

MID-COURSE PROJECT

PROJECT DATA: US & CANADA RESORTS

```
resorts.head()
```

	ID	Resort	Latitude	Longitude	Country	Continent	Price	Season	Highest point	Lowest point	...	Snow cannons	Surface lifts	Chair lifts	Gondola lifts	Total lifts	Lift capacity
0	4	Red Mountain Resort-Rossland	49.105520	-117.846280	Canada	North America	60	December - April	2075	1185	...	0	2	5	1	8	9200
1	11	Fernie	49.504175	-115.062867	Canada	North America	67	December - April	2134	1052	...	11	3	7	0	10	14514
2	12	Sun Peaks	50.884468	-119.882329	Canada	North America	62	November - April	2082	1198	...	0	6	6	0	12	13895
3	13	Panorama	50.736999	-119.120561	Canada	North America	62	December - April	2365	1140	...	0	3	6	4	13	11890
4	22	Steamboat	35.754022	-109.853751	United States	North America	120	November - April	3221	2103	...	0	1	14	2	17	32720

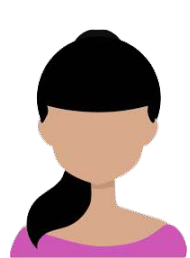
5 rows x 25 columns

```
resorts.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 98 entries, 0 to 97
Data columns (total 25 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   ID                                     98 non-null    int64
1   Resort                               98 non-null    object
2   Latitude                             98 non-null    float64
3   Longitude                             98 non-null    float64
4   Country                              98 non-null    object
5   Continent                             98 non-null    object
6   Price                                98 non-null    int64
7   Season                               98 non-null    object
8   Highest point                        98 non-null    int64
9   Lowest point                         98 non-null    int64
10  Beginner slopes                      98 non-null    int64
11  Intermediate slopes                  98 non-null    int64
12  Difficult slopes                     98 non-null    int64
13  Total slopes                         98 non-null    int64
14  Longest run                          98 non-null    int64
15  Snow cannons                         98 non-null    int64
16  Surface lifts                        98 non-null    int64
17  Chair lifts                          98 non-null    int64
18  Gondola lifts                        98 non-null    int64
19  Total lifts                          98 non-null    int64
20  Lift capacity                        98 non-null    int64
21  Child friendly                       98 non-null    object
22  Snowparks                           98 non-null    object
23  Nightskiing                         98 non-null    object
24  Summer skiing                       98 non-null    object
dtypes: float64(2), int64(15), object(8)
memory usage: 19.3+ KB
```



ASSIGNMENT: MIDCOURSE PROJECT



NEW MESSAGE

March 28, 2024

From: Deepthi Downhill (VP of Analytics)

Subject: More Ambitious Ski Resort App

Hello,

The work you've been doing with Leonard is very exciting. This type of application can save our agents hundreds of hours annually! I want to applaud you both on this amazing initiative.

That said, it's time to think a bit bigger. While Europe is a solid market, it's behind the US and Canada for us given our customers are almost exclusively from North America. Can you create two apps that will help us with these markets?

Thanks!

section04_midcourse_project.ipynb

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Key Objectives

1. Build two working Dash Applications
2. Add multiple chart types and interactive elements
3. Connect them with callback functions capable of taking multiple inputs and returning multiple outputs



FINAL PROJECT

PROJECT DATA: WORLDWIDE RESORTS

```
resorts.head()
```

	ID	Resort	Latitude	Longitude	Country	Continent	Price	Season	Highest point	Lowest point
0	1	Hemsedal	60.928244	8.383487	Norway	Europe	46	November - May	1450	620
1	2	Geilosiden Geilo	60.534526	8.206372	Norway	Europe	44	November - April	1178	800
2	3	Golm	47.057810	9.828167	Austria	Europe	48	December - April	2110	650
3	4	Red Mountain Resort-Rossland	49.105520	-117.846280	Canada	North America	60	December - April	2075	1185
4	5	Hafjell	61.230369	10.529014	Norway	Europe	45	November - April	1030	195

5 rows x 25 columns

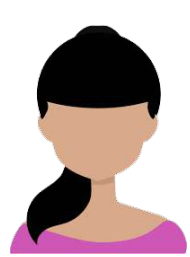


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```
resorts.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 499 entries, 0 to 498
Data columns (total 25 columns):
#   Column                                Non-Null Count  Dtype
---  -
0   ID                                     499 non-null    int64
1   Resort                               499 non-null    object
2   Latitude                             499 non-null    float64
3   Longitude                             499 non-null    float64
4   Country                              499 non-null    object
5   Continent                            499 non-null    object
6   Price                                499 non-null    int64
7   Season                               499 non-null    object
8   Highest point                        499 non-null    int64
9   Lowest point                         499 non-null    int64
10  Beginner slopes                      499 non-null    int64
11  Intermediate slopes                  499 non-null    int64
12  Difficult slopes                    499 non-null    int64
13  Total slopes                        499 non-null    int64
14  Longest run                          499 non-null    int64
15  Snow cannons                        499 non-null    int64
16  Surface lifts                       499 non-null    int64
17  Chair lifts                         499 non-null    int64
18  Gondola lifts                       499 non-null    int64
19  Total lifts                         499 non-null    int64
20  Lift capacity                       499 non-null    int64
21  Child friendly                      499 non-null    object
22  Snowparks                          499 non-null    object
23  Nightskiing                        499 non-null    object
24  Summer skiing                      499 non-null    object
dtypes: float64(2), int64(15), object(8)
memory usage: 97.6+ KB
```

ASSIGNMENT: FINAL PROJECT



NEW MESSAGE

May 1, 2023

From: Deepthi Downhill (VP of Analytics)

Subject: Even MORE Ambitious Resort App

Hey, thanks for the great work on the two dashboards.

However, I'm getting some feedback that having two separate dashboards is challenging to navigate. Can you make this a single app, with each view on its own tab? Try to improve the design a bit as well.

We also want to think EVEN BIGGER. The US and Canada were a great start, but we have access to data on ski resorts world-wide, and we should be able to leverage much of our existing code to include all of them.

Thanks!

section07_final_project.ipynb

← Reply

➡ Forward

Key Objectives

1. Build a multi-tab dashboard with a grid-based layout
2. Add multiple chart types and interactive elements
3. Write standard callback functions to connect them
4. Include a chained callback function and (if you're daring) a cross-filtering callback function

