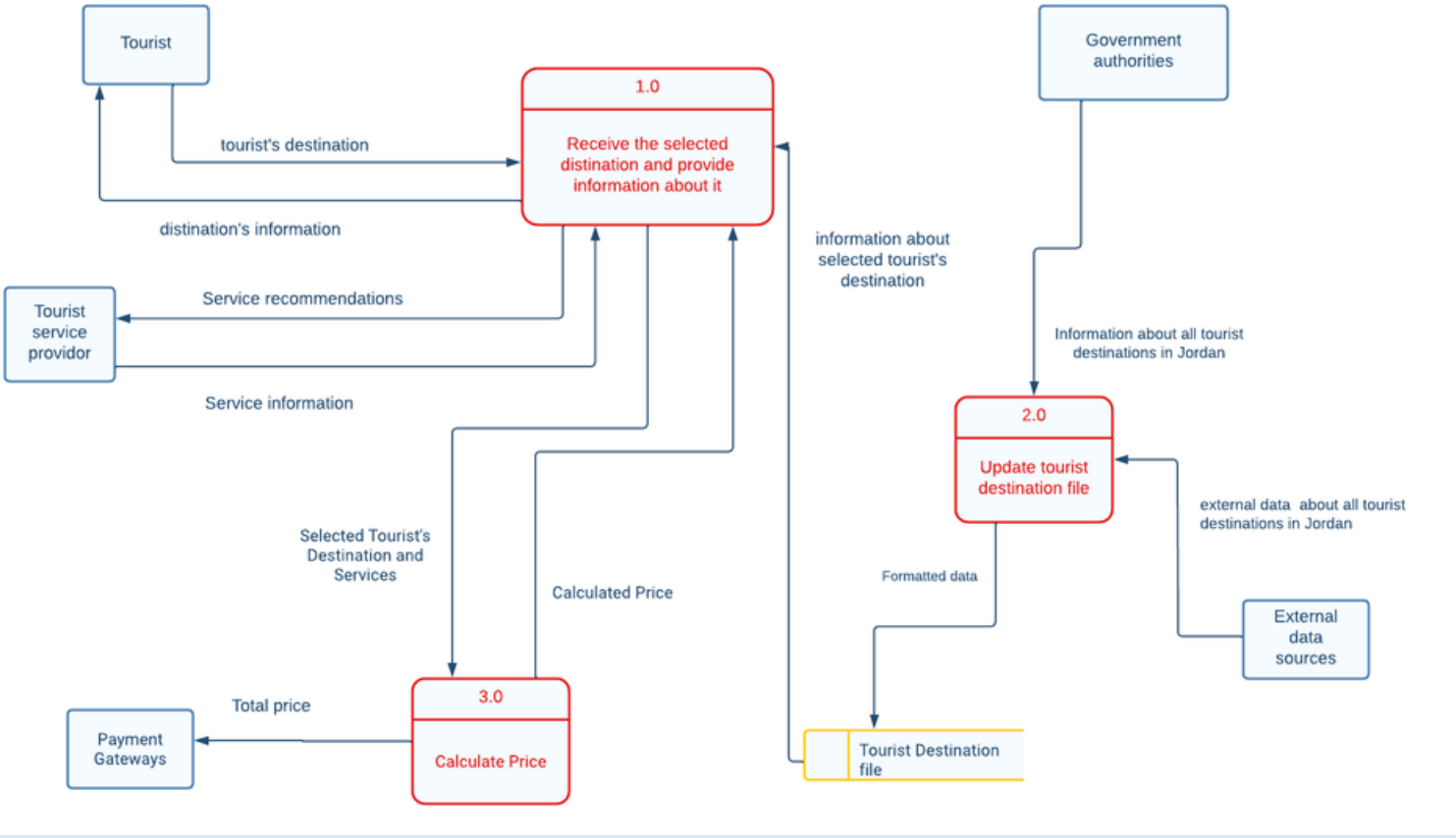
REQ 14 : COMPLIANCE: THE SYSTEM MUST FOLLOW APPLICABLE LEGAL AND INDUSTRIAL REQUIREMENTS, SUCH AS DATA PROTECTION LEGISLATION AND PRIVACY POLICIES.

2.4 CONTEXT DIAGRAM

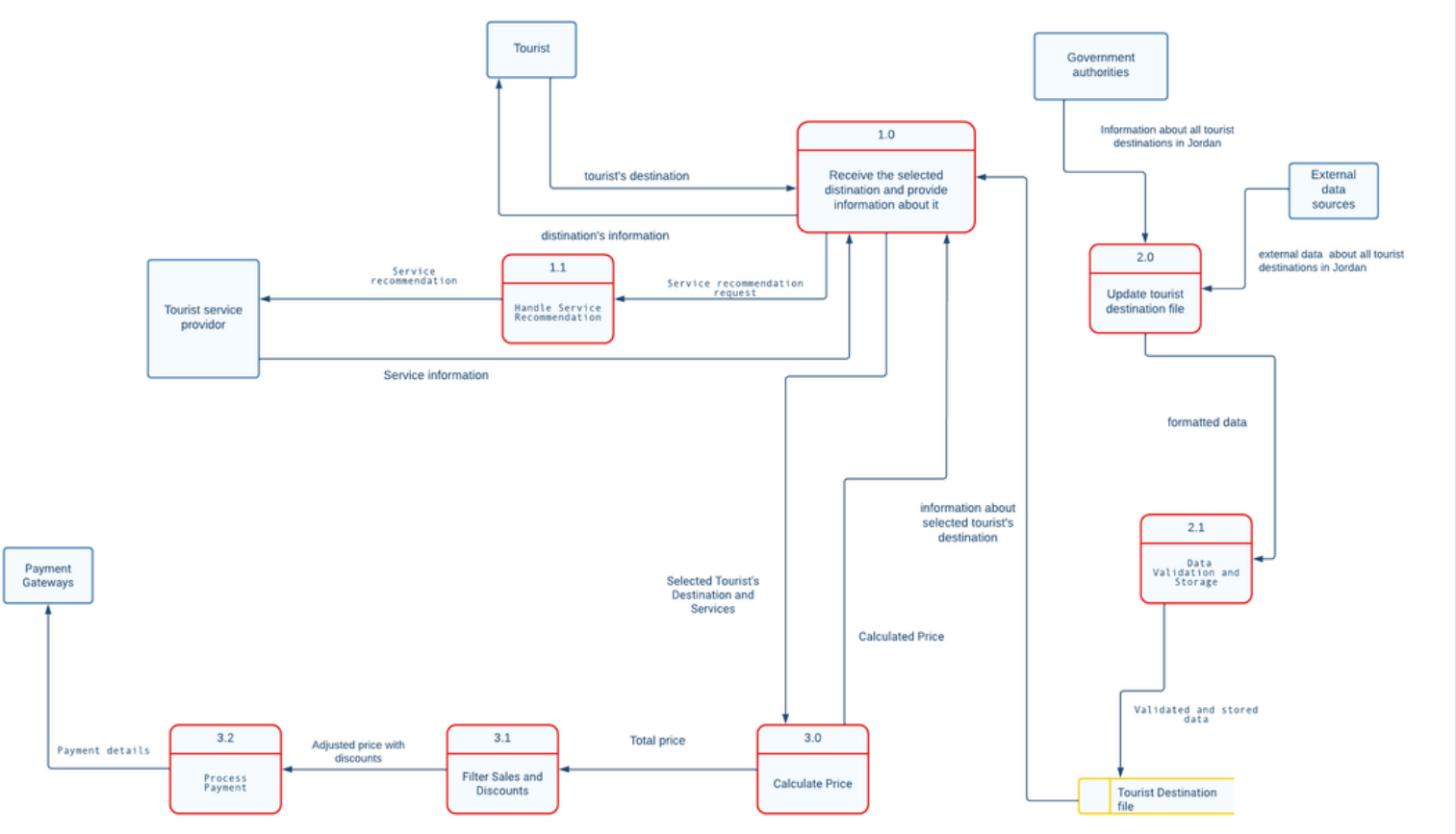


2.5 DFD

DFD: LEVEL 0



DFD: LEVEL 1

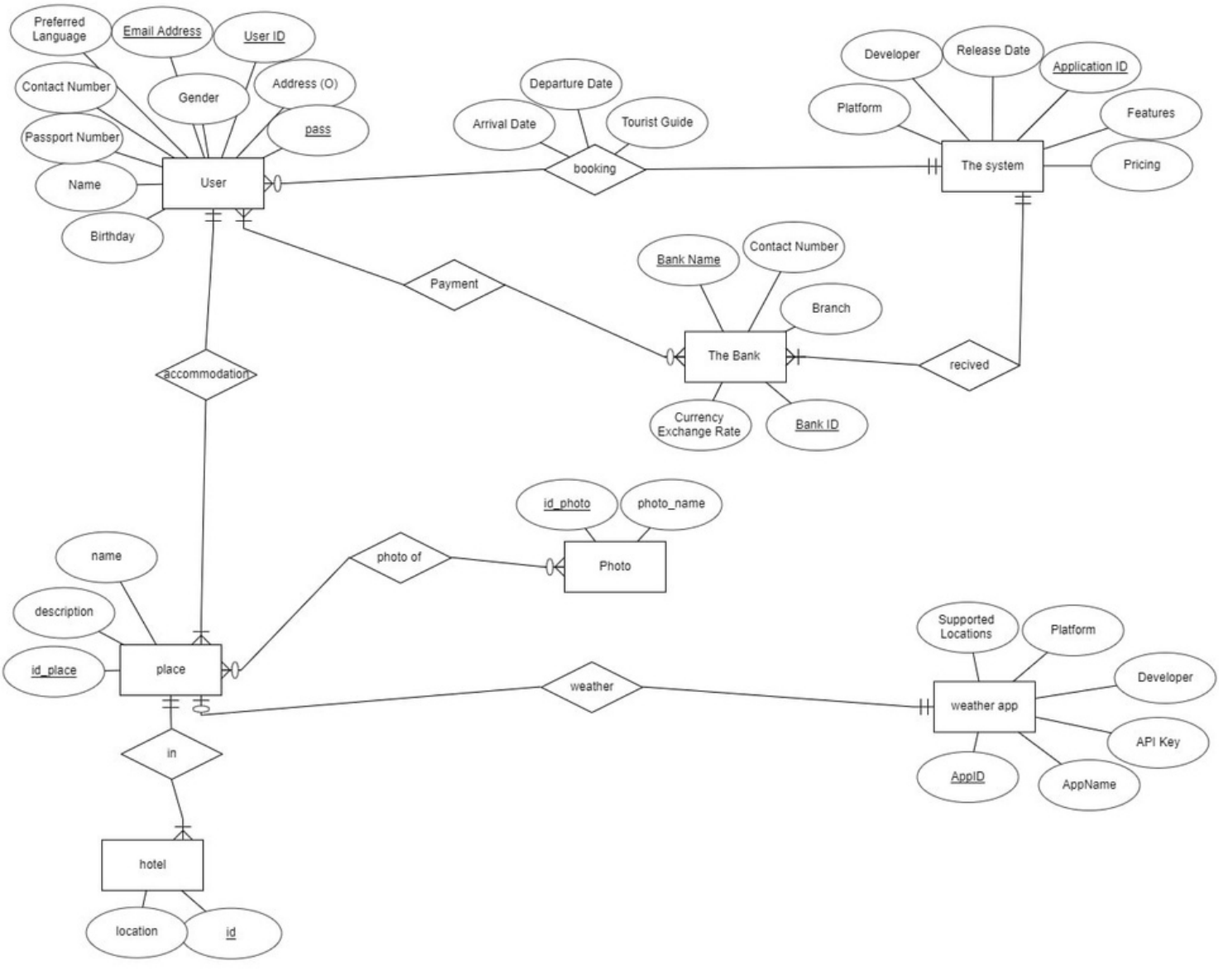

Tourist
Government authorities
1.0
Receive the selected distination and provide information about it
tourist's destination
distination's information
Information about all tourist destinations in Jordan
External data sources
2.0
Update tourist destination file
external data about all tourist destinations in Jordan
Tourist service providor
Service recommendation
1.1
Handle Service Recommendation
Service recommendation request
Service information
formatted data
information about selected tourist's destination
2.1
Data Validation and Storage
Payment Gateways
Selected Tourist's Destination and Services
Calculated Price
Validated and stored data
Payment details
3.2
Process Payment
Adjusted price with discounts
3.1
Filter Sales and Discounts
Total price
3.0
Calculate Price
Tourist Destination file

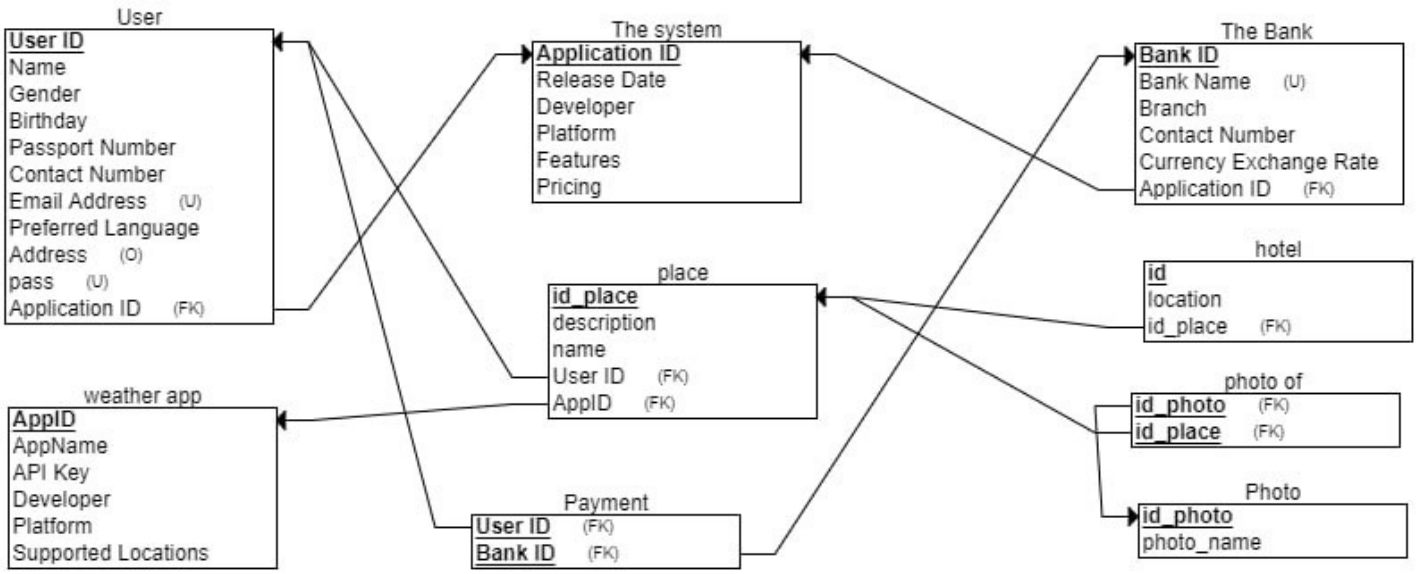
2.6 DECISION TABLE

WE ARE CREATING THIS TABLE TO HELP US TAKE DECISION SO FIRST WE SEE IF THE PERSON PICKED A TRIP IF YES THEN HE MUST VISIT HIS PAST RESERVATIONS SO HE CAN GET A 30% DISCOUNT ON HIS UPCOMING TRIP IF HE USED OUR SYSTEM TO BOOK TRIPS FOR AT LEAST 4 TIMES OTHERWISE HE WILL PAY THE FULL COST, IF THE PERSON HAVEN'T SELECTED ANY TOUR PACKAGE HE STILL CAN VISIT HIS LAST TOURS.

	Condition stubs	Rules			
		1	2	3	4
CONDITION	User selects a tour package	Y	Y	N	N
	User wants to book a trip and want to view past bookings if he has 4 previous reservations	Y	N	Y	N
	Action stubs	1	2	3	4
ACTION	Proceed to booking	X	X	X	
	Display past bookings from our site offer him 30%discount	X		X	-------
	Pay without discount		X		

2.7 DATA CONCEPTUAL MODELLING





OUR PROJECT RECORD

HTTPS://DRIVE.GOOGLE.COM/FILE/D/1TCFCMLXMS1VEV_RPG1UDUDEXYKZ2VYY8/VIEW?USP=SHARING