

PROJECT – 2

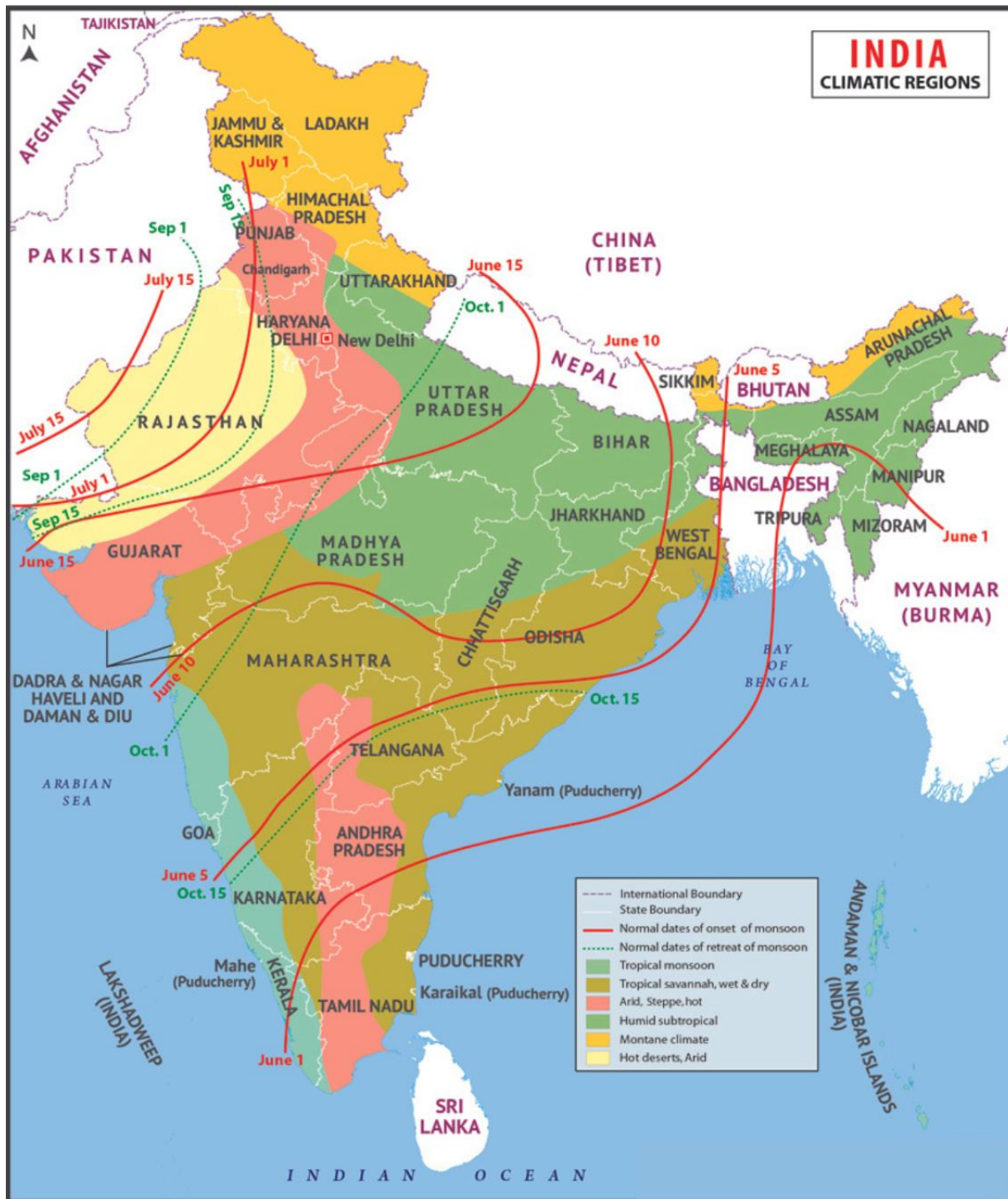
MS EXCEL

01/07/2024

Finlatics

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Case Study



The above mentioned map showcases the various seasons that are experienced across states in India. A key focus of the map is on the onset and retreat of the South West Monsoons in the country across various states and regions.

The climates of India are mainly divided into four different groups. The classification of these groups is based on the Koppen climate classification system.

- **Tropical Wet (Humid):**The tropical wet (humid) climate group in India is separated into two subparts: the tropical wet and dry climate, often known as the savannah climate, and the tropical monsoon climate. A tropical monsoon climate prevails in the Western Ghats, the Malabar Coast, southern Assam, Lakshadweep, and the Andaman & Nicobar Islands. It has seasonally significant rain and moderate to high temperatures. The wettest months are May through November, and the rain that falls during this time is more than enough for vegetation to grow all year. The most typical climate in the nation is the savannah climate or a tropical wet and dry climate. Except for some areas of the Western Ghats, it is most prevalent throughout the country's inland peninsula. The humid summer months last from June to September, and they are extremely hot.
- **Tropical Dry:**There are three subgroups of the tropical dry climate group: (a) tropical semi-arid (steppe), (b) subtropical arid (desert), and (c) subtropical semi-arid (steppe). The tropical semi-arid (steppe) climate is found in Karnataka, central Maharashtra, some regions of Tamil Nadu, and Andhra Pradesh. In this type of environment, rainfall is quite unpredictable, and the hot, dry summers last from March through May. Western Rajasthan experiences a subtropical arid (desert) climate with irregular and sparse rainfall. The sub-tropical semi-arid (steppe) climate is present in the tropical desert regions that stretch from Punjab and Haryana to Kathiawar. In this environment, the summertime high temperature can reach 40°C, while rains are unpredictable and typically fall during the summer monsoon season.
- **Subtropical Humid Climate:**The majority of northern and northeastern India experiences this climate. Summers are quite hot, and winters can see temperatures as low as 0°C. The majority of the time, rain falls in the summer, however certain places also have snowfall or sporadic rain throughout the winter. The hottest months are May and June, while frost can sometimes be found in the winter for a few months.
- **Mountain Climate:** In the Himalayas, the temperature drops by 0.6°C for every 100 m of elevation gain, resulting in a variety of climates, from tropical to tundra. The northern side of the western Himalayas, known as the trans-Himalayan region, is chilly, dry, and windswept. In contrast to the well-exposed slopes, the leeward side of the mountains experiences less rain. The months of December through February saw the most snowfall.

Answer the following questions based on data collection and visualisation of data, using MS-Excel.

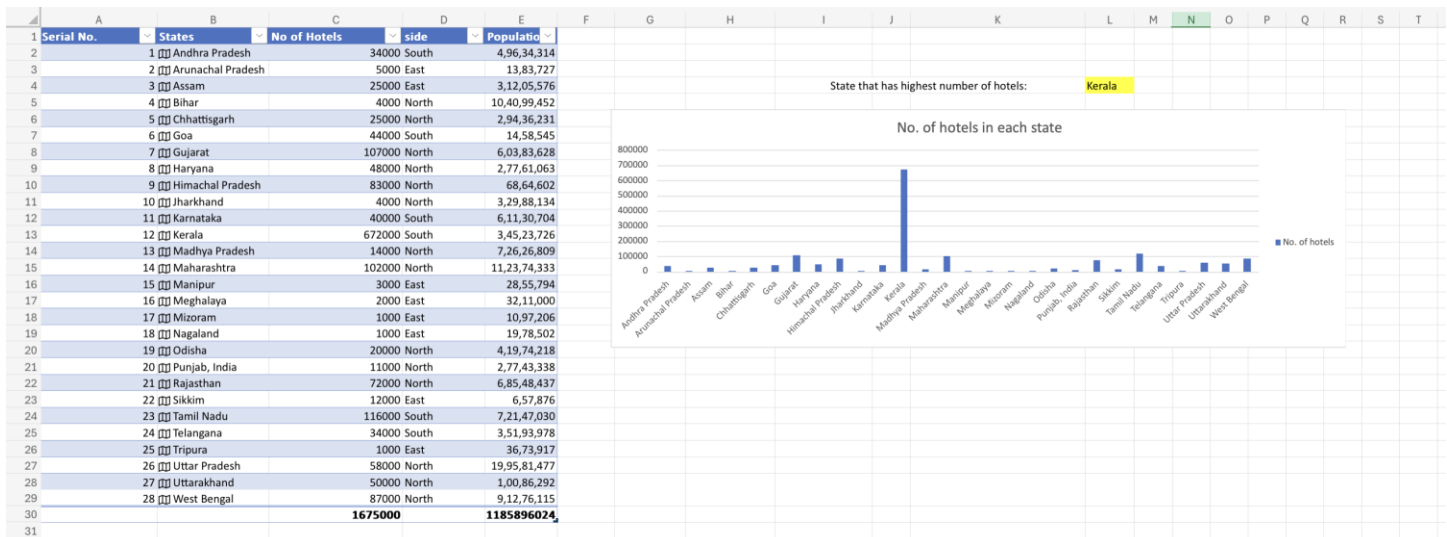
1. Which state has the highest number of hotels? Depict this via a bar graph that compares all states.
2. Which states have three types of climatic conditions? (convert the map, an unstructured data, to an Excel file in a structured format and mention the number of climates along with the state)
3. Among the northeastern states which are best to set up a hotel? Use Clustered Column Chart and give recommendations for hotel industry investors.
4. Customise the pivot charts to add/change the fields in the fields list with other fields and by using chart styles to customise the charts. (choose the data and parameters according to your choice)
5. Which is the best state for setting up a hotel? Why?
6. What is the average number of days the rainy season lasts in Indian states?

Instruction Set

- 1.Study the map and draw out key indicating parameters in a list format. Also, think about other parameters that indirectly affect our goal.
- 2.Collection of data.
- 3.Do descriptive and diagnostic analysis to fill the missing data points and scan the outliers.
- 4.Creation of separate sheets for each question and creating pivot tables accordingly.
- 5.Draw out conclusions by observing the visual charts made from the pivot tables.
- 6.All the best! Submit your answers in a PDF file.

Solutions:

Which state has the highest number of hotels? Depict this via a bar graph that compares all states.



The state that has the highest number of hotels is Kerala

Which states have three types of climatic conditions? (convert the map, an unstructured data, to an Excel file in a structured format and mention the number of climates along with the state)

The states are:

- + Gujarat
- + Haryana
- + Himachal Pradesh
- + Karnataka
- + Madhya Pradesh
- + Maharashtra
- + West Bengal

| | A | B | C | D | E | F | G | H | I | J | K | L |
|----|-------------------|------------------|------------------------------|-------------------|-------------------|----------------|--------------------|---|------------------|---------|---|---|
| 31 | | | | | | | | | | | | |
| 32 | | | | | | | | | | | | |
| 33 | States/Climates | Tropical Monsoon | Tropical savannah, wet & Dry | Arid, Steppe, hot | Humid subtropical | Montane climat | Hot desserts, Arid | Total number of climates in this region | Column1 | | | |
| 34 | Andhra Pradesh | | | 1 | 1 | | | 2 | | | | |
| 35 | Arunachal Pradesh | | | | | 1 | 1 | 2 | | | | |
| 36 | Assam | | | | | 1 | | 1 | | | | |
| 37 | Bihar | | | | | 1 | | 1 | | | | |
| 38 | Chhattisgarh | | | 1 | | 1 | | 2 | | | | |
| 39 | Goa | 1 | | | | | | 1 | | | | |
| 40 | Gujarat | | | 1 | 1 | | | 1 | 3 | Gujarat | | |
| 41 | Haryana | | | | 1 | 1 | | 1 | 3 | Haryana | | |
| 42 | Himachal Pradesh | | | | 1 | 1 | 1 | 3 | Himachal Pradesh | | | |
| 43 | Jharkhand | | | 1 | | 1 | | 2 | | | | |
| 44 | Karnataka | 1 | | 1 | 1 | | | 3 | Karnataka | | | |
| 45 | Kerala | 1 | | | | | | 1 | | | | |
| 46 | Madhya Pradesh | | | 1 | 1 | 1 | | 3 | Madhya Pradesh | | | |
| 47 | Maharashtra | | | 1 | 1 | 1 | | 3 | Maharashtra | | | |
| 48 | Manipur | | | | | 1 | | 1 | | | | |
| 49 | Meghalaya | | | | | 1 | | 1 | | | | |
| 50 | Mizoram | | | | | 1 | | 1 | | | | |
| 51 | Nagaland | | | | | 1 | | 1 | | | | |
| 52 | Odisha | | | 1 | | 1 | | 2 | | | | |
| 53 | Punjab | | | | 1 | | | 1 | 2 | | | |
| 54 | Rajasthan | | | | | | | 1 | 1 | | | |
| 55 | Sikkim | | | | | | 1 | | 1 | | | |
| 56 | Tamil Nadu | | | 1 | 1 | | | 2 | | | | |
| 57 | Telangana | | | 1 | 1 | | | 2 | | | | |
| 58 | Tripura | | | | | 1 | | 1 | | | | |
| 59 | Uttar Pradesh | | | | 1 | 1 | | 2 | | | | |
| 60 | Uttarakhand | | | | | 1 | 1 | 2 | | | | |
| 61 | West Bengal | | | 1 | | 1 | 1 | 3 | West Bengal | | | |
| 62 | | | | | | | | | | | | |

| |
|------------------------------------|
| State with atleast 3 climates are: |
| *Gujarat |
| *Haryana |
| *Himachal pradesh |
| *Karnataka |
| *Madhya Pradesh |
| *Maharashtra |
| *West Bengal |

Among the northeastern states which are best to set up a hotel? Use Clustered Column Chart and give recommendations for hotel industry investors.

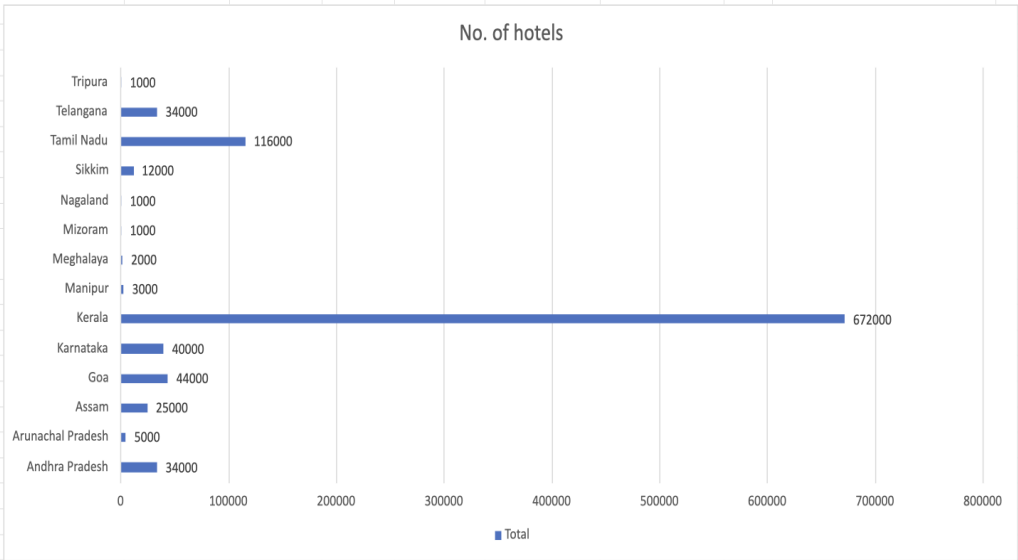
| | | | | |
|----|----------------------|-------------|---------------|-------------|
| 63 | States in northeast: | Population | No. of hotels | |
| 64 | Arunachal Pradesh | 13,83,727 | 5000 | 69.18635 |
| 65 | Assam | 3,12,05,576 | 25000 | 312.05576 |
| 66 | Manipur | 28,55,794 | 3000 | 237.9828333 |
| 67 | Meghalaya | 32,11,000 | 2000 | 401.375 |
| 68 | Mizoram | 10,97,206 | 1000 | 274.3015 |
| 69 | Nagaland | 19,78,502 | 1000 | 494.6255 |
| 70 | Tripura | 36,73,917 | 1000 | 918.47925 |
| 71 | Sikkim | 6,57,876 | 12000 | 13.70575 |
| 72 | | | | |

So, According to research Sikkim, Arunachal Padesh, Assam and meghaya are most liked by the tourists compared to other states, Other states are seasonal visits, but these 4 states have tourists regularly. Regarding hotels, it is best to set up in Assam as it has the highest population and regularly visiting tourists and the family is to hotel ratio is also high, So is the best choice to set up a hotel, followed by Meghalaya and Tripura. Sikkim has ennumerous of hotels, so the competition in the market is more and to get a stable place in the market, it takes time, so, the investor believes in "good things take time", it will be great to build a hotel in Sikkim

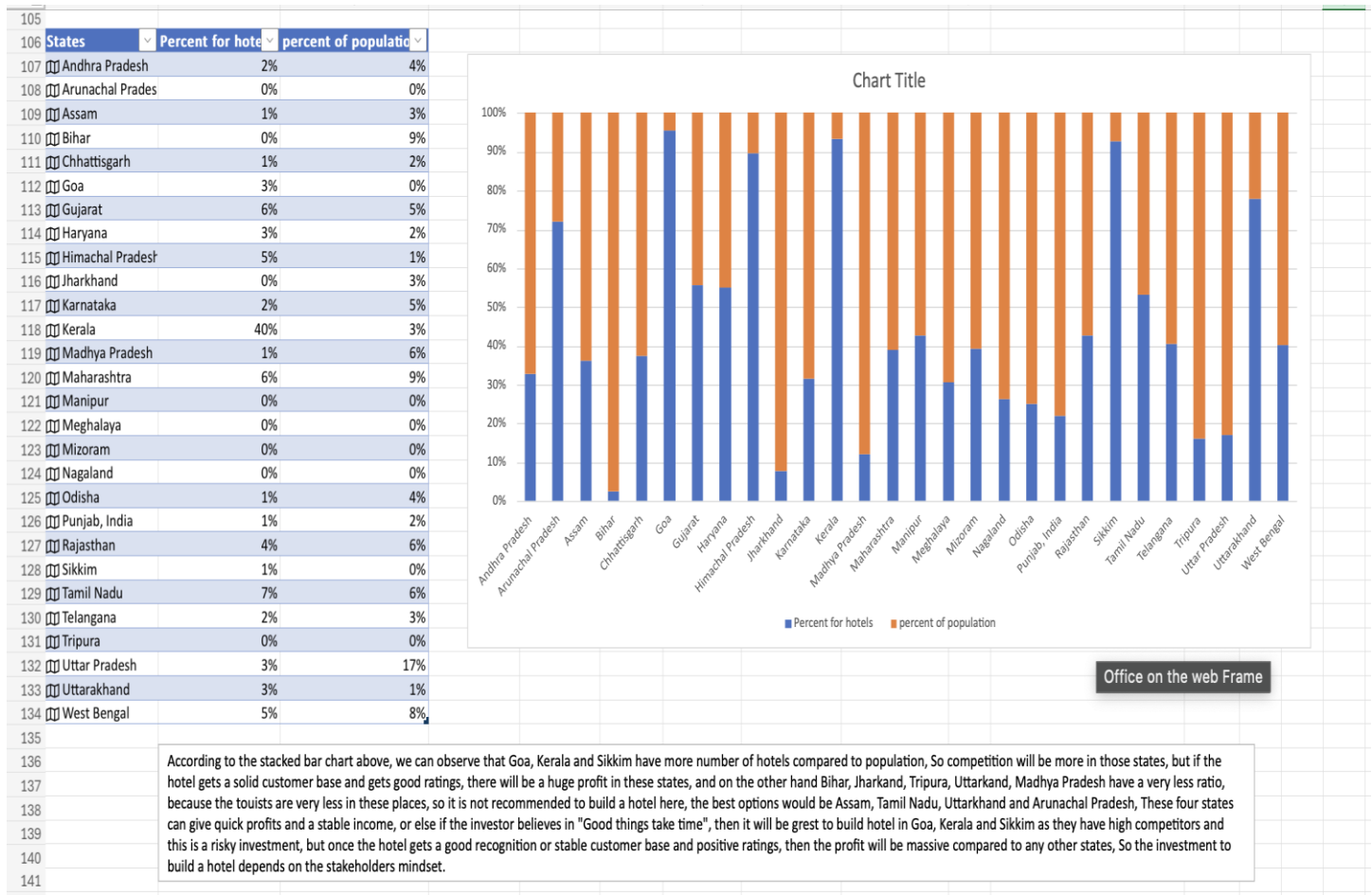
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Customize the pivot charts to add/change the fields in the fields list with other fields and by using chart styles to customize the charts. (choose the data and parameters according to your choice)

| | | | |
|-----|-------------------|---------------------|--|
| 73 | side | (Multiple Items) | |
| 74 | | | |
| 75 | States | Sum of No of Hotels | |
| 76 | Andhra Pradesh | 34000 | |
| 77 | Arunachal Pradesh | 5000 | |
| 78 | Assam | 25000 | |
| 79 | Goa | 44000 | |
| 80 | Karnataka | 40000 | |
| 81 | Kerala | 672000 | |
| 82 | Manipur | 3000 | |
| 83 | Meghalaya | 2000 | |
| 84 | Mizoram | 1000 | |
| 85 | Nagaland | 1000 | |
| 86 | Sikkim | 12000 | |
| 87 | Tamil Nadu | 116000 | |
| 88 | Telangana | 34000 | |
| 89 | Tripura | 1000 | |
| 90 | Grand Total | 990000 | |
| 91 | | | |
| 92 | | | |
| 93 | side | | |
| 94 | East | | |
| 95 | North | | |
| 96 | South | | |
| 97 | | | |
| 98 | | | |
| 99 | | | |
| 100 | | | |
| 101 | | | |



Which is the best state for setting up a hotel? Why?



According to the stacked bar chart above, we can observe that Goa, Kerala and Sikkim have more number of hotels compared to population, So competition will be more in those states, but if the hotel gets a solid customer base and gets good ratings, there will be a huge profit in these states, and on the other hand Bihar, Jharkhand, Tripura, Uttarakhand, Madhya Pradesh have a very less ratio, because the tourists are very less in these places, so it is not recommended to build a hotel here, the best options would be Assam, Tamil Nadu, Uttarakhand and Arunachal Pradesh, These four states can give quick profits and a stable income, or else if the investor believes in "Good things take time", then it will be great to build hotel in Goa, Kerala and Sikkim as they have high competitors and this is a risky investment, but once the hotel gets a good recognition or stable customer base and positive ratings, then the profit will be massive compared to any other states, So the investment to build a hotel depends on the stakeholders mindset and their budget for marketing and advertisements too.

What is the average number of days the rainy season lasts in Indian states?

The number of rainy days in each state in India varies significantly due to the country's diverse climate and geography. An overview of average rainy days per year for states are:

1. **Jammu and Kashmir** : 40-80 days
2. **Himachal Pradesh** : 100-120 days
3. **Punjab** : 30-50 days
4. **Haryana**: 30-50 days
5. **Uttarakhand**: 100-120 days
6. **Uttar Pradesh**: 30-60 days
7. **Bihar**: 50-80 days
8. **Jharkhand**: 50-80 days
9. **West Bengal**: 100-140 days
10. **Odisha**: 60-100 days
11. **Chhattisgarh**: 60-100 days
12. **Madhya Pradesh**: 40-80 days
13. **Gujarat**: 20-50 days
14. **Rajasthan**: 10-30 days
15. **Maharashtra**: 50-100 days (varies significantly within the state)
16. **Goa**: 90-120 days
17. **Karnataka**: 60-120 days (varies significantly within the state)
18. **Kerala**: 120-150 days
19. **Tamil Nadu**: 50-90 days
20. **Andhra Pradesh**: 50-90 days
21. **Telangana**: 40-80 days
22. **Assam**: 120-180 days
23. **Meghalaya**: 180-200 days
24. **Nagaland**: 120-150 days
25. **Manipur**: 100-130 days
26. **Mizoram**: 120-150 days
27. **Tripura**: 100-130 days
28. **Sikkim**: 150-180 days
29. **Arunachal Pradesh**: 150-180 days

These numbers are rough estimates and can vary from year to year based on specific climatic conditions. Additionally, within each state, there can be significant variations between different regions, such as coastal, inland, and hilly areas. So this is just a rough calculation, all even averages can be calculated only in ranges as , the number of rainy days are not certain.