



Nikki Bowles  
Mitchel DeMuesy  
Jason Lindsey  
Niko Tonhaeuser



# TABLE OF CONTENTS

## Phase 1

---

→ Team Member Resumes	<u><a href="#">Page 001</a></u>
→ Request for Information Services	<u><a href="#">Page 005</a></u>
→ Project Proposal	<u><a href="#">Page 006</a></u>
→ Business History	<u><a href="#">Page 007</a></u>
→ Organizational Chart	<u><a href="#">Page 008</a></u>
→ Stakeholder Description	<u><a href="#">Page 009</a></u>
→ Project Charter	<u><a href="#">Page 010</a></u>

## Phase 2

---

- **Business Requirement Statement** [Page 015](#)
  - **Alternatives Considered** [Page 018](#)
  - **System Improvement Objectives** [Page 020](#)
  - **Logical Process Models** [Page 021](#)
  - **Data Dictionary** [Page 025](#)
  - **Feasibility Matrix** [Page 026](#)
  - **Alternatives Matrix** [Page 027](#)
  - **Appendix** [Page 028](#)
- 

## Phase 3

---

- **Database Design** [Page 030](#)
- **Interface & Screen Design** [Page 031](#)

→ **Input, Output, & Report Design** [Page 034](#)

---

→ **Control Design** [Page 035](#)

---

→ **Test Plan** [Page 036](#)

---

→ **Data Conversion Plan** [Page 042](#)

---

## Phase 4

→ **Database** [Page 043](#)

---

→ **Prototype** [Page 049](#)

---

## Phase 5

→ **Training Plan** [Page 054](#)

---

→ **User Manual** [Page 057](#)

---

→ **System Conversion Plan** [Page 059](#)

---

→ **Support & Maintenance Plan** [Page 060](#)

# NIKKI BOWLES

I am a hard-working college student with a passion for computers and technology. I'm looking to expand my knowledge and hone my skills as I pursue my degree in Computer Science. I have a particular interest in cyber security and increasing my programming skills and experience.

---

## SKILLS

- Proficiency in HTML, CSS, JavaScript, Java, C++, Python, .Net, & SQL
  - Problem solving & analytical thinking
  - Effective communicator
  - Basic design & editing skills
  - Experience working with teams
  - Customer Service experience
  - Database experience
- 

## EDUCATION

### HIGH SCHOOL

Wadsworth High School - Graduated 2022

Participated in a Programming Design and Technology Extracurricular Class

### COLLEGE

Stark State College

2022 - Present | Associates in Computer Science

---

## EXPERIENCE

### FULFILLMENT

Lowes

November 2023 - Present

### GENERAL FAST FOOD

KFC

May 2022 - March 2023

### GROCERY STORE STOCKING

Save-A-Lot

August 2022 - September 2023

---

## CONTACT

Wadsworth, Ohio 44281

(330) 441-2002

nbowles0707@starkstate.net

# MITCHELL DEMUESY

Dedicated and detail-oriented professional excelling in web development and software development with a focus on achieving measurable outcomes.

---

## SKILLS

- Proficiency in .Net, HTML/CSS, JavaScript, PHP, SQL, C#, Bootstrap
  - Problem solving skills
  - Collaborative worker
  - Adaptable
  - Friendly
  - Computer Skills
  - Time Management
  - Mobile Development
  - Customer Service
  - Web-based Development
- 

## EDUCATION

### HIGH SCHOOL

Hoover High School - Graduated 2014

### COLLEGE

Hocking College | Associates of Graphic Design

Stark State College | Associates of Web Design & Development

---

## EXPERIENCE

### INBOUND COORDINATOR

Central Transportation

2020 - Current

### LOGISTICS COORDINATOR

R.G. Smith Contractors

2018 - 2020

### INTERNET TECH SUPPORT

ComCast

2016 - 2018

---

## CONTACT

Canton, Ohio 44685

(330) 704-7650

mdmunesy1116@starkstate.net

# JASON LINDSEY

20+ years in National Guard aviation. Able to work alone or with a group. Used to working under pressure and able to get creative to ensure work is completed. Adaptable and learns things quickly. Also knows how to manage people when and if needed. Has a ton of ideas for programming products that would benefit the military and aviation. Excited to learn as much as possible about programming.

---

## SKILLS

- C++, Visual Basic, Visual Basic .NET (VB.NET), Python, Java, Javascript, Bootstrap, PHP, SQL, and Github
  - Works well alone or in a group environment
  - Problem Solving and knowing how to use available resources
  - Database Administrator
  - System Administrator
  - Wordpress
  - Elementor
- 

## EDUCATION

### HIGH SCHOOL

Perry High School - Graduated 1999

### COLLEGE

Stark State College | Associates of Computer Science & Engineering

---

## EXPERIENCE

### WEB DEVELOPER INTERN

H-P Products

2023 - Current

### QUALITY CONTROL ANALYST

Flexjet

2018 - 2020

### QUALITY ASSURANCE SPECIALIST

AASF #1

2014 - 2018

---

## CONTACT

Canton, Ohio 44708

(330) 949-9414

jlindsey0123@starkstate.net

# NIKO TONHAEUSER

Highschool graduate with a strong work ethic and an eagerness to improve on any skills I need to be successful in my field. Has over 3 years of warehouse experience. I also worked in retail and have skills in assisting customers and a commitment to doing what I need to do for them, to have the best experience every time.

---

## SKILLS

- Great Communicator
- Good problem solving skills
- Collaborative worker
- Adaptable

Very passionate about technology, I have built my own computer and love to hear about what new things are coming out. I also go to the gym almost every day so I have a lot of self-discipline.

---

## EDUCATION

### HIGH SCHOOL

GreenHigh School - Graduated 2021

### COLLEGE

Stark State College | Associates of Computer Science & Engineering

---

## EXPERIENCE

### WAREHOUSE ASSOCIATE

ECS Tuning

January 2018 - Present

### RETAIL ASSOCIATE

Pet Lovers

2018-2020

---

## CONTACT

Canton, Ohio 44685

(330)704-7650

mdenuesy1116@starkstate.net



→ REQUEST FOR INFORMATION

# REQUEST FOR INFORMATION

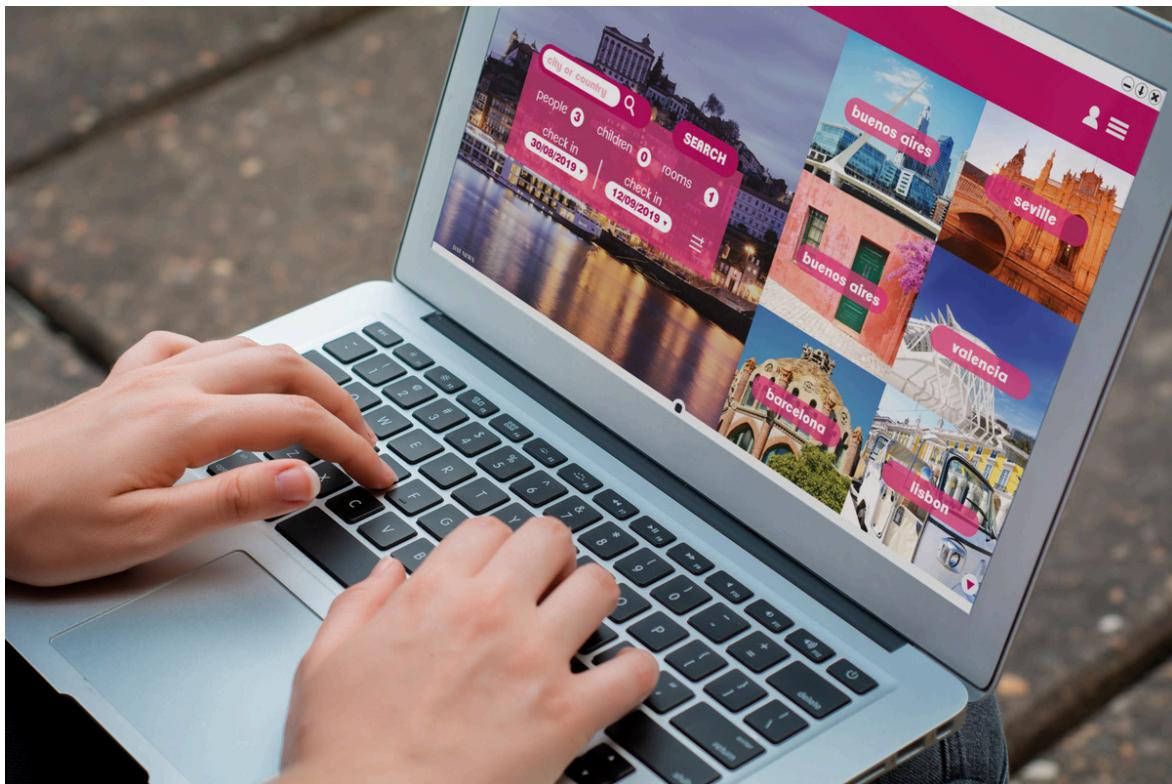
Dear development team,

TravelSmart is creating a new initiative to sell customized packages to customers. We would like to meet with the development team and hear your insights and recommendations. We want to have these new packages become a part of our luxury service. We also want to enhance our user accounts by setting up a feature that allows users to see current and past trips. We would like your input on integration with the current process, length of the project, resources, and challenges.

Thank you for your help in this matter.

Neal & Del

# PROJECT PROPOSAL



## Summary

TravelSmart presents a comprehensive solution designed to overcome problems faced by travel agencies. Our project aims to address any confusion and limitations to routes and amenities during the booking process! Additionally, we focus on enhancing user account management and will introduce new features that provide a personalized experience for both customers and agents.

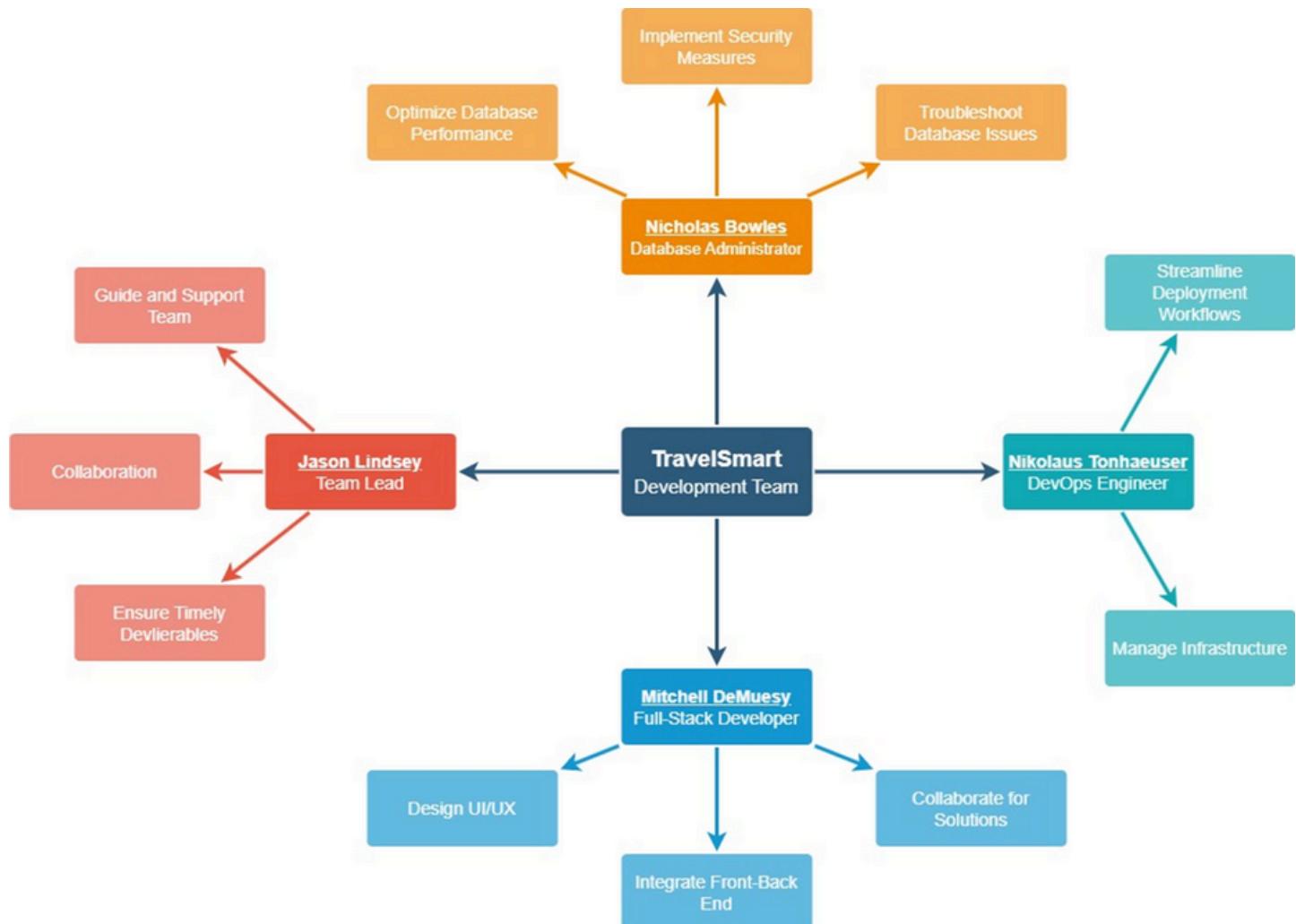
# BUSINESS HISTORY

TravelSmart, founded in 1997 by avid travelers Neal Page and Del Griffith, embarked on a mission to provide group-based travel packages to adventurers seeking shared experiences. Over the years, the agency has built a strong reputation for organizing memorable group tours to exotic destinations worldwide. However, as the travel landscape evolves and customer preferences shift towards personalized experiences, TravelSmart is poised to adapt and innovate.

TravelSmart primarily focuses on curating group-based travel packages. These meticulously crafted itineraries catered to diverse interests, from cultural immersion tours to adrenaline-fueled adventures. With a commitment to quality and customer satisfaction, the agency forged partnerships with local guides, accommodations, and tour operators, ensuring unforgettable journeys for its clients.

In response to shifting consumer behavior and market dynamics, TravelSmart wants to start curating a luxury, individual travel planning experience, and enhanced user account management. With the partnerships already forged and seeking to forge new partnerships, TravelSmart, while leveraging cutting-edge data analytics, the agency empowers customers to design their dream vacations with unparalleled precision and flexibility.

# TRAVELSMART DEVELOPMENT TEAM



## → STAKEHOLDER'S DESCRIPTION



### Customers

The Customer is a crucial stakeholder for our company because how else will we become profitable unless we market the company to the customer? We must identify the target market, whether our prices are high or low. It all depends on the customer.



### Managers

The managers are as important as the employees, maybe more so as with enough employees and a big enough workforce, there needs to be a primary direction for the employees' effort.



### Owners

The Owners of our application are probably the most significant shareholders because they made the idea that became the plan for our application.

### Employees

The Employee is also a significant part of the company as they are the ones to run the whole thing, whether that be run well or poorly. We need to find employees that have the same goals for the company as we do.



### Marketing

Marketing is used to advertise to our customers, and we need to convince them to try out our application and maybe make a purchase with our app.



### Development Team

The development team is the backbone of the entire application as they are responsible for creating our platform for the application that we are using. We need to have a good development team so that there are no bugs in the app and our customer satisfaction can be higher.

# CONCEPTION TO REALITY

## A.) Project Conception

Condition:

TravelSmart currently relies on traditional group-based travel packages, limiting its ability to meet the growing demand for personalized travel experiences. The market trend indicates a shift towards individualized itineraries, creating a need for a more flexible and tailored approach.

Purpose: The goal is to transition from group-focused travel to individual custom trips, allowing clients to design unique and personalized journeys. This evolution aims to meet the changing preferences of modern travelers who seek more control and personalization in their adventures.

## B.) Objective

- Develop a user-friendly platform allowing clients to easily create and customize their travel itineraries.
- Seamlessly integrate the new custom trip feature with the existing group-based travel system.
- Provide a smooth transition for both customers and agents, ensuring the flexibility of online customization while maintaining the high-quality service TravelSmart is known for.

## → PROJECT CHARTER CONT'D

### Cost

- Design: 50hr @ \$120/hr (\$6,000)
- Development/Testing: 200hr @ \$300/hr (\$60,000)
- Support: 1yr Free, Additional per month \$2,500
- Initial Total Cost: \$68,500
- Monthly: \$2,500

### Risks

- Development delays leading to the inability to launch the new custom trip feature on time.
- Potential technical issues causing disruptions in the booking process, resulting in a loss of revenue.
- Difficulty integrating the new system with the existing group-based travel framework, leading to operational challenges.

### Benefits

- Expanded market reach by catering to the growing demand for personalized travel experiences.
- Increased customer satisfaction through the ability to design individualized itineraries.
- Improved competitiveness within the travel industry by embracing modern trends.
- Enhanced word-of-mouth marketing as customers share their seamless and personalized travel experiences.



## → PROJECT CHARTER CONT'D

### **Deliverables**

- User-friendly online platform for designing custom travel itineraries.
- Integration of the custom trip feature with the existing group-based travel system.
- Efficient tracking and management system to monitor individualized bookings.

### **Alternatives**

- Maintain the current group-based travel model and focus on optimizing group experiences.
- Implement a hybrid model, offering both group-based and custom trip options for customers to choose from.
- Explore partnerships with other travel agencies to provide personalized experiences without significant system upgrades.

### **C.) Scope**

- TravelSmart aims to create a functional and reliable ordering system for our clients. We ensure that we reach our agreed-upon time frames with clients.

### **D.) Business Constraints**

Our project operates within our financial parameters, requiring a budget and good management. Time constraints demand a well-executed delivery. Stakeholder expectations, planning, and flawless system integration are needed to fulfill these business constraints.

## → PROJECT CHARTER CONT'D

### E.) Technology Constraints

The primary constraint is ensuring proficiency in the technologies among the team. Lack of familiarity may lead to undiscovered bugs during development or testing. Potential constraints could also include limited access to testing resources and downtime with the database.

### F.) Resource Constraints

There may be some issues with tracking and management because of times when tracking may not be accurate due to something happening with the user's trip. There will have to be some sort of interface where users can properly utilize their trip and customize it as time goes on. When users encounter an issue, there may be some downtime because not everyone will be able to answer questions at any given time.

### G.) Project Documentation & Communication

All team members are to review every other day by phone/email to share tasks completed or roadblocks from completing tasks.

All team members are to review documentation every other day by phone/email.

Questions/Training Instructions: Selected members to review questions asked via email once every day. Any questions relating to how to use the site, selected members will assist users on the site via email.

## → PROJECT CHARTER CONT'D

### H.) Project Analysis

#### Project Timetable

	Task Name	Duration	Start	ETA	Phase 1		Phase 2		Phase 3		Phase 4		Phase 5	
					22 Jan - 4 Feb	5 Feb - 25 Feb	26 Feb - 24 Mar	25 Mar - 14 Apr	15 Apr 15 - 5 May					
1	Phase 1: Planning	13 days	22 Jan 24	4 Feb 24										
2	Resumes	13 days	22 Jan 24	4 Feb 24										
3	Request for Information	13 days	22 Jan 24	4 Feb 24										
4	Project Proposal	7 days	22 Jan 24	29 Jan 24										
5	Company History	7 days	22 Jan 24	29 Jan 24										
6	Organizational Chart	10 days	22 Jan 24	1 Feb 24										
7	Stakeholder Description	13 days	22 Jan 24	4 Feb 24										
8	Project Charter	13 days	22 Jan 24	4 Feb 24										
9	Phase 2: Design	20 days	5 Feb 24	25 Feb 24										
10	UI Design	7 days	5 Feb 24	25 Feb 24										
11	Integration with current system design	10 days	5 Feb 24	25 Feb 24										
12	Database Design	15 days	5 Feb 24	25 Feb 24										
13	Phase 3: Development	20 days	26 Feb 24	24 Mar 24										
14	Front-end Development	10 days	26 Feb 24	24 Mar 24										
15	Back-end Development	10 days	26 Feb 24	24 Mar 24										
16	Integration	10 days	26 Feb 24	24 Mar 24										
17	Testing	10 days	26 Feb 24	24 Mar 24										
18	Phase 4: Deployment	18 days	25 Mar 24	14 Apr 25										
19	Test Launch	18 days	25 Mar 24	14 Apr 25										
20	Employee Training	18 days	25 Mar 24	14 Apr 25										
21	Feedback	18 days	25 Mar 24	14 Apr 25										
22	Phase 5: Post Launch	2 days	15 Apr 24	5 May 24										
23	Full Launch	20 days	15 Apr 24	5 May 24										
24	Support	20 days	15 Apr 24	5 May 24										
25	Marketing	20 days	15 Apr 24	5 May 24										

# WHAT'S THE SOLUTION?



## Executive Summary

This Project aims to revolutionize the travel industry through a customer-centric approach, robust technological solutions, and strategic partnerships, all within a \$50,000 budget and a six month time frame. The success of our application will depend on efficient collaboration among the key stakeholders and the ability to adapt to a changing and ever-competitive landscape.

# DEFINING THE PROJECT



## Project Objective

- Customer Satisfaction
- Digital Presence
- Destination Knowledge
- Sustainability
- Competitive Analysis
- Data Security



## Project Scope

- Be one of the most used and most useful tools for traveling
- Have a working prototype within 6 months
- Budget of \$50,000



## Business Requirements

- Code a functioning website
- Make a working database to hold all of our customer information
- No longer than 1 year production time
- Have a knowledgeable team of employees to operate the business

# DEFINING THE PROJECT CONT'D



## Key Stakeholders

- Customers
- Employees
- Managers
- Marketing
- Owners
- Development Team



## Project Constraints

- Six months of production time
- \$50,000 Budget
- Risk of being Phased Out by Competing Companies
- Working Database Server to Hold Customer Information



## Cost-Benefit Analysis

- \$50,000 Budget Compared to a \$100,000 Profit based on partnerships
- \$2,000 each for the development team
- \$40,000 Overflow Protection
- \$1,000 Database Server
- \$1,000 Website and Server

→ ALTERNATIVES CONSIDERED

# OPTIONS FOR INITIATIVE

## In-House Development

Initially, TravelSmart considered developing the custom trip platform internally using existing resources and expertise within the company. This option involved leveraging the skills of the internal development team and utilizing existing infrastructure. Information sources exploited for this alternative included internal discussions with the development team, assessing their capabilities, and evaluating the feasibility of in-house development.

---

## Outsource Development

Another alternative explored was outsourcing the development of the custom trip platform to third-party vendors or software development agencies. TravelSmart researched potential vendors through online platforms, industry directories, and colleague referrals. Information sources exploited included vendor websites, case studies, client testimonials, and proposal requests (RFPs).

→ ALTERNATIVES CONSIDERED

# OPTIONS FOR INITIATIVE

## Customizing Existing Platform

TravelSmart also considered customizing existing travel booking platforms or software solutions to accommodate the custom trip feature. Information sources exploited for this alternative included researching off-the-shelf software solutions, conducting demos, and engaging in discussions with software vendors to assess their customization capabilities.

---

## Hybrid Approach

A hybrid approach was also contemplated, combining in-house development and outsourcing elements. This option involved utilizing internal resources for certain aspects of the project while outsourcing specialized tasks or components to external vendors. Information sources exploited for this alternative included conducting cost-benefit analyses, assessing resource availability, and identifying areas where external expertise would add value.

→ ALTERNATIVES CONSIDERED CONT'D

# OPTIONS FOR INITIATIVE

## Working with Cloud Providers

TravelSmart explored the possibility of partnering with technology or cloud service providers offering platforms or tools tailored to the travel industry. This required researching industry-specific technology providers, attending trade shows and conferences, and networking with industry peers to gather insights and recommendations.

---

## Conclusion

Each alternative was carefully evaluated based on cost, timeline, technical feasibility, scalability, and alignment with business objectives. Ultimately, the decision to pursue outsourcing was made based on a thorough analysis of the alternatives and their benefits and limitations.

# GAME CHANGER

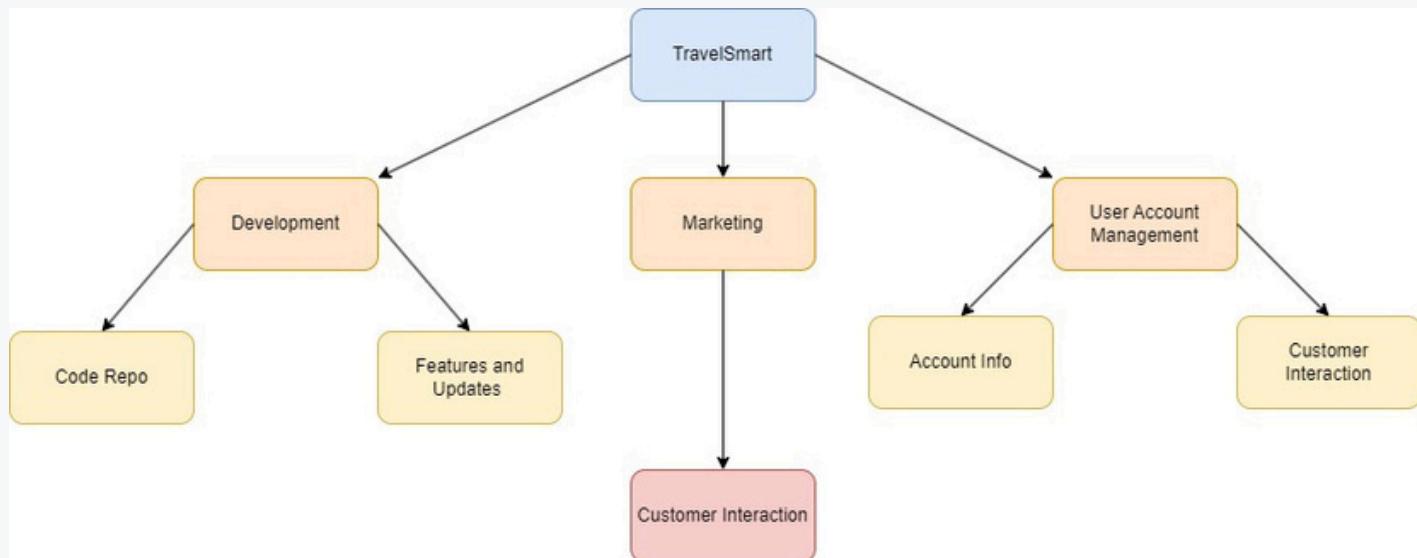


We want to change the market because our application will be a game changer: the best customer service and the easiest-to-use software.

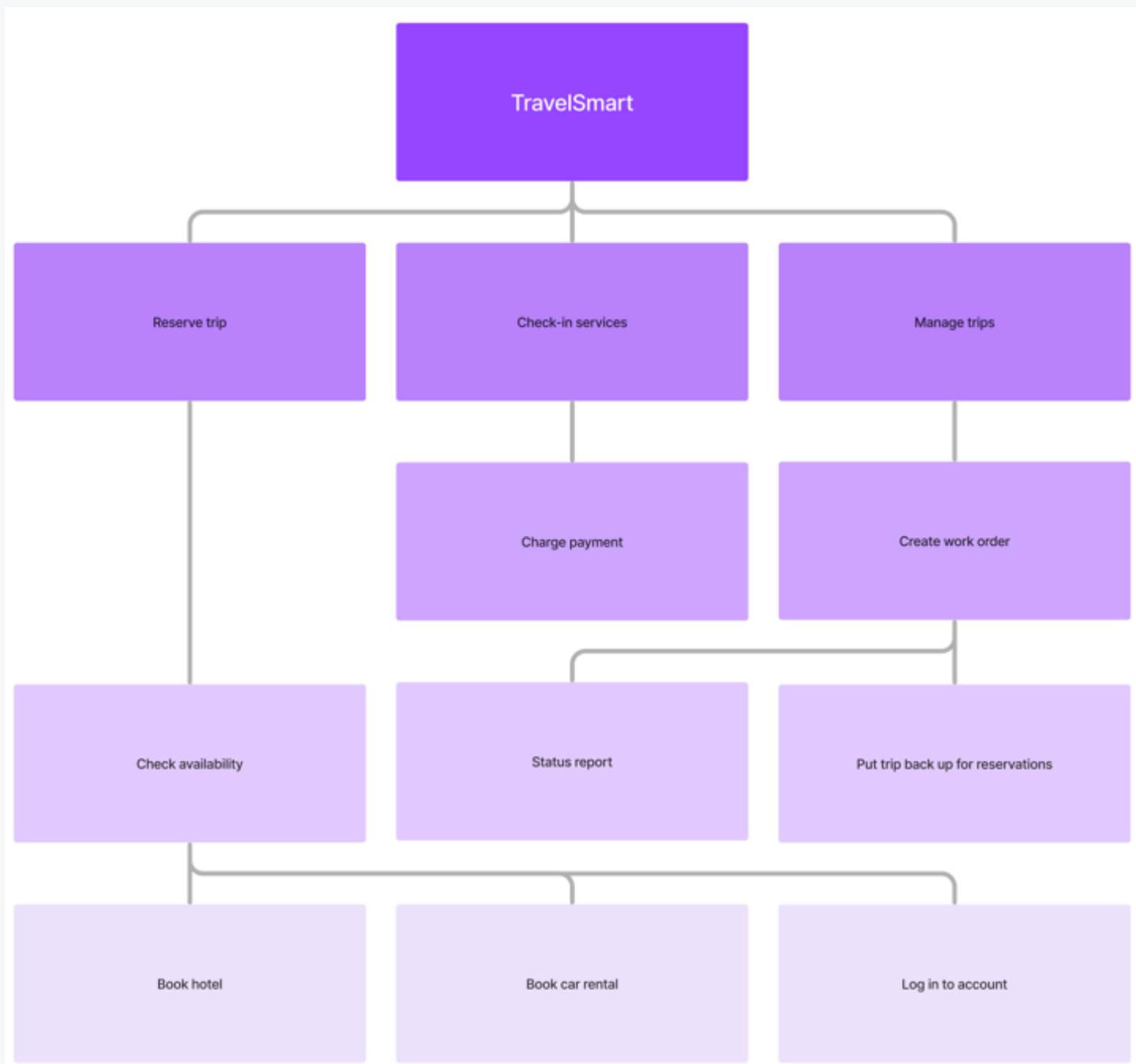
We are also looking to design a database that will hold all of our customer's data in a neat and accessible way. We are also looking to create a product that will be able to sell and not just be another option

in a sea of half-baked goods. We also want our customer service response time to be within 6 hours of the initial message. We want to be known in the travel agency market as not just a cheap option but one of the best options. Finally, we want our employees to have the best chance of success using the most up-to-date technology.

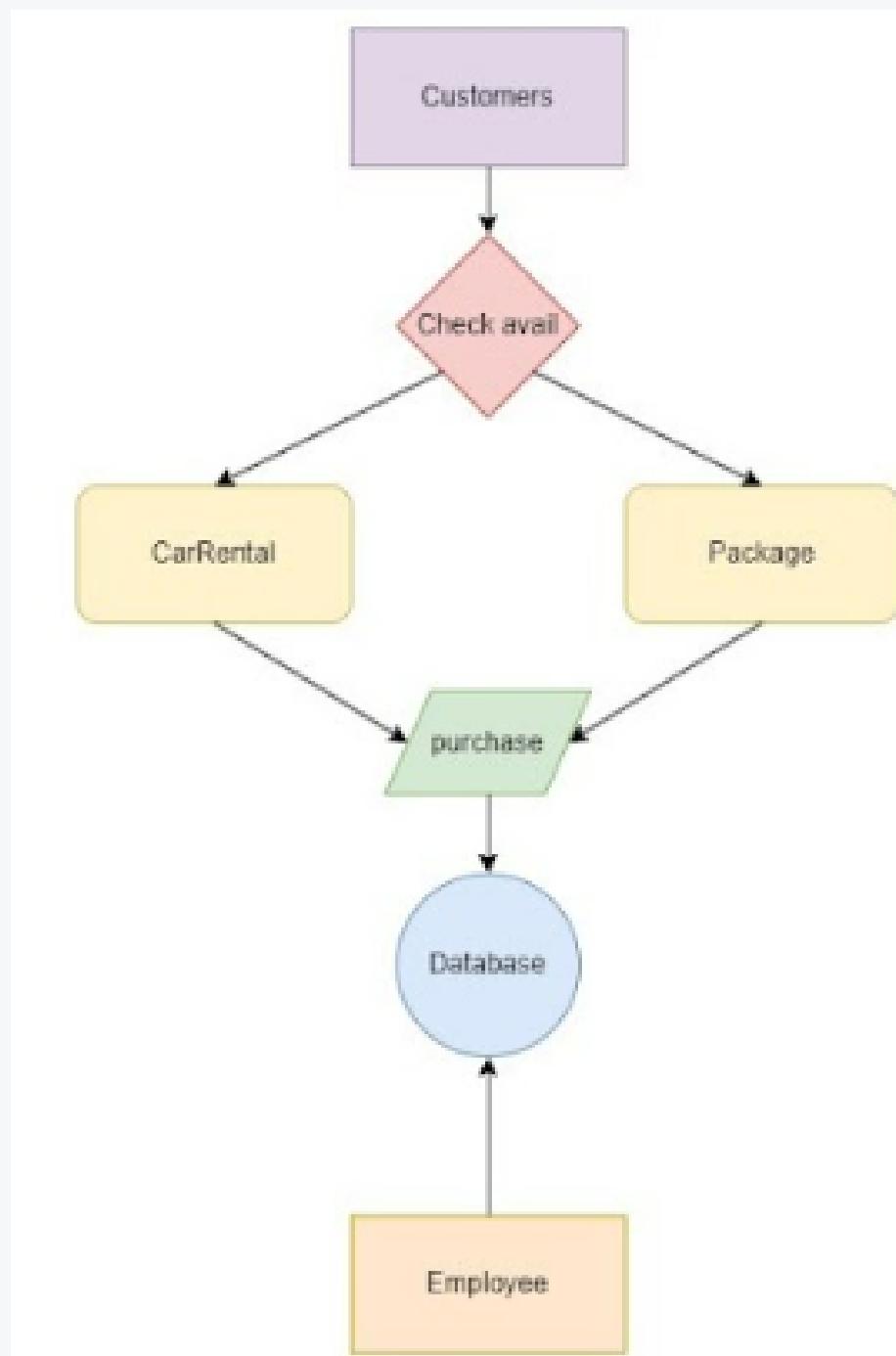
# CONTEXT DIAGRAM



# DECOMPOSITION DIAGRAM

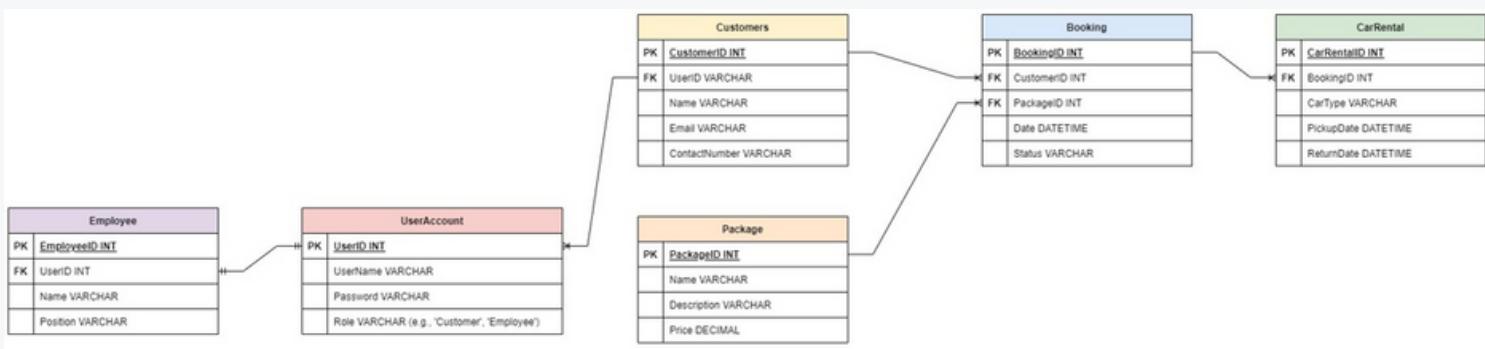


# DATA FLOW DIAGRAM



→ LOGICAL PROCESS MODELS CONT'D

# INITIAL ERD DIAGRAM



# ENTITIES, PROCESSES, & ATTRIBUTES

Table	Column	Data Type	Key	Nullable	Ref	Description
CUSTOMER	customerID	int	PK	not null		Customer ID
CUSTOMER	customerPhoneNumber	varchar(10)		nullable		Customer Phone Number
CUSTOMER	customerFirstName	varchar(20)		not null		Customer First Name
CUSTOMER	customerLastName	varchar(20)		nullable		Customer Last Name
CUSTOMER	customerEmail	varchar(50)		nullable		Customer Email
AGENTS	agentID	int	PK	not null		Agent ID
AGENTS	customerID	int	FK	not null	customerID in CUSTOMER	Many Customer To One Agent
AGENTS	agentPhoneNumber	varchar(10)		nullable		Agent Phone Number
AGENTS	agentFirstName	varchar(20)		nullable		Agent First Name
AGENTS	agentLastName	varchar(20)		nullable		Agent Last Name
AGENTS	agentEmail	varchar(50)		nullable		Agent Email
TRAVEL	travelID	int	PK	not null		Travel ID
TRAVEL	transportationID	int	FK	not null	transportationID in TRANSPORTATION	Many Transportation To Many Travel
TRAVEL	travelDuration	varchar(15)		not null		Travel Duration
TRAVEL	travelDestination	varchar(50)		nullable		Travel Destination
TRAVEL	travelType	int		not null		Travel Type
EXPENSE	expenseID	int	PK	not null		Expense ID
EXPENSE	transportationID	int	FK	not null	transportationID in TRANSPORTATION	Many Expense To Many Transportation
EXPENSE	expenseCost	int(6)		not null		Expense Cost
EXPENSE	expenseDate	date		nullable		Date of Expense
REVIEW	reviewID	int	PK	not null		Review ID
REVIEW	customerID	int	FK	not null	customerID in CUSTOMER	Many Review To One Customer
REVIEW	travelID	int	FK	not null	travelID in TRAVEL	Many Travel To One Customer
REVIEW	reviewRating	decimal(2, 1)		not null		Review Rating
REVIEW	reviewComment	varchar(50)		nullable		Review Comment
REVIEW	reviewDate	date		not null		Review Date
HOTEL	hotelID	int	PK	not null		Hotel ID
HOTEL	customerID	int	FK	not null	customerID in CUSTOMER	One Hotel To Many Customer
HOTEL	HotelRoomNumber	int		not null		Hotel Room Number
HOTEL	NumberOfGuests	int		nullable		Number Of Guests

→ FEASIBILITY MATRIX

# FEASIBILITY MATRIX

Feasibility Matrix

Feasibility Criteria	WT	Building Brand New Website	Using "Picturesque's" Current Site	Using a site builder
		Candidate 1	Candidate 2	Candidate 3
Operational Feasibility - Plan will allow the creation of a site that will be easy to utilize and customize with minimal effort.	40%	Start from scratch and benefit from having a brand new system that is reliable and responsive with an innovative design.	Will take less time to complete due to already having a website in place. Will require a few updates to incorporate a new image repository, but a lot more time efficient than building a brand new site.	Won't take as long as creating a new site because the layout sites such as Wix or Squarespace already have stuff to make it easy. Will be easier to set up but may not fully fit needs.
Technical Feasibility - Plan should be completed with current things at disposal.	40%	Current technology available will be sufficient to develop website.	Current technology available will be sufficient to develop website.	Current technology available will be sufficient to develop website.
Economic Feasibility - Plan will help flow of company tremendously without being steep on financials	10%	This project will cost \$0.	This project will cost \$0.	This project will cost money monthly depending on the platform chosen.
Schedule Feasibility - Plan needs to be set in motion in a relatively quick time.	10%	1-2 months	3 weeks	2-4 weeks

→ ALTERNATIVES MATRIX

# ALTERNATIVES MATRIX

## Alternatives Matrix

Interest	Build New Website	Use Existing Website	Site Builder	Score
Weights	4	3	2	9
Weighted Percentage	50%	25%	25%	100%
Cost Friendly	2	5	1	8
Expertise of individuals	4	4	2	10
Technological Requirements Available	5	5	5	15
Time Efficient	1	3	4	8
Responsive	5	5	3	13
User Friendly	5	4	4	13

Using Scale 1(not well) to 5(very well) as to  
how well it satisfies the interest

→ APPENDIX

# **SUPPORT MATERIALS, SAMPLE DOCUMENTS, EXISTING RELATED DOCUMENTATION**

## → APPENDIX CONT'D

### Sample Documents

- User Registration Form: A sample form outlining the fields required for user registration on the custom trip platform.
- Itinerary Template: A sample template for organizing travel itineraries, including sections for destinations, activities, and dates.
- Booking Confirmation Email Template: A sample email template for sending booking confirmations to users upon successful reservation.

---

### Related Documents

- Group-Based Travel Packages Brochure: A brochure showcasing TravelSmart's existing group-based travel packages, providing insight into the company's current offerings.
- Customer Feedback Reports: Reports summarizing customer feedback and reviews regarding their experiences with TravelSmart services.
- Market Research Analysis: Reports and studies on market trends, consumer preferences, and competitive landscape in the travel industry.



## → APPENDIX CONT'D

### **Technical Specs**

- System Requirements Document: A detailed document outlining the technical requirements and specifications for developing the custom trip platform, including hardware, software, and integration needs.
- 

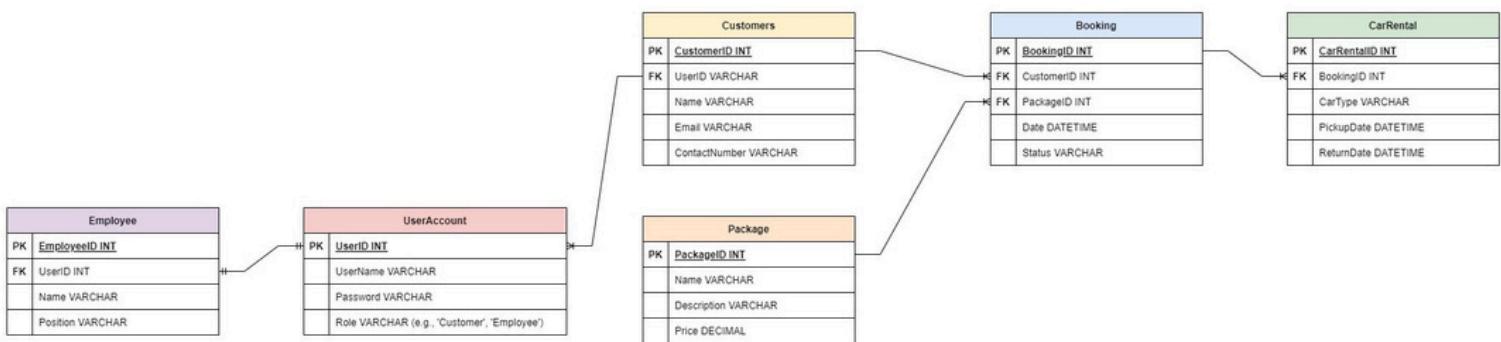
### **Project Management**

- Project Plan: A comprehensive project plan outlining the timeline, milestones, and tasks associated with the development and deployment of the custom trip platform.
- Gantt Chart: A visual representation of the project schedule, showing dependencies and progress of various tasks and deliverables.



→ DATABASE DESIGN

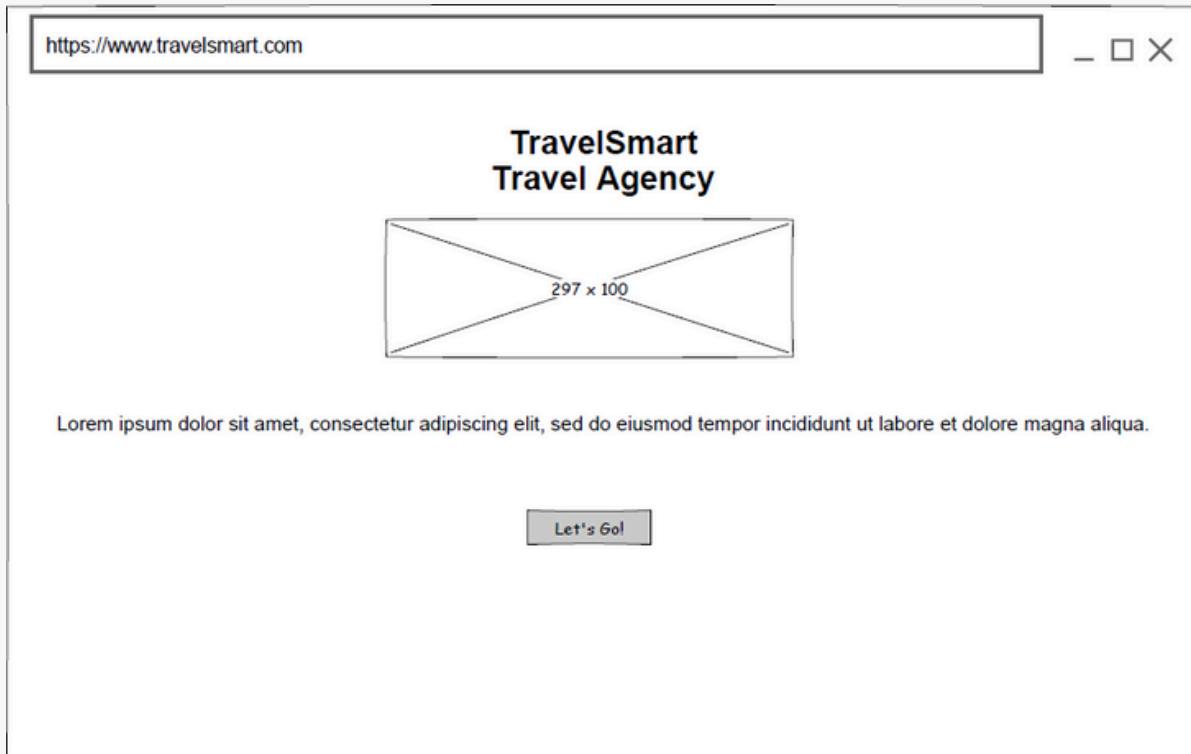
# DATABASE DESIGN



→ INTERFACE AND SCREEN DESIGNS

# INTERFACE AND SCREEN DESIGNS

## Home Screen



## → INTERFACE AND SCREEN DESIGNS CONT'D

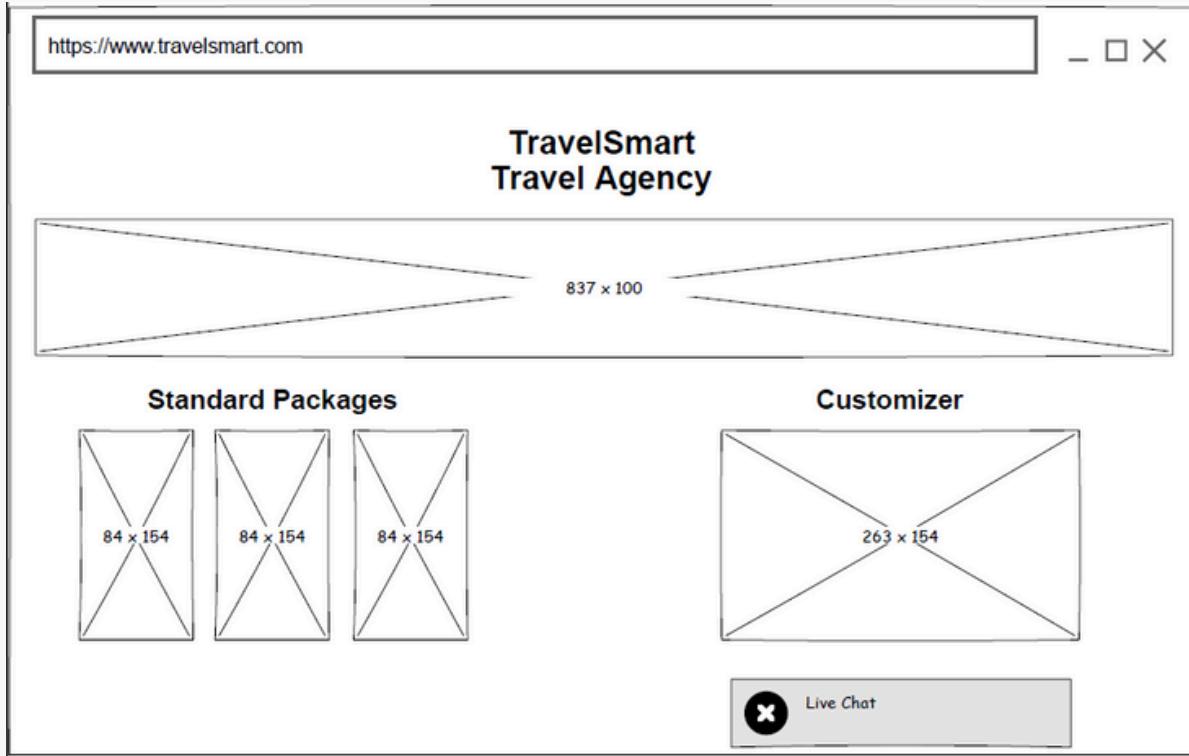
### Login Screen

The screenshot shows a web browser window with the URL <https://www.travelsmart.com> in the address bar. The main content area displays the logo "TravelSmart Travel Agency" and a "Login" button. Below the button are two input fields: "Username" containing "john@email.com" and "Password" containing a series of asterisks. At the bottom of the form is a link "[Create Account](#)".



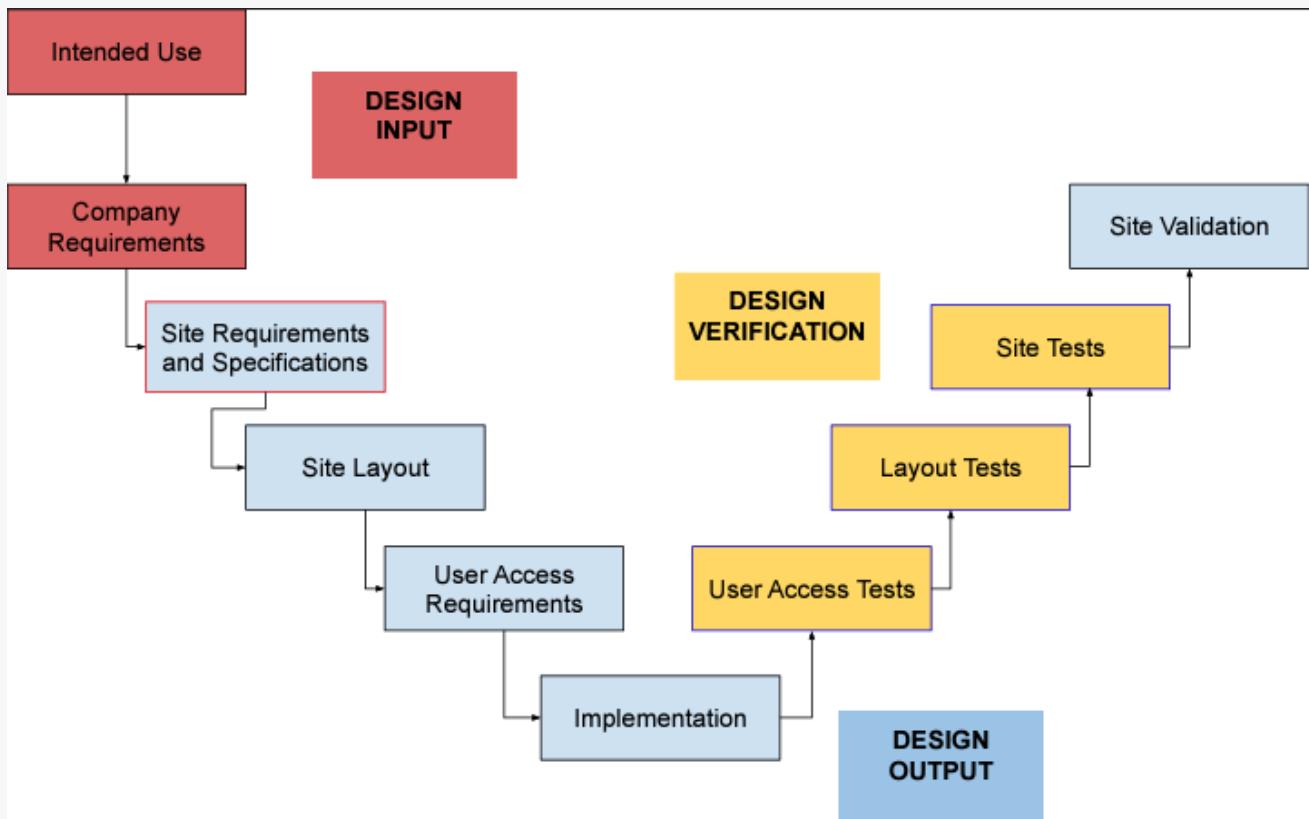
## → INTERFACE AND SCREEN DESIGNS CONT'D

### Packages

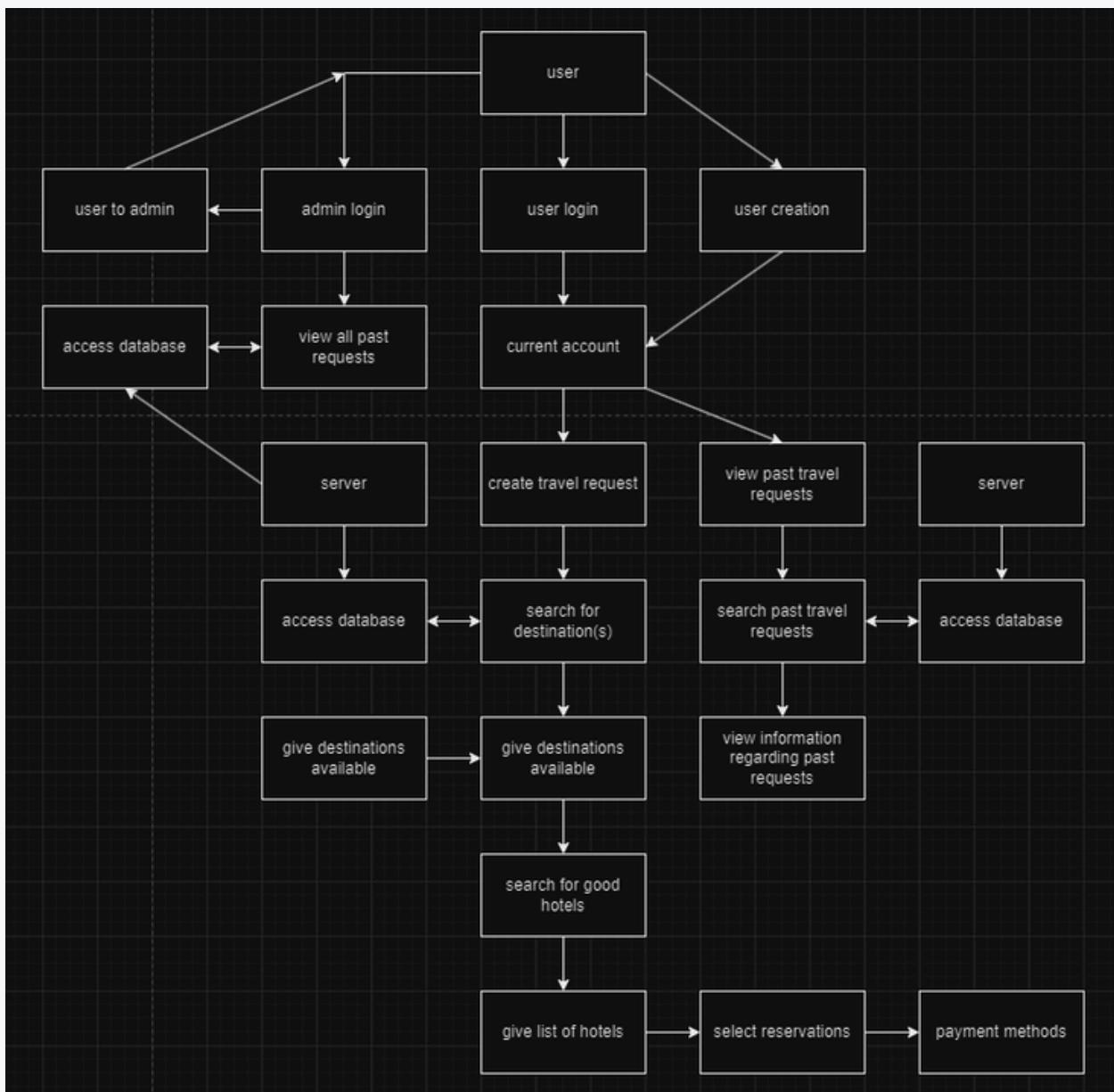


→ INPUT, OUTPUT & REPORT DESIGN

# INPUT, OUTPUT & REPORT DESIGN



# CONTROL DESIGN



## → TEST PLAN (SYSTEM, APPLICATION, ETC.)



### Introduction

The purpose of this test plan is to define the testing strategy, objectives, scope, and approach for the TravelSmart application. This application aims to assist users in planning and managing their travel itineraries effectively.

### Objective

- To verify that TravelSmart meets specified functional and non-functional requirements.
- To identify and report defects or issues related to usability, performance, security, and functionality.
- To ensure that the application provides a seamless and intuitive user experience across different devices and platforms.

## → TEST PLAN (SYSTEM, APPLICATION, ETC.) CONT'D

### Scope

#### In-Scope:

- Functional testing of core features including trip planning, itinerary management, flight and hotel bookings, and travel expense tracking.
- Compatibility testing across web browsers (Chrome, Firefox, Safari) and mobile platforms (iOS, Android).
- Usability testing to evaluate user interface design, navigation, and accessibility.
- Performance testing to assess application responsiveness and load times.
- Security testing to identify vulnerabilities related to data protection and authentication mechanisms.

#### Out-of-Scope:

- Integration testing with third-party APIs (flight booking, hotel reservation, etc.).
- Localization and internationalization testing for language and cultural adaptations.
- Stress testing under high user loads.
- Compatibility testing with older or unsupported browsers and devices.

### Test Approach

- Utilize a combination of manual and automated testing techniques.
- Develop test cases based on user stories, functional requirements, and use cases.
- Prioritize testing based on risk assessment and criticality of features.
- Conduct exploratory testing to uncover usability issues and edge cases.



## → TEST PLAN (SYSTEM, APPLICATION, ETC.) CONT'D

### Test Environment

- Web application hosted on a staging server with access to test data and sample travel itineraries.
- Supported web browsers: Chrome, Firefox, Safari.
- Supported mobile platforms: iOS (latest version), Android (latest version).
- Test devices: Desktops, laptops, tablets, and smartphones.

### Test Cases

- Test cases will cover different functional areas such as trip planning, itinerary creation, flight and hotel bookings, expense tracking, and user account management.
- Each test case will include a description, test steps, expected results, and actual results.
- Test cases will be organized into test suites based on feature sets and user workflows.

### Test Execution

- Test execution will be performed iteratively based on planned test cycles.
- Defects will be logged using a standardized defect tracking system.
- Test results and progress will be regularly communicated to stakeholders through status reports and meetings.

## → TEST PLAN (SYSTEM, APPLICATION, ETC.) CONT'D

### Test Approach

- Utilize a combination of manual and automated testing techniques.
- Develop test cases based on user stories, functional requirements, and use cases.
- Prioritize testing based on risk assessment and criticality of features.
- Conduct exploratory testing to uncover usability issues and edge cases.

### Test Environment

- Web application hosted on a staging server with access to test data and sample travel itineraries.
- Supported web browsers: Chrome, Firefox, Safari.
- Supported mobile platforms: iOS (latest version), Android (latest version).
- Test devices: Desktops, laptops, tablets, and smartphones.

### Risks and Contingencies

- Risks such as time constraints, resource availability, and environmental dependencies will be identified and mitigated.
- Contingency plans will be developed to address unexpected issues and minimize project delays.



## → TEST PLAN (SYSTEM, APPLICATION, ETC.) CONT'D

### Sign-Off Criteria

- Testing will be considered complete when all critical functionality has been thoroughly tested and validated.
- Defects will be resolved or mitigated to an acceptable level as determined by stakeholders.

### Conclusion

This test plan provides a structured approach for testing the TravelSmart application, ensuring that it meets the needs and expectations of users. By following the outlined strategy and leveraging appropriate testing techniques, we aim to deliver a high-quality and reliable travel planning solution.

# DATA CONVERSION PLAN

The data conversion plan for TravelSmart will revolve around five key steps to ensure a seamless transition to our system.

- Assessment and Validation  
This phase involves assessing and validating the essential data within the company's current system.
- Additional Data  
To enhance the system such as travel planning, user account management and car rentals we will require data. This will allow personalized experiences to the end user.
- Data Preparation  
We will prepare the data for migration. Standardizing and mapping it to align with the requirements of our new system.
- Data Migration  
This will be performed by automated scripts and tools that can transfer data from the current system to the new one.
- Verification and Validation  
Once the migration is completed, we will need to verify and validate the converted data.

→ DATABASE

# CREATE

```
CREATE TABLE UserAccount (
    UserID INT PRIMARY KEY,
    UserName VARCHAR(255),
    Password VARCHAR(255),
    Role VARCHAR(50)
);
```

```
CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Position VARCHAR(255),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);
```

```
CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Email VARCHAR(255),
    ContactNumber VARCHAR(20),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);
```

## → DATABASE CONT'D

```
CREATE TABLE Package (
    PackageID INT PRIMARY KEY,
    Name VARCHAR(255),
    Description VARCHAR(255),
    Price DECIMAL(10, 2)
);
```

```
CREATE TABLE Booking (
    BookingID INT PRIMARY KEY,
    CustomerID INT,
    PackageID INT,
    Date DATETIME,
    Status VARCHAR(50),
    FOREIGN KEY (CustomerID) REFERENCES Customers(CustomerID),
    FOREIGN KEY (PackageID) REFERENCES Package(PackageID)
);
```

```
CREATE TABLE CarRental (
    CarRentalID INT PRIMARY KEY,
    BookingID INT,
    CarType VARCHAR(255),
    PickupDate DATETIME,
    ReturnDate DATETIME,
    FOREIGN KEY (BookingID) REFERENCES Booking(BookingID)
);
```

## → DATABASE CONT'D

```
CREATE TABLE UserAccount (
    UserID INT PRIMARY KEY,
    UserName VARCHAR(255),
    Password VARCHAR(255),
    Role VARCHAR(50)
);

CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Position VARCHAR(255),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Email VARCHAR(255),
    ContactNumber VARCHAR(20),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);

CREATE TABLE Package (
    PackageID INT PRIMARY KEY,
    UserID INT
);
```

100 % ▶

Messages

Commands completed successfully.

Completion time: 2024-04-12T11:06:07.4808629-04:00

# INSERT

```
INSERT INTO UserAccount (UserID, UserName, Password, Role) VALUES  
(1, 'mitchell_demuesy', 'password123', 'employee'),  
(2, 'nikki_bowles', 'securepass', 'customer'),  
(3, 'jason_lindsey', 'adminpass', 'admin'),  
(4, 'niko_tonhaeuser', 'password123', 'employee');
```

```
INSERT INTO Employee (EmployeeID, UserID, Name, Position) VALUES  
(101, 1, 'Mitchell DeMuesy', 'Manager'),  
(102, 3, 'Jason Lindsey', 'Administrator'),  
(103, 4, 'Niko Tonhaeuser', 'Employee');
```

```
INSERT INTO Customers (CustomerID, UserID, Name, Email,  
ContactNumber) VALUES  
(201, 2, 'Jane Smith', 'jane@example.com', '123-456-7890'),  
(202, 4, 'Michael Johnson', 'michael@example.com', '987-654-3210');
```

```
INSERT INTO Package (PackageID, Name, Description, Price) VALUES  
(301, 'Family Vacation Package', 'Enjoy a family-friendly vacation with our  
special package', 1000.00),  
(302, 'Romantic Getaway Package', 'Escape with your loved one and enjoy  
a romantic getaway', 800.00);
```

## → DATABASE CONT'D

```
INSERT INTO Booking (BookingID, CustomerID, PackageID, Date, Status)
VALUES
(401, 201, 301, '2024-04-15', 'Confirmed'),
(402, 202, 302, '2024-05-20', 'Pending');
```

```
INSERT INTO CarRental (CarRentalID, BookingID, CarType, PickupDate,
ReturnDate) VALUES
(501, 401, 'SUV', '2024-04-15 12:00:00', '2024-04-20 12:00:00'),
(502, 402, 'Convertible', '2024-05-20 10:00:00', '2024-05-25 10:00:00');
```

```
SQLInsert - DeMues...747N\ Mitchell (66) SQL - DeMuesy.sql...747N\ Mitchell (60) ×
CREATE TABLE UserAccount (
    UserID INT PRIMARY KEY,
    UserName VARCHAR(255),
    Password VARCHAR(255),
    Role VARCHAR(50)
);

CREATE TABLE Employee (
    EmployeeID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Position VARCHAR(255),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);

CREATE TABLE Customers (
    CustomerID INT PRIMARY KEY,
    UserID INT,
    Name VARCHAR(255),
    Email VARCHAR(255),
    ContactNumber VARCHAR(20),
    FOREIGN KEY (UserID) REFERENCES UserAccount(UserID)
);

CREATE TABLE Package (
    PackageID INT PRIMARY KEY,
```

100 %

Messages

Commands completed successfully.

Completion time: 2024-04-12T11:06:07.4808629-04:00

# SELECT

```
SELECT * FROM Employee;  
SELECT * FROM Customers;  
SELECT * FROM Package;  
SELECT * FROM Booking;  
SELECT * FROM CarRental;
```

The screenshot shows the SQL Server Management Studio interface with five tabs at the top: 'SQLQuery3.sql - DE...', 'SQLInsert - DeMuesy...', and 'SQL - DeMuesy.sql...'. The 'SQLQuery3.sql' tab contains the following five SELECT statements:

```
SELECT * FROM Employee;  
SELECT * FROM Customers;  
SELECT * FROM Package;  
SELECT * FROM Booking;  
SELECT * FROM CarRental;
```

Below the tabs, there are five result grids corresponding to each SELECT statement:

- Employee:**

	EmployeeID	UserID	Name	Position
1	101	1	Mitchell DeMuesy	Manager
2	102	3	Jason Lindsey	Administrator
3	103	4	Niko Tonhaeuser	Employee
- Customers:**

	CustomerID	UserID	Name	Email	ContactNumber
1	201	2	Jane Smith	jane@example.com	123-456-7890
2	202	4	Michael Johnson	michael@example.com	987-654-3210
- Package:**

	PackageID	Name	Description	Price
1	301	Family Vacation Package	Enjoy a family-friendly vacation with our special pa...	1000.00
2	302	Romantic Getaway Package	Escape with your loved one and enjoy a romantic ...	800.00
- Booking:**

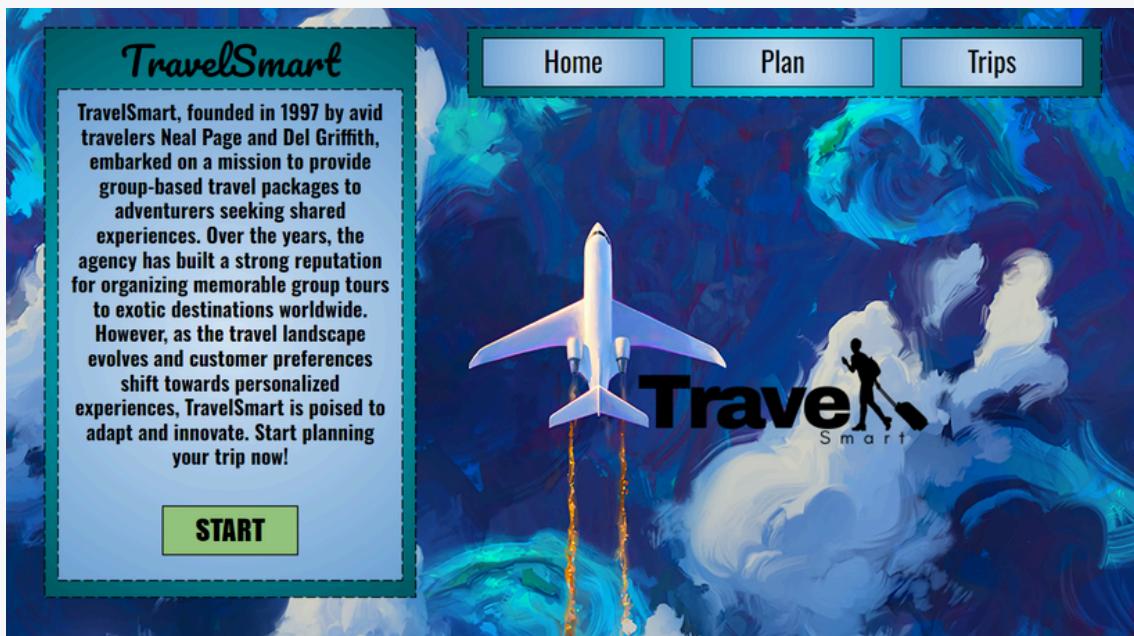
	BookingID	CustomerID	PackageID	Date	Status
1	401	201	301	2024-04-15 00:00:00.000	Confirmed
2	402	202	302	2024-05-20 00:00:00.000	Pending
- CarRental:**

	CarRentalID	BookingID	CarType	PickupDate	ReturnDate
1	501	401	SUV	2024-04-15 12:00:00.000	2024-04-20 12:00:00.000
2	502	402	Convertible	2024-05-20 10:00:00.000	2024-05-25 10:00:00.000

A yellow status bar at the bottom right of the results grid area says "Query executed successfully."

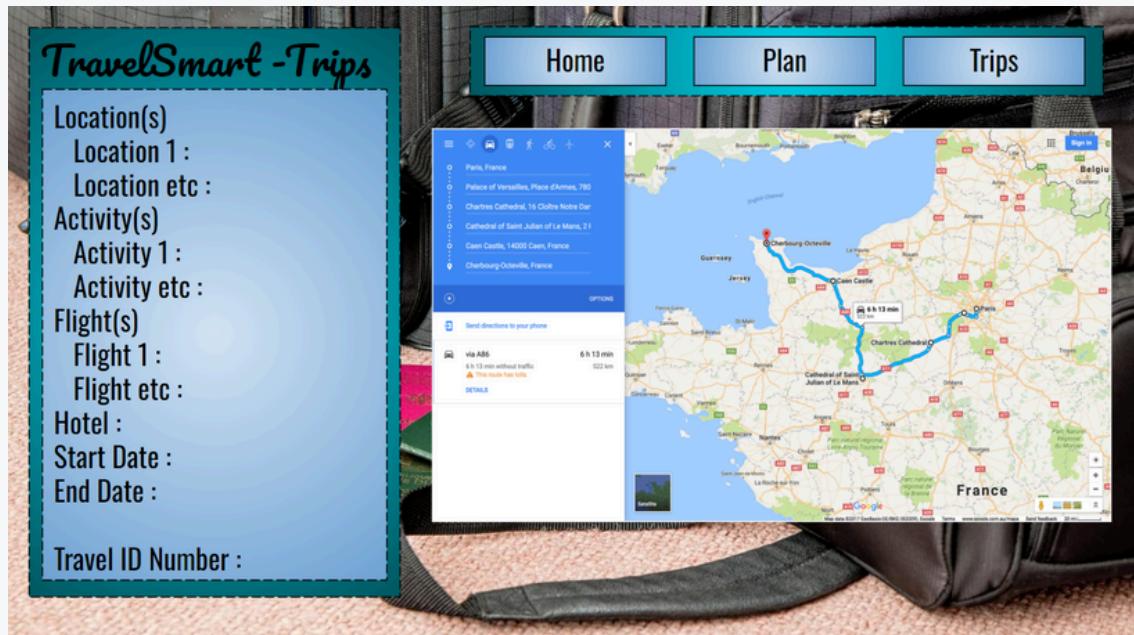
→ PROTOTYPE

# INTERFACE & NAVIGATION



→ PROTOTYPE CONT'D

# INPUT / OUTPUT



# SECURITY DESIGN CHECKLIST

## Authentication and Authorization

- a. Implement strong authentication mechanisms such as multi-factor authentication (MFA) where applicable.
- b. Use secure protocols for authentication (e.g., HTTPS).
- c. Give employees roles with set permissions.
- d. Limit access based on role privileges.

## Data Encryption

- a. Encrypt sensitive data stored in database, files, and backups.
- b. Use secure key management practices to safeguard encryption keys.

## Input Validation

- a. Validate user inputs to prevent injection attacks.
- b. Use server-side input validation to ensure data integrity.

## Secure File Uploads

- a. Use validation and sanitization of file uploads to prevent malicious file execution.
- b. Store files in a secure location.

## → SECURITY DESIGN CONT'D

### User Logs

- a. Log user actions and system events.
- b. Monitor logs for suspicious activities and incidents to alert of issues.

### Security Awareness

- a. Provide security awareness training for employees to show best practices to reduce security risks.



→ **TRAINING PLAN**

# TRAINING PLAN

## Training Objective

The objective of this training plan is to equip employees with the knowledge and skills required to effectively use the TravelSmart system for travel planning and management.

## Training Audience

All employees who will be involved in utilizing the TravelSmart system for personal or business travel purposes.

## **Training Duration**

The training will be conducted over the course of one week, consisting of daily sessions lasting 1-2 hours each.

## Training Methodology

The training will be delivered through a combination of instructor-led presentations, hands-on exercises, and interactive demonstrations. Participants will have access to training materials, user manuals, and online resources for self-paced learning.

## Training Content

### Day 1: Introduction to TravelSmart

Overview of the TravelSmart system and its features.

Importance of efficient travel planning and management.

Introduction to the user interface and navigation.

### Day 2: Getting Started

Logging in to the TravelSmart system.

Exploring the dashboard and its components.

Understanding user roles and permissions.

## → TRAINING PLAN CONT'D

### Day 3: Discovering Destinations

Browsing travel packages and destinations.  
Using tags and filters to refine search results.  
Exploring package details and inclusions.

### Day 4: Making Bookings

Selecting and booking travel packages.  
Understanding the checkout process.  
Overview of payment options and security measures.

### Day 5: Managing Your Account

Updating profile settings and contact information.  
Accessing and reviewing booking history.  
Troubleshooting common issues and seeking support.

### Training Delivery

Training sessions will be conducted in a classroom setting or via virtual conferencing tools to accommodate remote participants.  
Each session will include a mix of presentations, demonstrations, and hands-on exercises to reinforce learning.  
Participants will be encouraged to ask questions and seek clarification as needed.

### **Training Evaluation**

At the end of each training session, participants will complete a brief quiz or assessment to gauge their understanding of the material covered.  
Feedback will be collected from participants to identify areas for improvement and tailor future training sessions accordingly.

## → TRAINING PLAN CONT'D

### Training Support

Participants will have access to training materials, user manuals, and online resources for reference after the training.

A dedicated support team will be available to address any additional questions or concerns that arise post-training.

### Conclusion

By completing this training plan, employees will be equipped with the knowledge and skills needed to navigate and utilize the TravelSmart system effectively for their travel planning and management needs.



# TRAVELSMART USER MANUAL

## Table of Contents

- 1. Introduction**
- 2. Getting Started**
  - A. Login**
  - B. Exploring the Dashboard**
- 3. Discovering Destinations**
  - A. Browsing Packages**
  - B. Using Tags for Filters**
- 4. Making Bookings**
- 5. Managing Your Account**
  - A. Profile Settings**
  - B. Booking History**
- 6. Trouble Shooting**
- 7. Contact Us**

## → USER MANUAL CONT'D

### 1. Introduction

Welcome to TravelSmart, your gateway to personalized travel experiences! This user manual will guide you through our website's features and functionalities, ensuring you make the most of your journey planning.

### 2. Getting Started

#### A. Login

To access your account, click on the Log in button located at the top-right corner of the homepage. Enter your username and password, then click "Log in" to access your account dashboard

#### B. Exploring the Dashboard

Upon logging in, you'll land on your personalized dashboard. Here, you'll find recommendations, upcoming trips, and quick links to essential features. Take a moment to familiarize yourself with the layout for seamless navigation.

### 3. Discovering Destinations

#### A. Browsing Packages

Explore our curated collection of travel packages by clicking on the "Packages" tab in the navigation menu. From exotic getaways to adrenaline-fueled adventures, there's something for every traveler's taste.

#### B. Using Tags for Filters

Refine your search by using tags to filter packages based on your interests, such as "Beach Escapes," "Cultural Immersion," or "Family-Friendly." Tags make it easy to find the perfect destination tailored to your preferences.

## → USER MANUAL CONT'D

### 4. Making Bookings

Ready to book your dream vacation? Simply select your desired package, choose your travel dates, and proceed to the checkout. Our secure booking system ensures a hassle-free reservation process.

### 5. Managing Your Account

#### A. Profile Settings

Keep your account information up to date by visiting the "Profile Settings" section. Here, you can update your contact details, change your password, and manage communication preferences.

#### B. Booking History

Track your past and upcoming bookings in the "Booking History" tab. Access details of your trips, review itineraries, and make any necessary changes with ease.

### 6. Troubleshooting

Encountering technical difficulties? Don't worry, we've got you covered! Our troubleshooting section provides step-by-step guides to resolve common issues and ensure smooth navigation.

### 7. Contact Us

**Phone:** (330) 123-4567

**Email:** [travelsmart@aol.com](mailto:travelsmart@aol.com)

You can also reach us through web tickets online!



→ SYSTEM CONVERSION PLAN

# SYSTEM CONVERSION PLAN

Role	Responsibility
Nikki Bowles - Team Member	Additional Data and Data Preparation - Enhance system and prepare data for migration.
Mitchel DeMuesy - Technical Staff	Data Migration - Transfer data from old system to new system.
Jason Lindsey - Project Manager	Assessment and Validation. Validate data with the company's system.
Niko Tonhaeuser - Team Member	Verification and Validation - Verify migrated data.

Task #	Task Description	Begin Date	End Date	Person(s) Responsible
1	Collect and Observe Data	Period 8; Week 1	Period 8; Week 1	Nikki Bowles
2	Migrate Data	Period 8; Week 1	Period 8; Week 2	Mitchel DeMuesy
3	Assess and Validate Data	Period 8; Week 3	Period 8; Week 3	Jason Lindsey
4	Verify and Validate Data	Period 8; Week 4	Period 8; Week 4	Niko Tonhaeuser

→ SYSTEM CONVERSION PLAN

# SUPPORT AND MAINTENANCE PLAN

IT Support will be available 9-5 Monday to Friday to help any users entering any input into the website or if the website goes down for any reason there will be support to help guide users.

## The Maintenance Plan

The Travel Database will be checked if is operational every weekday before 9am and after 5pm preferably between 8-9 am and between 5-6 pm.

Change out the server the database Is on every 5 years to make sure the chance of corruptions in the data go down. Keep a static copy of the data that is updated every month incase previous methods to stop corruption of the data does not work.