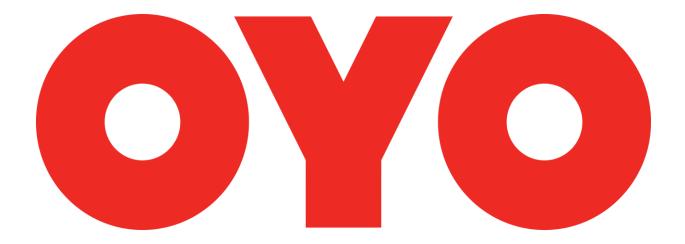




# INNOMATICS RESEARCHLABS







Web Scrapping & Data Analysis On OYO HOTELS

https://www.oyorooms.com/



## Team Members:

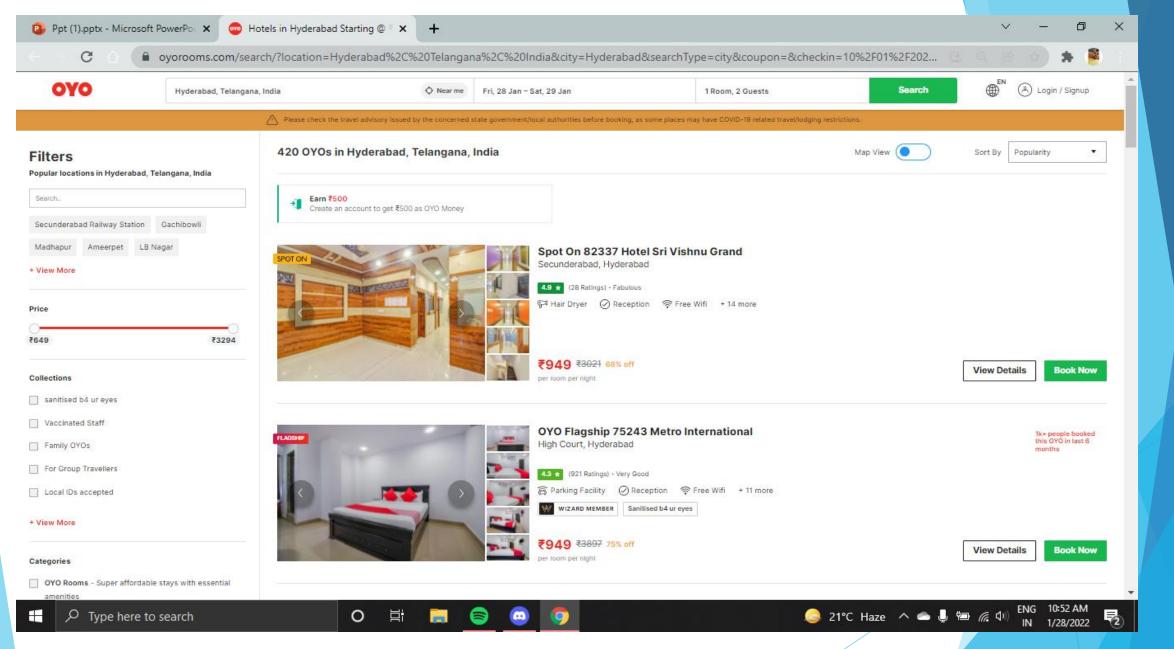
Name: Vengala Pranay

Qualification: B/E Mining Engineering

Name: Kommarajula Uday Kumar

Qualification: B/E Mining Engineering







## About 0Y0

➤ In 2012, Ritesh Agarwal launched Oravel Stays to enable listing and booking of budget accommodations.

Later he renamed the firm to OYO in 2013. OYO Rooms has a multi-brand approach.

#### These include:

- > OYO Town House
- ➤ OYO Flag ship
- > OYO Home
- ➤ Silverkey
- > Spot on
- ➤ Capital 0
- ➤ Pallete
- ➤ Collection 0



#### WEB SCRAPPING

- ▶ Web scraping is a term used to describe the use of a program or algorithm to extract and process large amounts of data from the web.
- ▶ Web scraping is the process of using bots to extract content and data from a website. Unlike screen scraping, which only copies pixels displayed onscreen, web scraping extracts underlying HTML code and, with it, data stored in a database. The scraper can then replicate entire website content elsewhere.
- For public consumption and use it for analysis. However, it is not legal if you scrape confidential information for profit. For example, scraping private contact information without permission, and sell them to a 3rd party for profit is illegal.

### **DATA FRAME**

|     | Hotel_name                           | Adress   | Price | Original_price | Ratings                      | Discount |
|-----|--------------------------------------|--|-------|----------------|------------------------------|----------|
| 0   | OYO Townhouse RCC Elite 265 Begumpet | Opp to Js babu silks., Hyderabad                 | ₹1099 | ₹4095          | 4.6 (3088 Ratings)·Excellent | 73% off  |
| 1   | Capital O 71317 White Ridge          | Near Khazana Jewellery, Dilsukhnagar, Hyderabad  | ₹1199 | ₹4989          | 4.6 (1930 Ratings) Excellent | 75% off  |
| 2   | OYO Flagship 60834 Kaashyapasa Homes | hitech city MMTS, Hyderabad                      | ₹1099 | ₹3088          | 4.4 (800 Ratings)·Very Good  | 64% off  |
| 3   | OYO 49253 Raja Residency             | Near Raja Deluxe Complex, Musheerabad, Hyderabad | ₹1049 | ₹3148          | 4.5 (3722 Ratings)·Excellent | 66% off  |
| 4   | OYO Flagship 61858 Hotel Banyan Tree | Centrally Located, Near Huda Park, Kukatpally,   | ₹1099 | ₹3272          | 4.6 (2825 Ratings)·Excellent | 66% off  |
|     |                                      |  |       |                |                              |          |
| 507 | OYO Flagship 49925 Divi Heritage Inn | Indian Oil Bunk, Behind SM Hospital, Ooty        | ₹1778 | ₹3508          | 3.8 (45 Ratings)-Good        | 49% off  |
| 508 | OYO 77682 Mohans Cottage             | Lovedale Junction, Ooty                          | ₹1741 | ₹4070          | NEW                          | 57% off  |
| 509 | OYO 78121 Red Rock                   | Near Funcity, Ooty                               | ₹1673 | ₹3938          | 4.3 (62 Ratings)·Very Good   | 57% off  |
| 510 | OYO 78094 Cool Spot Cottage          | Charing Cross, Ooty                              | ₹1854 | ₹4163          | 3.8 (90 Ratings)-Good        | 55% off  |
| 511 | OYO HOME 84637 Kirran Cottage        | Nondimedu, Ooty                                  | ₹1327 | ₹2527          | NEW                          | 47% off  |

512 rows × 6 columns



## Data Frame After Cleaning

|     | Hotel_name                              | Price | Original_price | city      | location                            | Area                 | Rating | Rating_summary | Price_Flucations | %_Discount |
|-----|---|-------|----------------|-----------|-------------------------------------|----------------------|--------|----------------|------------------|------------|
| 0   | OYO Townhouse RCC Elite<br>265 Begumpet | 1099  | 4095           | Hyderabad | Opp to Js babu                      | 265 Begumpet         | 4.6    | Excellent      | 2996             | 73         |
| 1   | Capital O 71317 White<br>Ridge          | 1199  | 4989           | Hyderabad | Near Khazana<br>Jewellery           | White Ridge          | 4.6    | Excellent      | 3790             | 75         |
| 2   | OYO Flagship 60834<br>Kaashyapasa Homes | 1099  | 3088           | Hyderabad | hitech city                         | Kaashyapasa<br>Homes | 4.4    | Very Good      | 1989             | 64         |
| 3   | OYO 49253 Raja Residency                | 1049  | 3148           | Hyderabad | Near Raja Deluxe<br>Complex         | Raja Residency       | 4.5    | Excellent      | 2099             | 66         |
| 4   | OYO Flagship 61858 Hotel<br>Banyan Tree | 1099  | 3272           | Hyderabad | Centrally Located<br>Near Huda Park | Banyan Tree          | 4.6    | Excellent      | 2173             | 66         |
|     |   |       | •••            |           |                                     |                      |        |                |                  |            |
| 507 | OYO Flagship 49925 Divi<br>Heritage Inn | 1778  | 3508           | Ooty      | Indian Oil Bunk<br>Behind SM        | Heritage Inn         | 3.8    | Good           | 1730             | 49         |
| 508 | OYO 77682 Mohans<br>Cottage             | 1741  | 4070           | Ooty      | Lovedale                            | Mohans Cottage       | 4.0    | NEW            | 2329             | 57         |
| 509 | OYO 78121 Red Rock                      | 1673  | 3938           | Ooty      | Near                                | Red Rock             | 4.3    | Very Good      | 2265             | 57         |
| 510 | OYO 78094 Cool Spot<br>Cottage          | 1854  | 4163           | Ooty      | Charing                             | Spot Cottage         | 3.8    | Good           | 2309             | 55         |
| 511 | OYO HOME 84637 Kirran<br>Cottage        | 1327  | 2527           | Ooty      |                                     | Kirran Cottage       | 4.0    | NEW            | 1200             | 47         |

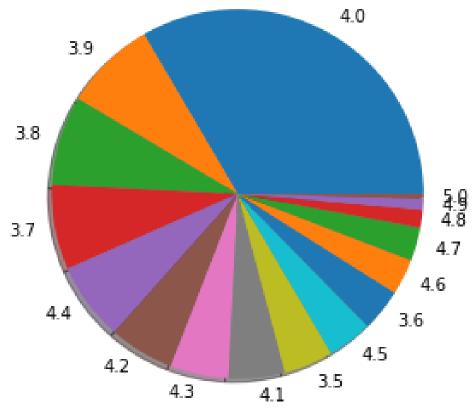
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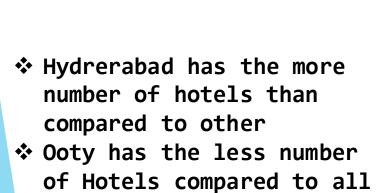
## Data Visualization

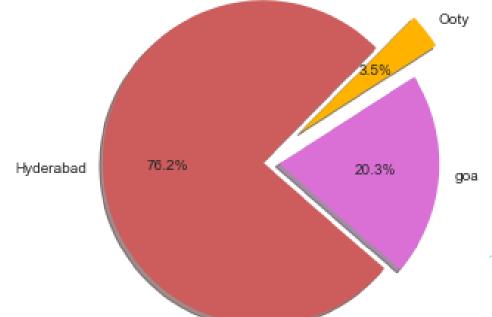






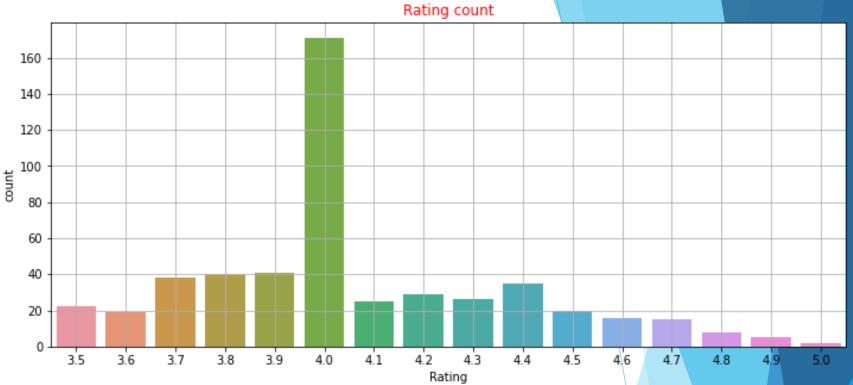
- ❖ 4.0 Rating Hotels are more among all three cities
- ❖ 5.0 Rating Hotels are very rare
- ❖ 3.7,3.8,3.9 hotels are bit less compared to 4.0 rating hotels

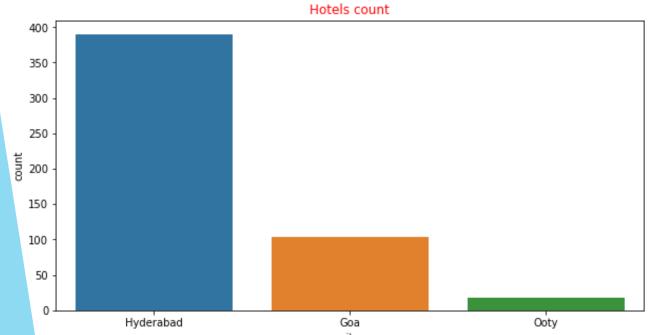






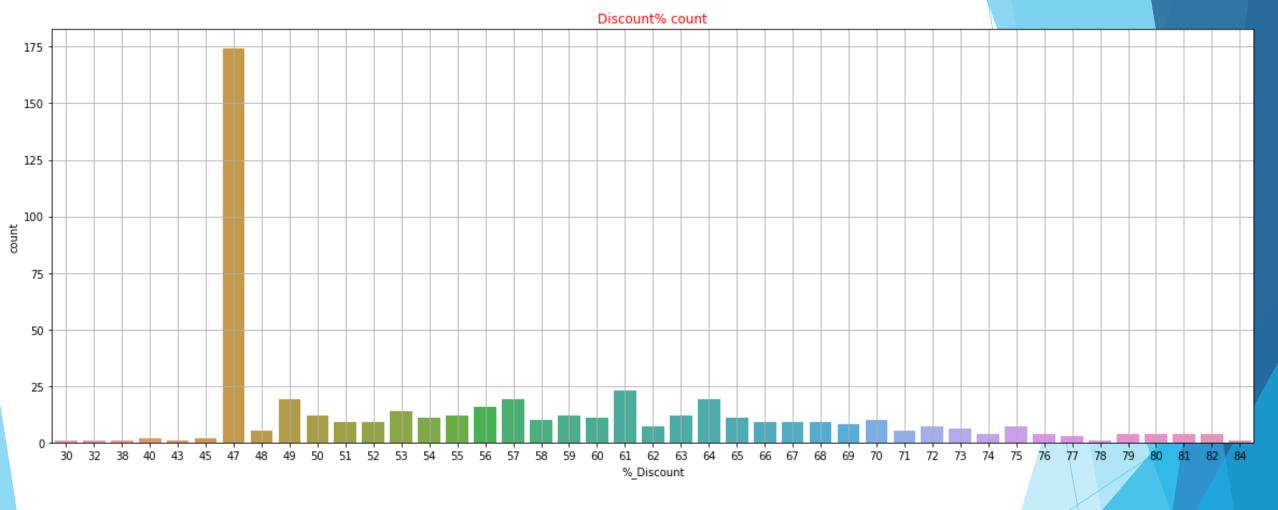
- ❖ More than 160 hotels have 4.0 rating.
- ❖ More than 40 hotels have 3.9 rating.
- ❖ 40 hotels have 3.8 rating among all cities.
- ❖ Very rare hotels are having
  5.0 rating.





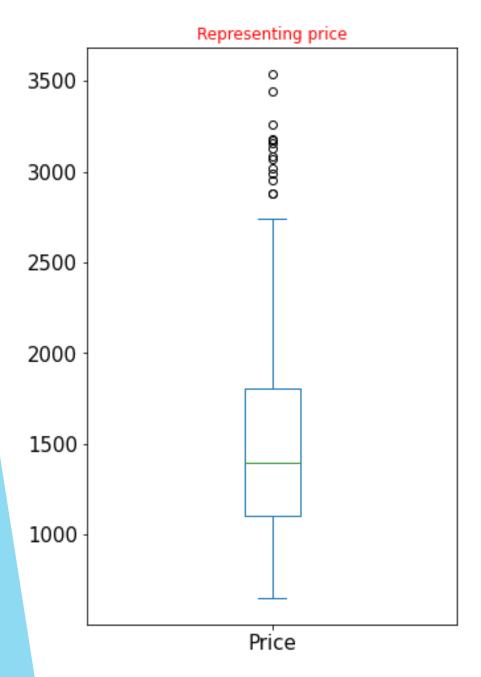
- Hyderabad has 390 hotels.
- ❖ Goa has 108 hotels.
- ❖ Ooty has 18 hotels.





- ❖ More than 174 hotels have 47% discount.
- ❖ 23 hotels have 61 % discount.
- ❖ Only 1 hotel have 84% Discount among all.



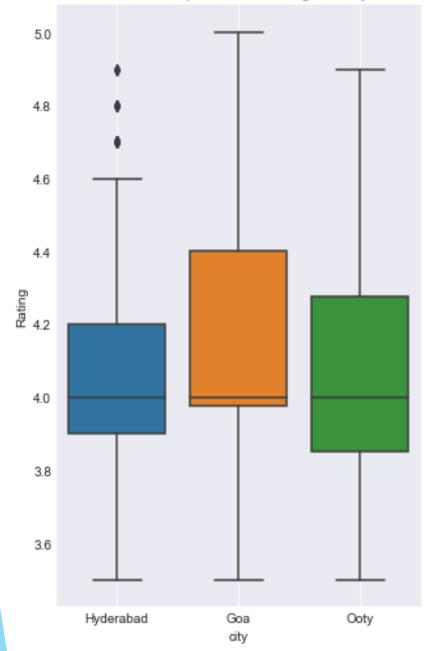


| count | 512.000000  |
|-------|-------------|
| mean  | 1517.632812 |
| std   | 524.350406  |
| min   | 649.000000  |
| 25%   | 1099.000000 |
| 50%   | 1393.000000 |
| 75%   | 1803.250000 |
| max   | 3540.000000 |

- ❖ Minimum hotel price is ₹649
  among all Hotels.
- ❖ Maximum hotel price is ₹3450
  among all Hotels.
- ❖ Mean hotel price
- **❖** Is ₹1517.



#### Relationship Between Rating and city



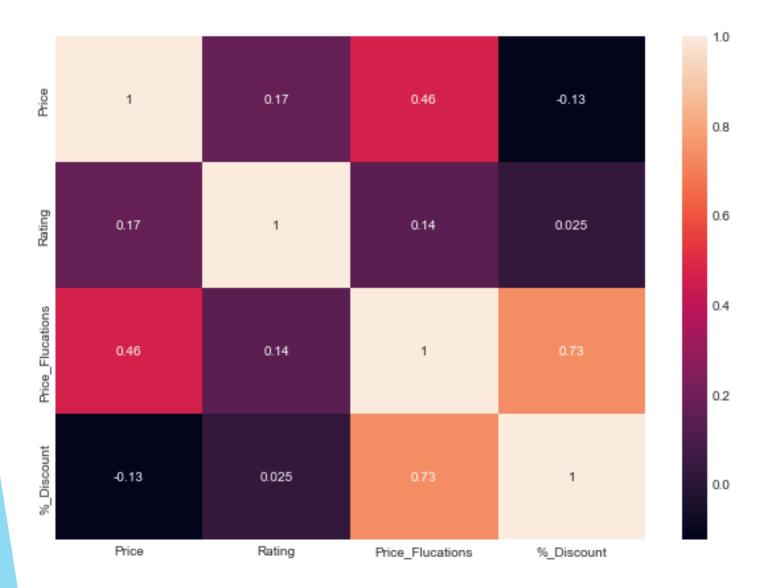
- median is 4.0 rating among
  all cities
- only goa has 5.0 rating hotels
- most of them are 3.5 rating
  hotels



|       | Price       | Original_price | Rating     | Price_Flucations | %_Discount |
|-------|-------------|----------------|------------|------------------|------------|
| count | 512.000000  | 512.000000     | 512.000000 | 512.000000       | 512.000000 |
| mean  | 1517.632812 | 3732.867188    | 4.060547   | 2215.234375      | 56.250000  |
| std   | 524.350406  | 1727.593733    | 0.315059   | 1420.240772      | 10.043545  |
| min   | 649.000000  | 1402.000000    | 3.500000   | 440.000000       | 30.000000  |
| 25%   | 1099.000000 | 2639.500000    | 3.900000   | 1367.000000      | 47.000000  |
| 50%   | 1393.000000 | 3148.000000    | 4.000000   | 1714.000000      | 54.000000  |
| 75%   | 1803.250000 | 4254.500000    | 4.200000   | 2554.750000      | 64.000000  |
| max   | 3540.000000 | 12266.000000   | 5.000000   | 10176.000000     | 84.000000  |

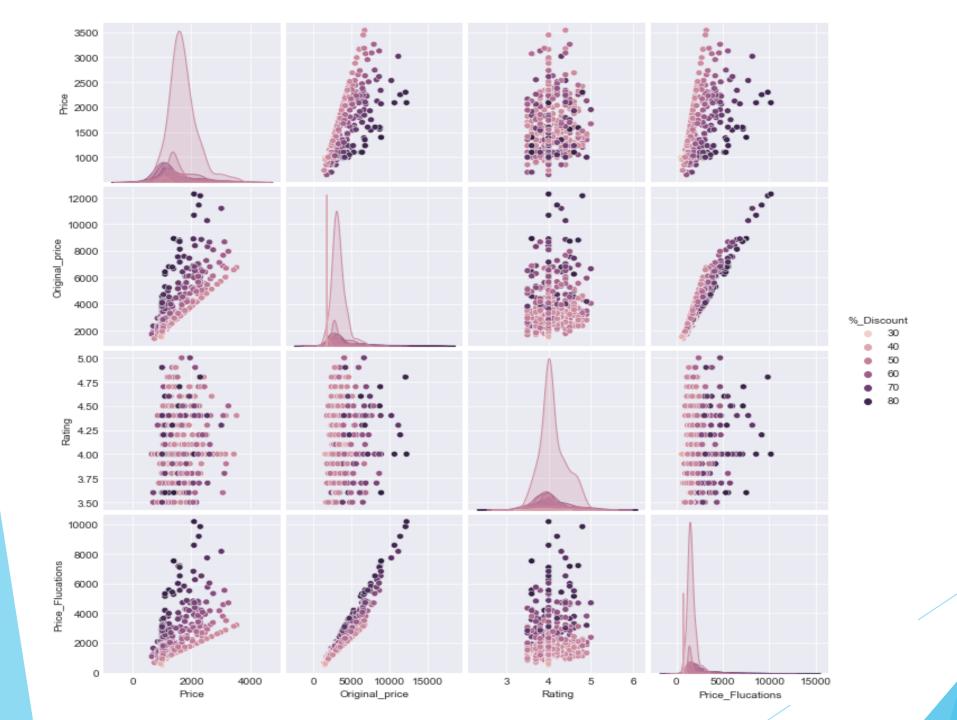
- ❖ Max Discount is 84% &
- ❖ Minimum is 30% Discount for all hotels
- **❖** Max rating is 5.0 & minimum rating is 3.5 for all hotels





❖Price and Discount are highly colurated
❖Price and rating are normally colerated







| Hotel_name  | Price | Original_price | city      | Area                         | Rating | Rating_summary | Price_Flucations | %_Discount |
|---|-------|----------------|-----------|------------------------------|--------|----------------|------------------|------------|
| OYO 65004 La Vihan Resort                         | 1951  | 6649           | Goa       | Vihan Resort                 | 5.0    | Fabulous       | 4698             | 70         |
| SPOT ON 65327 Ashwem Beach Guest<br>House         | 1668  | 4045           | Goa       | Guest House                  | 5.0    | Fabulous       | 2377             | 58         |
| OYO Flagship 83509 Savita Holiday Goa             | 2128  | 5940           | Goa       | Holiday Goa                  | 4.9    | Fabulous       | 3812             | 64         |
| OYO 85106 Hotel Elvin,s Place                     | 2299  | 12137          | Goa       | Elvin,s Place                | 4.8    | Excellent      | 9838             | 81         |
| OYO 83865 Baba Guest House                        | 1524  | 3331           | Goa       | Guest House                  | 4.8    | Excellent      | 1807             | 54         |
| OYO 35467 Shiridi Residency                       | 1349  | 3238           | Hyderabad | Shiridi Residency            | 4.9    | Fabulous       | 1889             | 58         |
| Townhouse 733 Whiteridge Gachibowli<br>Townhouse  | 1437  | 3477           | Hyderabad | Gachibowli Townhouse         | 4.9    | Fabulous       | 2040             | 58         |
| OYO 84191 Residency Inn                           | 1466  | 2792           | Hyderabad | Residency Inn                | 4.9    | Fabulous       | 1326             | 47         |
| Collection O 81765 Hotel White Ridge              | 1243  | 2367           | Hyderabad | White Ridge                  | 4.8    | Excellent      | 1124             | 47         |
| OYO 78286 Collection O White Ridge                | 2420  | 4609           | Hyderabad | White Ridge                  | 4.8    | Excellent      | 2189             | 47         |
| OYO 78034 New Star Cottages                       | 999   | 4184           | Ooty      | Star Cottages                | 4.9    | Fabulous       | 3185             | 76         |
| Collection O 83248 Silent Valley                  | 1696  | 4528           | Ooty      | Silent Valley                | 4.5    | Excellent      | 2832             | 62         |
| OYO 10950 Hotel Hills Palace                      | 2102  | 6813           | Ooty      | Hills Palace                 | 4.4    | Very Good      | 4711             | 69         |
| OYO Flagship 44245 Hotel Rainforest<br>Thalayathi | 999   | 3997           | Ooty      | Rainforest<br>Thalayathimund | 4.4    | Very Good      | 2998             | 75         |
| OYO 78121 Red Rock                                | 1673  | 3938           | Ooty      | Red Rock                     | 4.3    | Very Good      | 2265             | 57         |

- ❖ Top 5 best hotels Among all cities
- ❖ We prefer to choose this best hotles for our upcoming trips on those cities &
- ❖ Will suggest our friends and other neighbours about these best hotels to visit







