

# The Outlanders



# *The Outlanders Team*

## **Team Members:**

**Chris Beatty**

**Brian Gossett**

**Larissa Passamani Lima**

**Christeen Safar**

**Michele Speidel**

Module 11.2 Assignment

Milestone #4

CSD310-330H\_2225\_DD

Database Development and Use

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# *The Outlanders - Group Introduction*

The Outlanders was formed on July 4, 2022, to handle Case Study for Outland Adventures. Our team is made of five eager students in the 330H Cohort Software Development Program at Bellevue University instructed by Profession Sampson and Professor Woods.

## **Chris Beatty**

has experience in database development. He also spends his time automating file storage and media on his home server.



Photos taken from  
[https://www.123rf.com/photo\\_15063120\\_boy-hiking-illustration.html](https://www.123rf.com/photo_15063120_boy-hiking-illustration.html)



Photos taken from <https://www.lovepik.com/>

## **Brian Gossett**

was a programmer in the military in web development. He is working on a degree here for his resume in the hopes of working for FAANG.

## Michele Speidel

is an insurance professional and has experience in database development. She currently works in a remote position as a Business Analyst.



Photos taken from  
<https://www.kissclipart.com/skier-cartoon-hiking-equipment-trekking-pole-ski-tjog9g>

## Larissa Passamani Lima

is fairly new to database development. She has a degree in Criminal Justice, and experience in Supply Chain Operations. She is currently working as a Wave Technician for a Flow Center.



Photos taken from <https://www.vectorstock.com/>

## Christeen Safar

has no experience in database development. She has two Bachelor's degrees in Child Development. Now, she works as a Personal Stylist at Macy's, but she is planning to work in her new major.



*Cast Study  
Selected*

# Outland Adventures



# *A Brief Description of Case Study*

## **Mission**

To provide adventurous guided trips for the hiking and camping enthusiasts

## **Description of Case Study**

Outland Adventures was founded back in January 1, 2022 when Blythe Timmerson and Jim Ford decided to take a risk and dedicate their time and energy into the vision of what would become Outland Adventures. Their primary focus of the company was to share their passion with others.

The reason Outland Adventures has been thriving is because the organization focuses on providing the best quality experience with well informative guided tours, safety precautions, and adventure to far off places with great destinations that have been fully experienced priorly in order for the guides to offer the most well crafted excursions. Choosing the “Right Adventure” is the primary focus of the company to continue improving the experience provided to its customers.

## **Mission of success:**

- Focusing on customers
- Employing a great management team
- Keeping detailed financial records
- Continuing to innovate
- Pursuing long-term goals
- Adapting to new technology

# *Location of the Store*

The store is located at **2309 Iowa Center Rd, Neverland IA 09989**. The location allows customers to purchase the necessary equipment for their trip as well as providing information about their excursions to customers in person.



*Photos taken from <https://www.istockphoto.com/search/store>*

# *Adventure to Far Off Places*



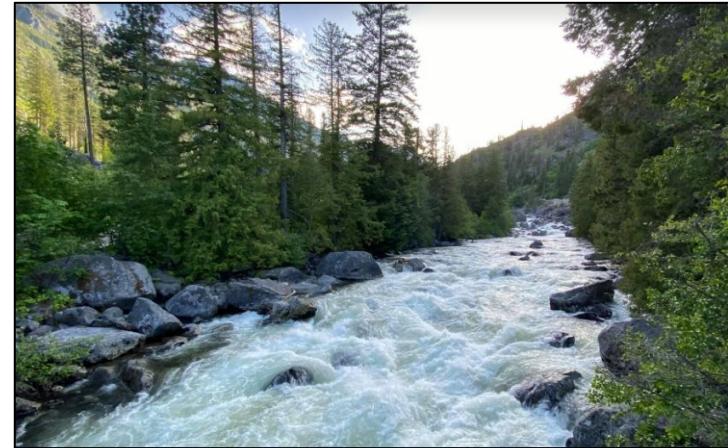
Photos taken by Larissa Passamani in Washington state and Brazil



The idea of creating the “Outland Adventure” project was to find great destinations for curious travelers who are eager to discover new realms. These destinations are the world's best places to travel to; according to the experts. The locations where they have conducted treks are Africa, Asia, Northern Europe, Southern Europe, North America. The founders of Outland Adventure were planning to arrange guided trips to the world's most wondrous places to create the best travel experience for their customers.

## *The “Right Adventures”*

Outland Adventures was designed to offer great destination guided tours. The company has taken the time and efforts to get to know the places before adding them to their destination guides in order to provide unique experiences that cannot be found with any other guided organization. They have spent many months crafting excursions to different regions of the world. These regions have been purposely picked to be different from one another in order to provide a unique experience that cannot be repeated in another trip.



*Photos taken by Larissa Passamani in Washington state and Yosemite*

# *Behind the Organization*

## Owners



*Photo taken from <https://depositphotos.com/stock-photos/tourist-guide.html>*

Blythe Timmerson and Jim Ford are the owners and CEOs of Outland Adventures.

They both share the passion for the outdoors, and continually devote their full time and energy into their joint venture.

## Tour Guides



Photos taken from <https://www.istockphoto.com/search/2/image?phrase=tourist+guide>

With 25 years of combined tour guiding experience, John 'Mac' MacNell, and D.B. 'Duke' Marland are the tour guides for every excursion. They are also in charge of organizing and planning the trips, including investigating airfares, visa requirements, and inoculations.

# Support Team

**Anita Gallegos** has 15 years of experience as a Marketing Analyst and is in charge of all of the marketing aspects of the organization.



Photos taken from <https://www.istockphoto.com/search>

**Mei Wong** has 10 years of experience in building excellent E-Commerce websites. She was just recently hired by Outland Aventures to build an E-Commerce site for the organization, to allow potential customers the ability to find out about trip schedules, types of excursions, and purchase or rent hiking and camping equipment in advance.

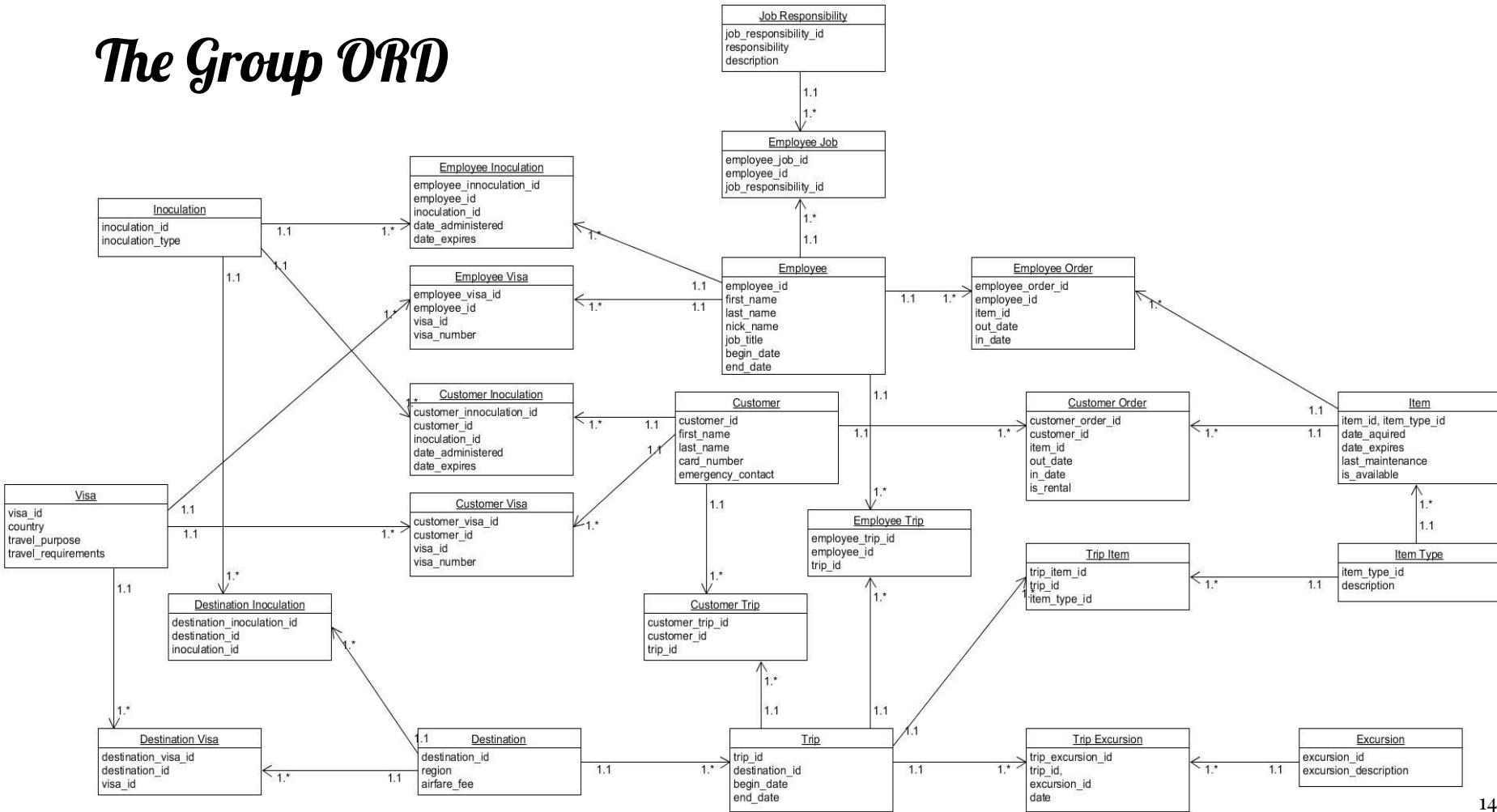


**Dimitrios Stravopolous** has 7 years of experience managing inventory. He was hired to be in charge of ordering supplies for the trips as well as keeping the equipment inventory up to date.

# Organization Chart



# The Group ORD



# Three Key Organization Optimization Reports

- **Regional Total Trips, Regional Total Customers Report & Trip Region Total Customer**
  - Are there downward booking trends in any of the Regions (primarily Africa, Asia, and Southern Europe)
- **Customer Buy & Customer Rent vs Buy Report**
  - Do enough customers buy equipment to keep equipment sales
- **Item By Age Report**
  - Are there inventory items that are over five years old (items will need to be replaced)



# Regional Trip & Customer Reports

## Total Trips

This report shows number of trips scheduled for each region  
There are two trips scheduled in four regions and less than two in the other regions

Region	Total Trips
Africa	2
Asia	2
North America	2
Northern Europe	2
South America	0
Southern Europe	1

Region	Total Customer Trips
Africa	4
Asia	6
North America	8
Northern Europe	10
South America	0
Southern Europe	4

## Total Customer Trips

This report shows how many customers have selected trips in each region.

- Asia, North America, and Northern Europe have six or more customers scheduled per region and have been substantial to the optimization plan.
- Southern Europe has four trip customers for only one trip. Marketing efforts will focus on this trip to increase customer interest and bookings.
- Although Africa also has four trip customers, it is spread out between two trips and does not support optimization. Due to the lack of interest in this region and zero interest in South America, these two regional will be removed from the marketing plans and the schedule.



# Trip Region Total Customer



## Trip Region Total Customer

This Report elaborates further on the trip trends. It shows each trip region, the trip dates, and total customers per trip.

### Upward Trend

- Asia 2-trips; 6-customer
- North America; 2-trips; 8-customer
- Northern Europe; 2-trips; 10-customer

### Moderate Trend

- Southern Europe; 1-trip; 4-customers

### Downward Trend

- Africa; 2-trips; 4-customers
- South America; 0-trips; 0 customers

Trip Number	Region	Trip date	Total Customer Trips
NULL	South America	NULL	0
1	Asia	2022-06-01	2
2	North America	2022-07-12	4
3	Asia	2022-07-23	4
4	Southern Europe	2022-08-13	4
5	Africa	2022-09-03	2
6	Northern Europe	2022-10-20	2
7	Northern Europe	2022-11-01	8
8	Africa	2022-12-07	2
9	North America	2023-01-05	4

# Equipment Sales Reports

## Customer Rent vs Buy

This report shows the quantity of equipment purchased rather than rented. Forty-Two items were rented but only two were purchased.

RentVsBuy	COUNT(*)
Rent	42
Buy	2

## Customer Buy Report

This report shows the type of equipment being purchased. It includes the customer's name, and the date purchased (the "out\_date").

first_name	last_name	description	Buy or Rent	out_date
John	Smith	Mystery Box	Buy	2022-09-01
Jimmy	Newtron	Mystery Box	Buy	2022-09-01

Equipment sales are not substantial to the optimization plan so general equipment sales will be discontinued.

However, the Mystery Box will be added to the marketing efforts to help increase sales.



# Item By Age Report

## Item By Age Report

This report provides inventory details, description of item, age in days, age in years, and date acquired.

An interactive report is used to identify the equipment with an age greater than the age entered (this report shows equipment > 2-years old for example)..

No equipment is over five years old at this time but there are some Trekking poles the CEOs added to the inventory that will reach the 5-year old mark and will require replacement within the year.



Press any key to continue...

Finding items older than X years old: [ ]

item_id	description	Age in Days	Age in Years	Date Acquired
1	Trekking poles	1546	4.2327	04/23/2018
2	Trekking poles	1546	4.2327	04/23/2018
3	Trekking poles	1546	4.2327	04/23/2018
4	Trekking poles	1500	4.1068	06/08/2018
5	Trekking poles	1500	4.1068	06/08/2018
6	Trekking poles	1500	4.1068	06/08/2018
11	First aid kit	1211	3.3155	03/24/2019
12	First aid kit	1211	3.3155	03/24/2019
13	First aid kit	833	2.2806	04/05/2020
14	First aid kit	833	2.2806	04/05/2020
27	Tent	500	1.2517	09/05/2020

# Other Key Reports for Case Study

- **Equipment Needed Per Trip**
  - This report provides the equipment needed by region.
- **Customer Visa And Shot Records**
  - These reports provide inoculation and visa details for each customer for the regions and dates they plan to travel.
- **Employee Visa And Shot Records**
  - These reports provide inoculation and visa details for each employee for the regions and dates they plan to travel.
- **Trip Schedule**
  - The company needs a report so potential customers can check on trip schedules



# Equipment Needed Per Trip Report

## Equipment Needed Per Trip Report

This report provides the equipment needed by region.

- Tour Guides and Customers will need to know what equipment is required per Trip so they can prepare to rent or buy equipment.
- Inventory staff needs reports for trip inventory to identify what equipment is needed.

Trip Equipment

trip_id	region	description
1	Asia	First aid kit
1	Asia	Sunscreen
1	Asia	Trekking poles
1	Asia	Water bottle
2	North America	First aid kit
2	North America	Sunscreen
2	North America	Trekking poles
2	North America	Water bottle
3	Asia	First aid kit
3	Asia	Lighter
3	Asia	Sunscreen
3	Asia	Tent
3	Asia	Trekking poles
3	Asia	Water bottle
4	Southern Europe	First aid kit
4	Southern Europe	Sunscreen
4	Southern Europe	Trekking poles
4	Southern Europe	Water bottle
5	Africa	First aid kit
5	Africa	Fishing Tools
5	Africa	Sunscreen
5	Africa	Trekking poles
5	Africa	Water bottle

# Customer & Employee Visa And Shot

## Purpose of Reports

- These reports provide inoculation and visa details for each customer or employee for the regions and dates they plan to travel.
- Administration and Guides need these reports to determine inoculation and visa compliance



# Customer Visa And Shot Records

- The report shows that all countries require customers to get inoculation type for COVID-19.
- Most countries will require customers to get a Visa. For the “NULL” in the “has\_inoculation\_type”, “date\_expires”, “visa\_number” or “has\_visa\_in\_country”, the guides will have to quickly gather information to notify the customer(s) of the requirements before the trip.

customer_trip_id	trip_id	begin_date	end_date	first_name	last_name	region	required_inoculation_type	has_inoculation_type	date_expires	required_country_visa	has_visa_in_country	visa_number
15	5	2022-09-03	2022-09-18	Fabricio	Pontic	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	8417167036
16	5	2022-09-03	2022-09-18	Mary	Louis	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	8054617431
28	8	2022-12-07	2022-12-14	Fernanda	Clark	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	4245774388
27	8	2022-12-07	2022-12-14	Zack	Petisso	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	3178154381
5	2	2022-07-12	2022-07-18	Pepe	Yee	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
3	2	2022-07-12	2022-07-18	Pickle	Rick	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
6	2	2022-07-12	2022-07-18	Fernanda	Clark	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
4	2	2022-07-12	2022-07-18	Mary	Louis	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
29	9	2023-01-05	2023-01-10	Rick	Roll	North America	Covid-19	NULL	NULL	Colombia	NULL	NULL
32	9	2023-01-05	2023-01-10	Jimmy	Newtron	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
31	9	2023-01-05	2023-01-10	John	Smith	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
30	9	2023-01-05	2023-01-10	Mary	Louis	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
14	4	2022-08-13	2022-08-27	John	Smith	Southern Europe	Covid-19	Covid-19	2023-02-01	Italy	NULL	NULL
12	4	2022-08-13	2022-08-27	Fabricio	Pontic	Southern Europe	Covid-19	Covid-19	2023-02-01	Italy	NULL	NULL
13	4	2022-08-13	2022-08-27	Mary	Louis	Southern Europe	Covid-19	Covid-19	2023-02-01	Italy	Italy	3502991909
11	4	2022-08-13	2022-08-27	Zack	Petisso	Southern Europe	Covid-19	Covid-19	2023-02-01	Italy	Italy	4512365845
17	6	2022-10-20	2022-10-30	Fabricio	Pontic	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	4582154632
18	6	2022-10-20	2022-10-30	Mary	Louis	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	5421596325
26	7	2022-11-01	2022-11-25	Jimmy	Newtron	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	NULL	NULL
25	7	2022-11-01	2022-11-25	John	Smith	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	9407205279
24	7	2022-11-01	2022-11-25	Pepe	Yee	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	NULL	NULL
23	7	2022-11-01	2022-11-25	Pickle	Rick	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	NULL	NULL
22	7	2022-11-01	2022-11-25	Fernanda	Clark	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	1548456325
21	7	2022-11-01	2022-11-25	Fabricio	Pontic	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	4582154632
20	7	2022-11-01	2022-11-25	Mary	Louis	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	5421596325
19	7	2022-11-01	2022-11-25	Zack	Petisso	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	NULL	NULL
2	1	2022-06-01	2022-06-15	Fabricio	Pontic	Asia	Covid-19	Covid-19	2023-02-01	China	China	6089625897
1	1	2022-06-01	2022-06-15	Zack	Petisso	Asia	Covid-19	Covid-19	2023-02-01	China	China	978861948
10	3	2022-07-23	2022-08-06	Jimmy	Newtron	Asia	Covid-19	Covid-19	2023-02-01	China	China	6576895802
9	3	2022-07-23	2022-08-06	Pepe	Yee	Asia	Covid-19	Covid-19	2023-02-01	China	China	8587366182
8	3	2022-07-23	2022-08-06	Fabricio	Pontic	Asia	Covid-19	Covid-19	2023-02-01	China	China	6089625897
7	3	2022-07-23	2022-08-06	Zack	Petisso	Asia	Covid-19	Covid-19	2023-02-01	China	China	978861948

# Employee Visa And Shot Records

- The report shows that all countries require employees to get inoculation type for COVID-19.
- Most countries will require employees to get a Visa. However, for the “NULL” in the “visa\_number” or “has\_visa\_in\_country”, the Administration will have to quickly gather that information and notify the appropriate employee(s) of the requirements before the trip.

employee_trip_id	trip_id	begin_date	end_date	first_name	last_name	region	required_inoculation_type	has_inoculation_type	date_expires	required_country_visa	has_visa_in_country	visa_number
6	5	2022-09-03	2022-09-18	John	MacNell	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	3421590256
10	8	2022-12-07	2022-12-14	John	MacNell	Africa	Covid-19	Covid-19	2023-02-01	South Africa	South Africa	3421590256
2	2	2022-07-12	2022-07-18	D.B.	Marland	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
11	9	2023-01-05	2023-01-10	D.B.	Marland	North America	Covid-19	Covid-19	2023-02-01	Colombia	NULL	NULL
5	4	2022-08-13	2022-08-27	D.B.	Marland	Southern Europe	Covid-19	Covid-19	2023-02-01	Italy	Italy	222592611
7	6	2022-10-20	2022-10-30	John	MacNell	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	4465333391
8	7	2022-11-01	2022-11-25	John	MacNell	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	4465333391
9	7	2022-11-01	2022-11-25	D.B.	Marland	Northern Europe	Covid-19	Covid-19	2023-02-01	Greece	Greece	892417636
1	1	2022-06-01	2022-06-15	John	MacNell	Asia	Covid-19	Covid-19	2023-02-01	China	China	3870696915
3	3	2022-07-23	2022-08-06	John	MacNell	Asia	Covid-19	Covid-19	2023-02-01	China	China	3070696915
4	3	2022-07-23	2022-08-06	D.B.	Marland	Asia	Covid-19	Covid-19	2023-02-01	China	China	9689705174



# Trip Schedules

## Purpose of Report

This report is needed so customers and staff can check on trip schedules and each day's excursion.

- The report shows trip\_id, region, and each excursion with the beginning and ending date of the trip (for example; trip\_id 1 is one trip to Asia with two different excursion)



trip_id	region	Begin Date	End Date	Excursion Date	excursion_description
1	Asia	06/01/2022	06/15/2022	06/10/2022	Rock Climbing
1	Asia	06/01/2022	06/15/2022	06/11/2022	Camp Games
2	North America	07/12/2022	07/18/2022	07/12/2022	Rock Climbing
2	North America	07/12/2022	07/18/2022	07/13/2022	Camp Games
2	North America	07/12/2022	07/18/2022	07/14/2022	Tea Time
2	North America	07/12/2022	07/18/2022	07/16/2022	Rock Climbing
2	North America	07/12/2022	07/18/2022	07/17/2022	Camp Games
2	North America	07/12/2022	07/18/2022	07/18/2022	The Big Event
3	Asia	07/23/2022	08/06/2022	07/25/2022	Rock Climbing
3	Asia	07/23/2022	08/06/2022	07/26/2022	Camp Games
3	Asia	07/23/2022	08/06/2022	07/27/2022	Outdoor Cooking Class
3	Asia	07/23/2022	08/06/2022	07/28/2022	Hiking
3	Asia	07/23/2022	08/06/2022	07/29/2022	Hiking
3	Asia	07/23/2022	08/06/2022	07/30/2022	Outdoor Cooking Class
3	Asia	07/23/2022	08/06/2022	07/31/2022	Rock Climbing
3	Asia	07/23/2022	08/06/2022	08/01/2022	Rock Climbing
3	Asia	07/23/2022	08/06/2022	08/02/2022	The Big Event
3	Asia	07/23/2022	08/06/2022	08/03/2022	The Big Event
3	Asia	07/23/2022	08/06/2022	08/04/2022	The Big Event
4	Southern Europe	08/13/2022	08/27/2022	08/15/2022	Camp Games
4	Southern Europe	08/13/2022	08/27/2022	08/16/2022	Hiking
4	Southern Europe	08/13/2022	08/27/2022	08/17/2022	Hiking
4	Southern Europe	08/13/2022	08/27/2022	08/18/2022	Outdoor Cooking Class
4	Southern Europe	08/13/2022	08/27/2022	08/19/2022	Rock Climbing
4	Southern Europe	08/13/2022	08/27/2022	08/20/2022	Rock Climbing
4	Southern Europe	08/13/2022	08/27/2022	08/21/2022	The Big Event
4	Southern Europe	08/13/2022	08/27/2022	08/22/2022	The Big Event
4	Southern Europe	08/13/2022	08/27/2022	08/24/2022	The Big Event
4	Southern Europe	08/13/2022	08/27/2022	08/24/2022	Swimming
4	Southern Europe	08/13/2022	08/27/2022	08/25/2022	Swimming



# *Destinations*

## *Hiking*



Photos taken from <https://Vertuoso.com/>

## *Camping*



Photos taken from <https://www.bigsksafaris.com/>

## *Fishing*



Photos taken from <https://www.weforum.org/>

**Africa** is a continent that has a lot to offer. Our excursions include nature hikes, camping, fishing and getting close to wildlife while practicing safety precautions.

# *Asia*

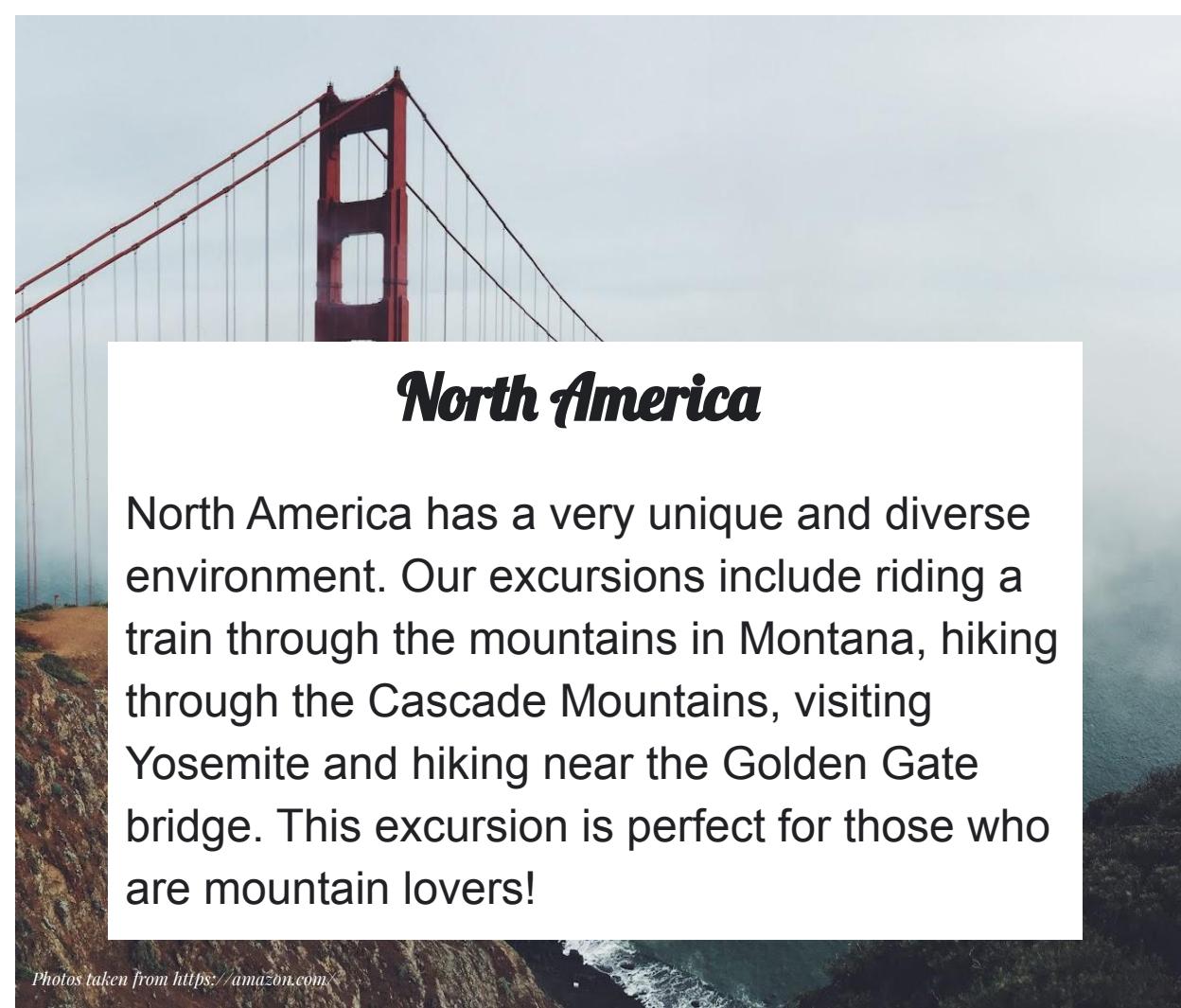
Asia is full of big cities, beautiful nature, culture and architecture. Our excursions in Asia includes different countries worth visiting such as China, Thailand and Japan. Our trips were designed to experience the best out of this continent including unique landmarks, food experiences, and mountain hikes.



*Photos taken from <https://Shutterstock.com>*



*Photos Taken from <https://iStock.com>*



## ***North America***

North America has a very unique and diverse environment. Our excursions include riding a train through the mountains in Montana, hiking through the Cascade Mountains, visiting Yosemite and hiking near the Golden Gate bridge. This excursion is perfect for those who are mountain lovers!

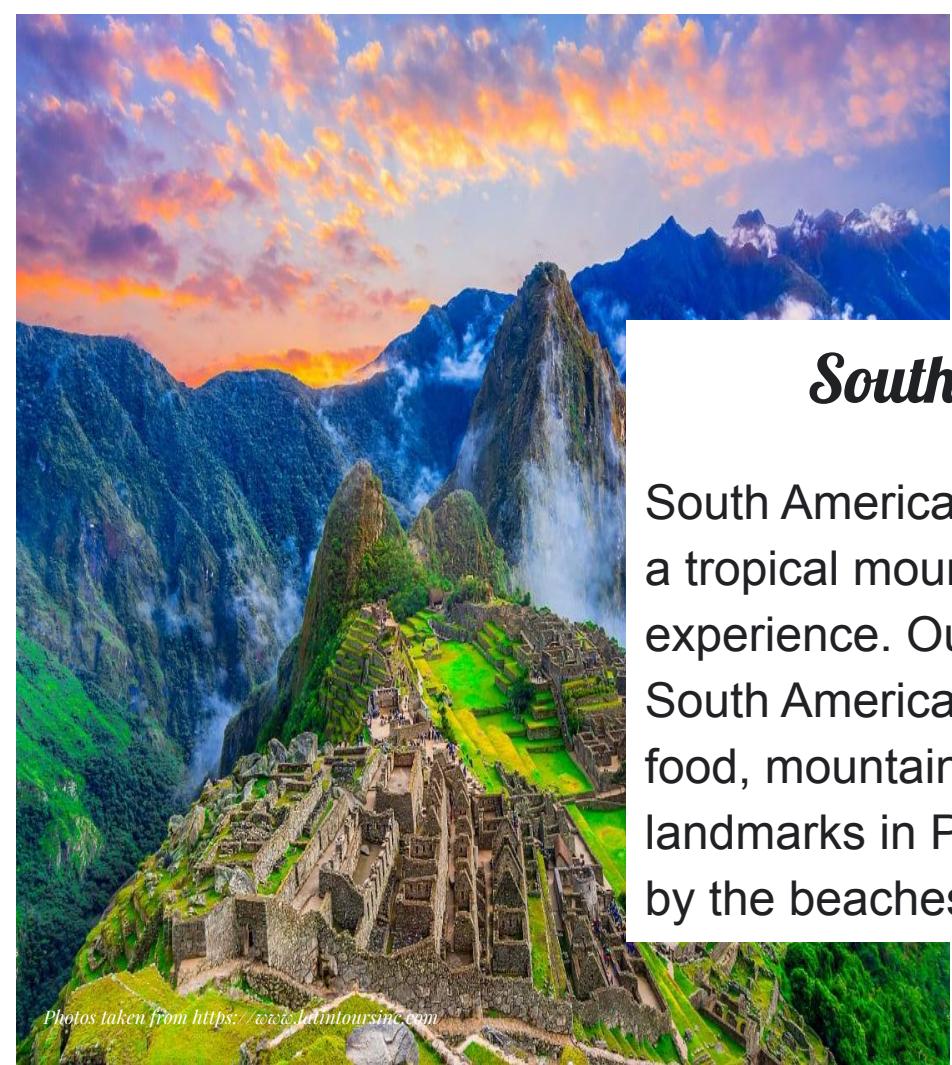
*Photos taken from <https://amazon.com/>*



*Photos taken from <https://travel.gc.ca/canadian-tourism?>*



*Photos taken from <https://www.insightvacations.com/>*



## *South America*

South America offers the best of a tropical mountain and beach experience. Our excursions in South America includes great food, mountain hikes to popular landmarks in Peru and relaxation by the beaches of Brazil.



# *Northern Europe*

Northern Europe has a lot of charm, and offers an unlimited amount of experiences. In our excursions we included visits to the Alpine Lakes in Norway, historical charming towns in Ireland, mountain hikes, and to top it off a very unique food and cultural experience.



Photos taken from <https://Vermo.com/>



Photos taken from <https://glcruises.com/>



## *Southern Europe*

Southern Europe offers mesmerizing historical landmarks. Our Excursions include exploring Italy's charming towns, wineries, unique hikes in France, and beach towns in Greece.



# Assumptions:

- Owners are considered in the employee table.
- Each destination has its own flat airline fee.
- Only new equipment is purchased to sell or rent but the owners brought new equipment to the business which can be several years old.
- Card number represents payment information customer would provide.
- Every customer and employee on a trip is going on all excursions.
- Items include equipment, supplies, and safety essentials.
- Full inventory reports or available items reports were not created for this case study
- Camping is part of the excursion activities.
- If customer\_order table shows “is\_rental” field as “0” or “false”, customer decided to buy equipment.



Photos taken from <https://travelawaits.com/>



- Each excursion will be documented per day (If excursion takes multiple days, it will be listed once per day).
- Each of the Guides will be required to have each of the items required for the trip.
- If a trip requires an item, only one person will be required to check out the item.
- The project does not provide interactive website reports for customers to check trip schedules. or purchase equipment. There is an interactive report to show equipment over X years old.
- All trips are assumed to be paid for so there is no invoice or billing information provided in this report.
- The business has expanded since this case study was written to conduct trips in North America, Northern Europe, and South America
- Customer inoculation records were updated while evaluating this case study. Customers provided additional information since the tables were originally created.

# *Thank You* *The Outlanders Team*



Team Members:

**Chris Beatty** - <https://github.com/AnotherByte/csd-310.git>

**Brian Gossett** - <https://github.com/BrianGossett/csd-310.git>

**Larissa Passamani Lima** - <https://github.com/passamani15/csd-310.git>

**Christeen Safar** - <https://github.com/ChristeenS/csd-310.git>

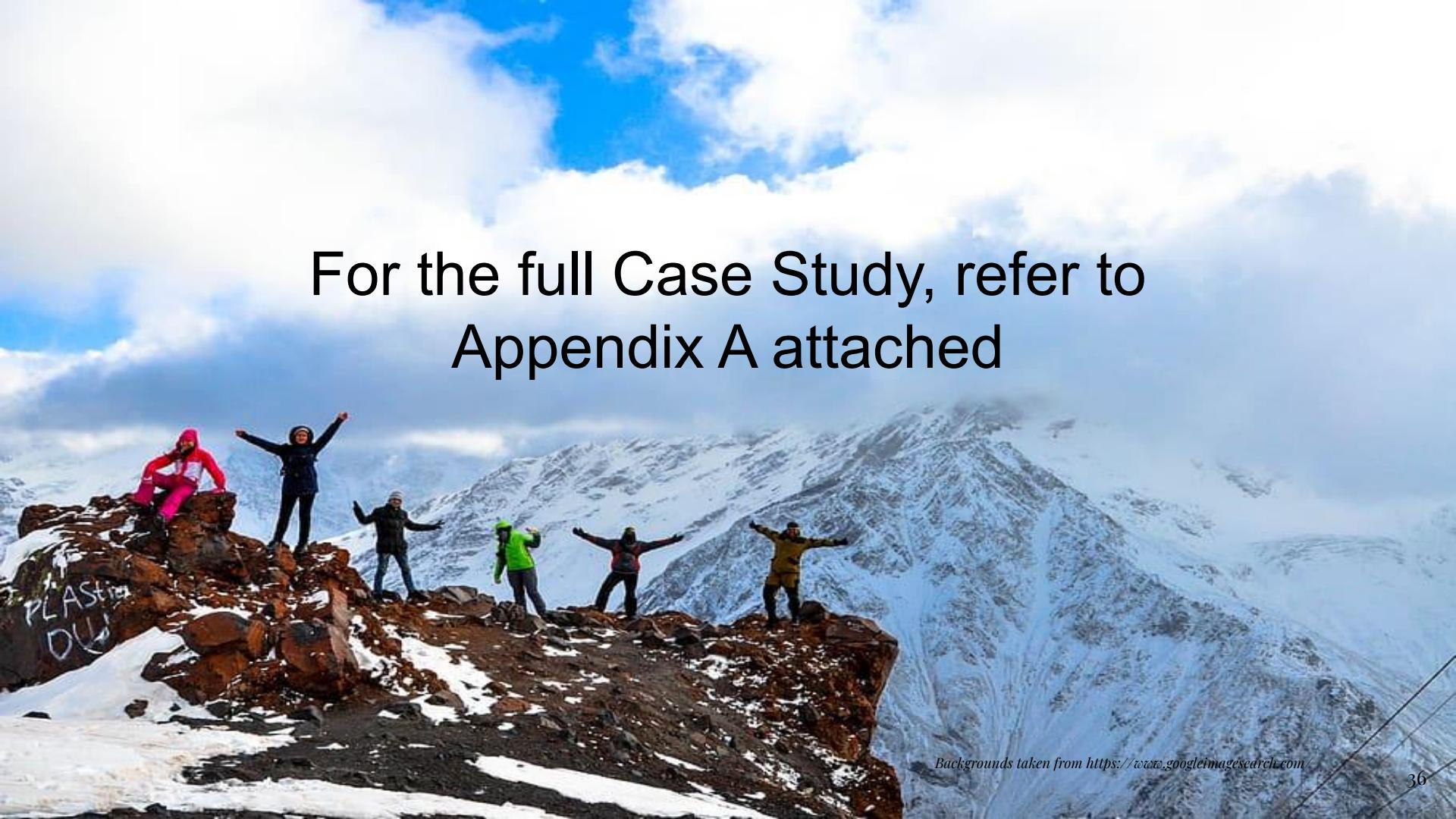
**Michele Speidel** - <https://github.com/jamdmmsfreese/csd-310.git>

N/A. (n.d.). Hiking Clipart. Clipart Panda.

Retrieved July 9, 2022, from

<http://images.clipartpanda.com/hiking-clipart-hike.gif>

*Backgrounds taken from https://www.googleimagesearch.com/*



For the full Case Study, refer to  
Appendix A attached

*Backgrounds taken from <https://www.googleimagesearch.com/>*