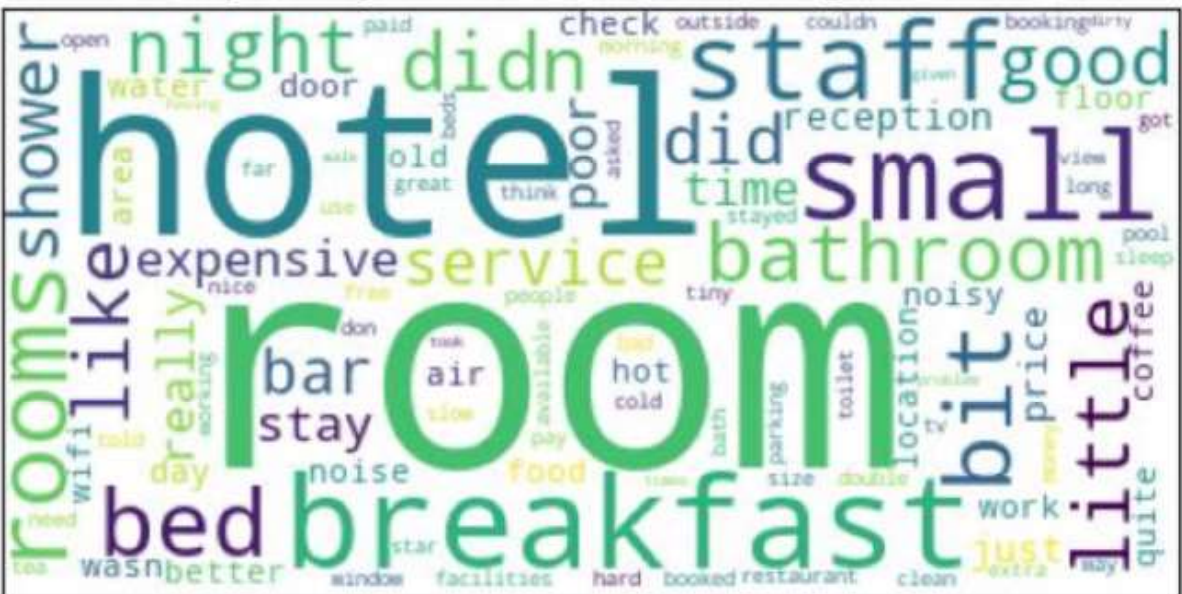


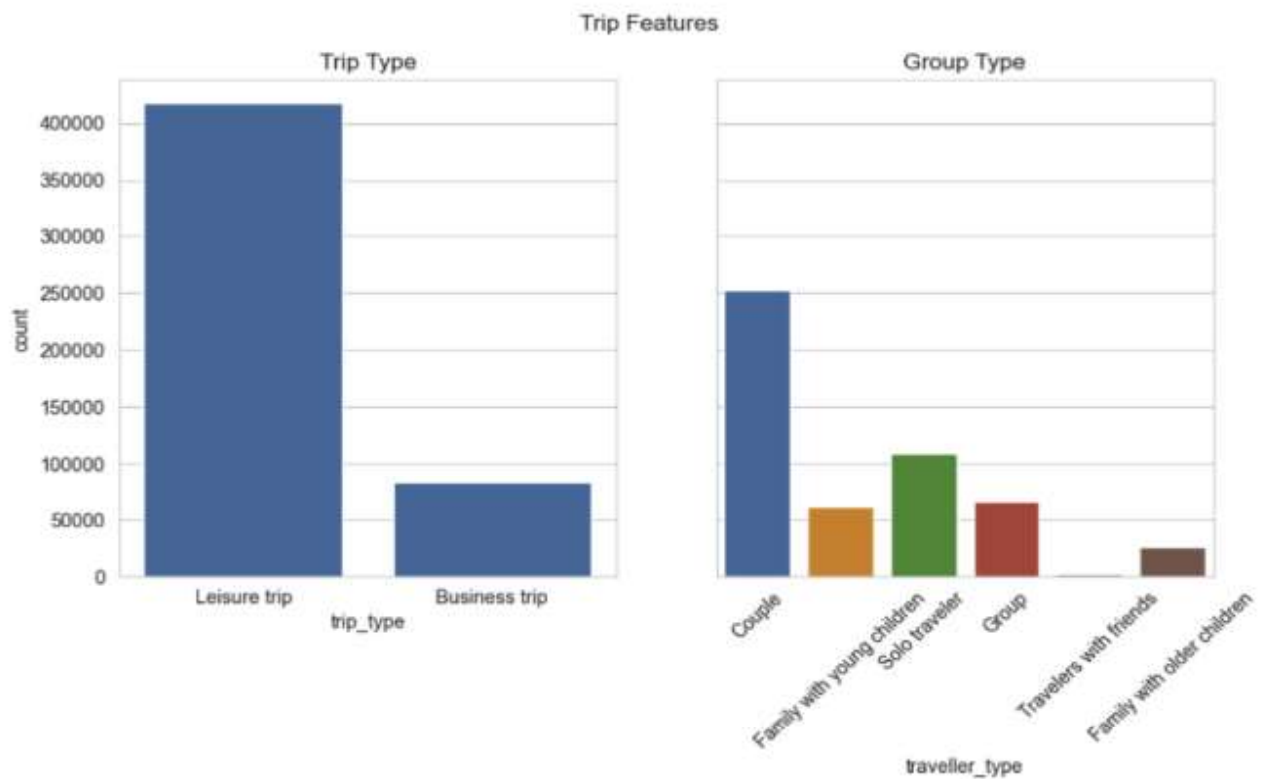
1.

[illegible]

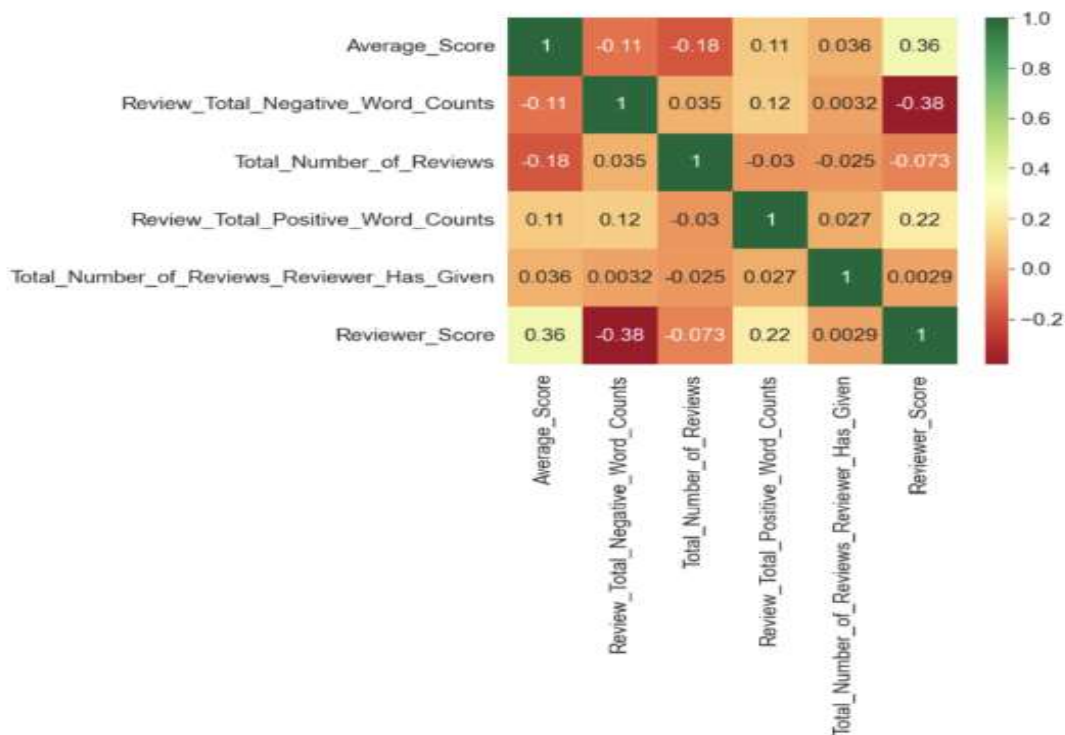
Most Frequently Used Words in Negative Reviews

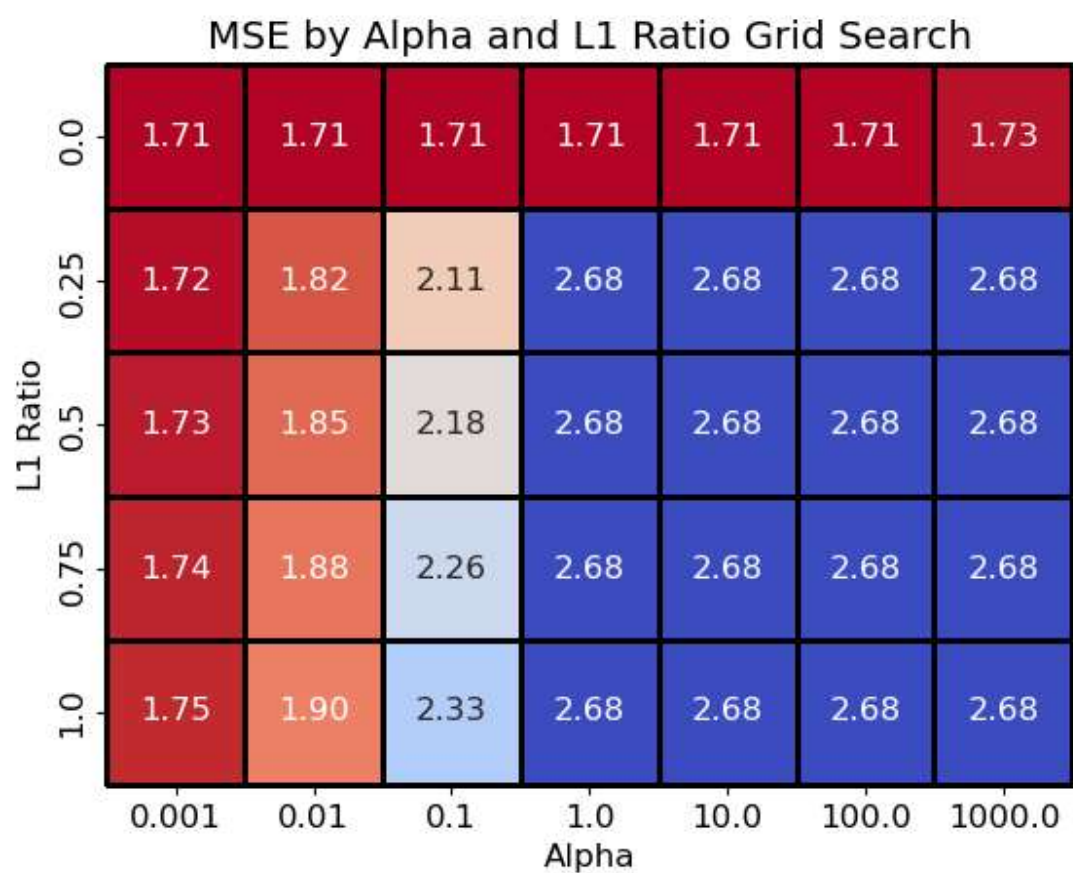


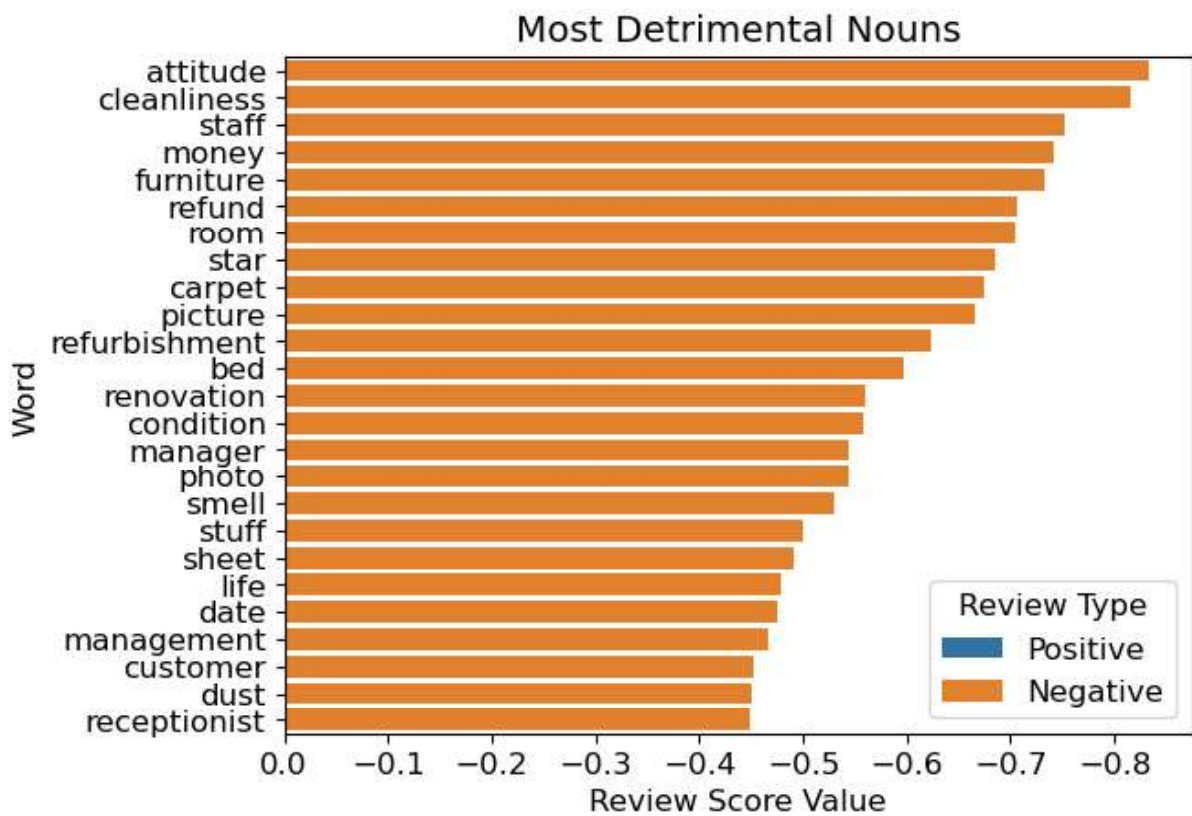
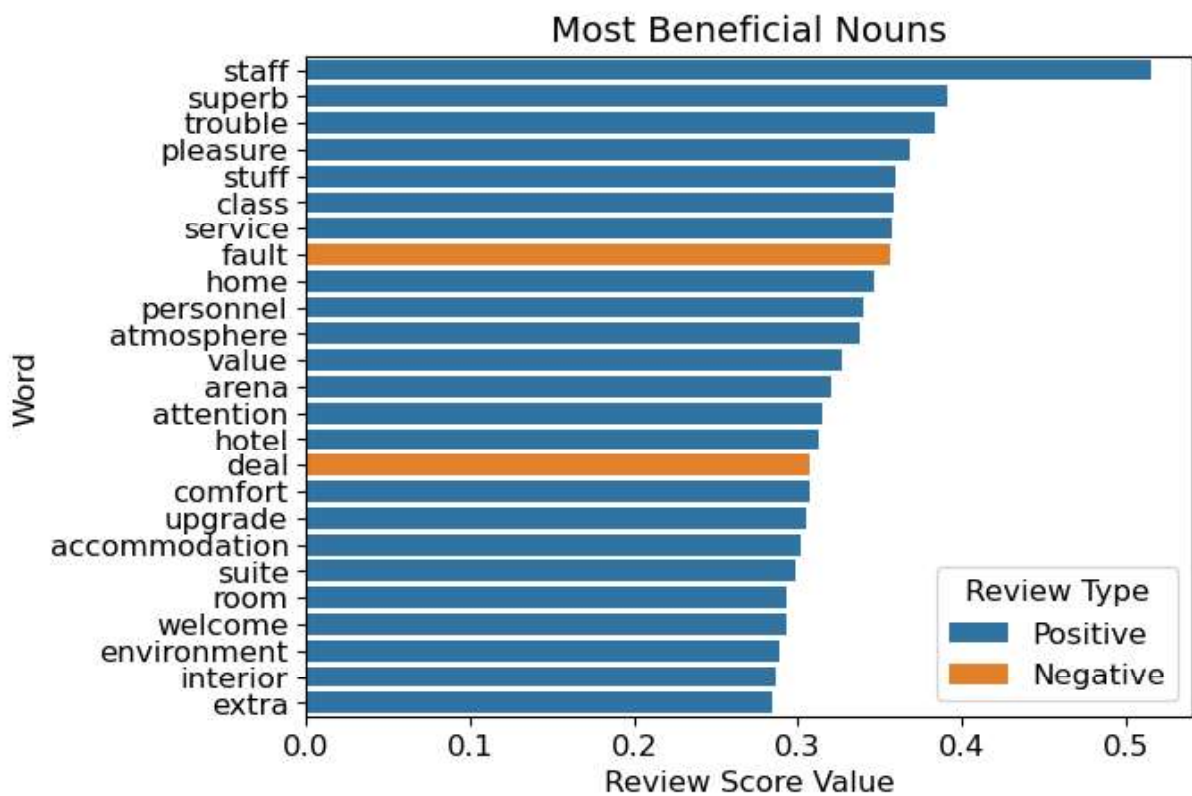
3. Distribution based on Trip type and Group type



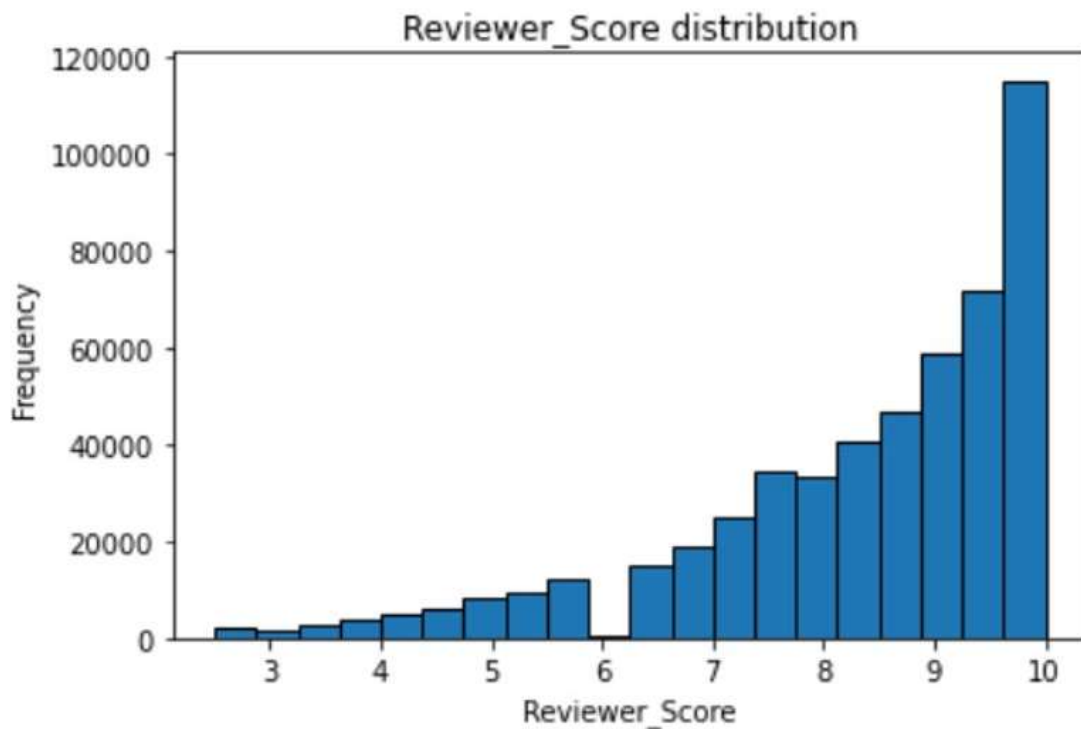
4. Correlation plot between numerical features in Dataset







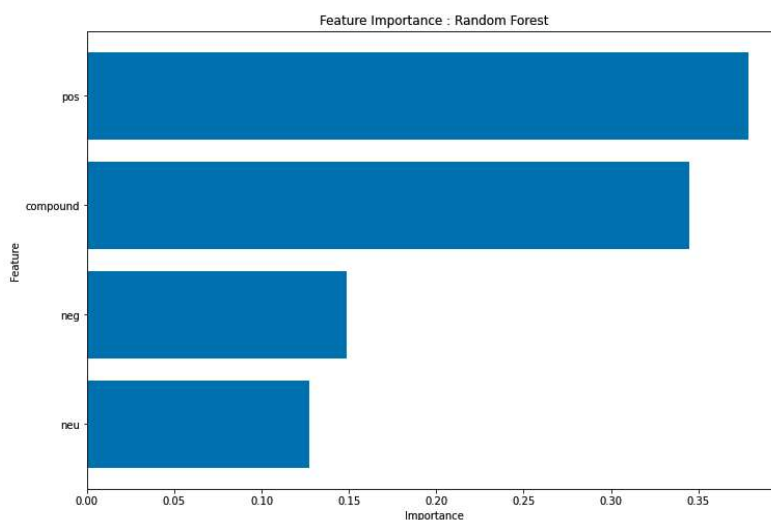
1. Reviewer score frequency distribution



2. MSE values for all the models created and tested

Decision Tree MSE: 2.8544843663986983
Random Forest MSE: 2.0228066866555814
Adaboost MSE: 2.100317199537433

3. Feature Importance for Random Forest



- Output for the merged dataset creating using the original dataset and the added features:

ve_Review	Positive_Review	Tags	Unnamed: 0	Hotel Address	Number of Reviews	Average Score	Service	Cleanliness	Comfort	Environment	Value	countries	review
o angry that le this post available...	Only the park outside of the hotel was beauti...	Leisure trip Couple Duplex Double Room Sta...	1377	Gravesandestraat 55 Oost 1092 AA Amsterdam ...	405	7.7	3.0	0.5	5.8	5.0	3.3	Netherlands	I am so angry that I made this post available...
	No real complaints the hotel was great ...	Leisure trip Couple Duplex Double Room Sta...	1377	Gravesandestraat 55 Oost 1092 AA Amsterdam ...	405	7.7	3.0	0.5	5.8	5.0	3.3	Netherlands	No Negative No real complaints the hotel was g...
ns are nice or elderly a bit difficul...	Location was good and staff were ok It is cut...	Leisure trip Family with young children Dup...	1377	Gravesandestraat 55 Oost 1092 AA Amsterdam ...	405	7.7	3.0	0.5	5.8	5.0	3.3	Netherlands	Rooms are nice but for elderly a bit difficul...
m was dirty was afraid o walk ba...	Great location in nice surroundings the bar a...	Leisure trip Solo traveler Duplex Double Ro...	1377	Gravesandestraat 55 Oost 1092 AA Amsterdam ...	405	7.7	3.0	0.5	5.8	5.0	3.3	Netherlands	My room was dirty and I was afraid to walk ba...
You When I d with your any on line y...	Amazing location and building Romantic setting	Leisure trip Couple Suite Stayed 2 nights ...	1377	Gravesandestraat 55 Oost 1092 AA Amsterdam ...	405	7.7	3.0	0.5	5.8	5.0	3.3	Netherlands	You When I booked with your company on line y...

- Separate dataset with curated Positive & negative nouns used to generate the word cloud

	Hotel Name	Hotel Address	Positive Nouns	Negative Nouns
0	11 Cadogan Gardens	11 Cadogan Gardens Sloane Square Kensington an...	welcome hotel location size room bathroom frie...	drink bar problem building charm property staf...
1	1K Hotel	13 Boulevard Du Temple 3rd arr 75003 Paris France	location room bed staff cleanliness hotel brea...	room work wall area need refurbishment star ho...
2	25hours Hotel beim MuseumsQuartier	Lerchenfelder Stra e 1 3 07 Neubau 1070 Vienna...	style middle museum restaurant hotel room expe...	bit plate cup coffee bit hotel pillow quality ...
3	41	41 Buckingham Palace Road Westminster Borough ...	proximity service restaurant staff world star ...	thing room head staff hotel room night room ch...
4	45 Park Lane Dorchester Collection	45 Park Lane Westminster Borough London W1K 1P...	staff room way staff food need dining restaura...	kind fruit juice bar guest guest experience ro...
...
1489	citizenM London Bankside	20 Lavington Street Southwark London SE1 0NZ U...	hotel ride minute walk station bar restaurant ...	stay hotel room road sleep traffic noise scree...

3. Output1 for the Recommendation System:

```
destination_and_description('uk','I am going on a family trip, I need a single room and i am staying for five nights ')
```

	Hotel Name	Hotel Address	Country	Number Of Reviews	Average Score	Service	Cleanliness	Comfort	Environment	Value
0	Haymarket Hotel	1 Suffolk Place Westminster Borough London SW1...	UK	121	9.6	5.8	8.6	6.5	7.7	6.7
1	41	41 Buckingham Palace Road Westminster Borough ...	UK	103	9.6	7.6	6.0	6.1	9.1	5.3
2	Taj 51 Buckingham Gate Suites and Residences	Buckingham Gate Westminster Borough London SW1...	UK	133	9.5	5.1	6.0	8.7	6.1	8.2
3	Ham Yard Hotel	One Ham Yard Westminster Borough London W1D 7D...	UK	141	9.5	7.1	6.1	7.5	8.4	3.5
4	Charlotte Street Hotel	15 17 Charlotte Street Hotel Westminster Borou...	UK	141	9.5	5.7	7.1	7.7	8.4	6.3



4. Output2 for the Recommendation System:

```
destination_and_description('Italy','I am going on a leisure trip, I need a Deluxe room and i will stay 2 weeks')
```

	Hotel Name	Hotel Address	Country	Number Of Reviews	Average Score	Service	Cleanliness	Comfort	Environment	Value
0	Excelsior Hotel Gallia Luxury Collection Hotel	Piazza Duca D Aosta 9 Central Sitation 20124 Mi...	Italy	310	9.4	4.3	5.9	7.2	8.7	7.4
1	Palazzo Pangi Hotel Grand Spa Milano	Corso Di Porta Nuova 1 Milan City Center 20121 ...	Italy	122	9.3	6.7	5.7	6.7	9.2	6.3
2	Room Mate Galia	Silvio Pellico 4 Milan City Center 20121 Milan...	Italy	621	9.3	6.6	5.3	7.1	9.4	6.4
3	Hotel Spadari Al Duomo	Via Spadari 11 Milan City Center 20123 Milan I...	Italy	243	9.3	5.9	6.4	6.9	7.5	6.4
4	UNA Maison Milano	Via Mazzini 4 Milan City Center 20123 Milan Italy	Italy	320	9.3	6.7	5.7	7.8	5.2	8.8



5. Output3 for the recommendation system

