**GRADED ASSIGNMENT ON MS EXCEL**

**Task 1: Data cleaning**

1. There are no duplicate values in the dataset
2. There are some empty values in the dataset which have been removed using Advanced filter option

**Task 2: Categorization**

1. Categorization done using IF Condition
2. Formula: =IF(zomato!R2>=4,"Excellent", IF(zomato!R2>=3, "Good", IF(zomato!R2>=2, "Average", "Poor")))

**Task 3: Service Availability**

1. Used VLookup in new sheet named Insights and obtained Service availability like Table booking and online Delivery

**Task 4: Derive Country codes**

1. I have Old Excel Version which does not support XLOOKUP. So used 2 VLOOKUPs one to fetch country code assigned to each restaurant name as they are unique and then another VLOOKUP to fetch country from Country codes Excel sheet.

**Task 5: Cuisine preference**

1. Retrieved City data from sheet zomato to Insights using a VLOOKUP
2. Used Index and Match formula to find the preferred cuisine by city
3. Formula: =INDEX(zomato!J:J, MATCH(G2, zomato!D:D, 0))

**Task 6: Customer satisfaction by price range using Pivot**

1. Used column charts pivot by selecting price range in rows and Average of Customer Reviews in Values. Shows that the price range 4 has highest Reviews and price range 1 has lowest reviews represented using a Bar Graph

**Task 7: geographic heatmap visualizing restaurant distribution and performance across cities.**

1. Do not have Map function in my version of Excel so I created a Power BI Dashboard and Adding on Github

**Task 8: Performance comparison by Service type**

1. **Average Rating**: Restaurants offering **online delivery** have a significantly higher average rating (3.25) compared to those that don't (2.47).
2. **Total Votes:** Restaurants without online delivery received **more total votes** (980,731) compared to those with online delivery (517,914). This could indicate a preference for in-person dining or the higher visibility of dine-in establishments.

**Task 9: What-If Analysis for Business Growth**

1. Calculated Weighted Aggregate ratings with change in 10% of votes by using formulas.
2. Weighted Aggregate formula: =((D2\*C2)+(D3\*C3))/(D2+D3)
3. Created a Scenario Manager in a new sheet

**Task 10: Adding Sparklines for Visualizing Trends**

1. Created a new sheet called Rating Impact Visualization to show the Restaurant performance trends with and without online deliveries