Project Title: "Analyzing Student Performance Data"

Project Questions

1. **Data Collection**:
    - What data will you collect?

      Exam score (e.g., exam scores or hours studied)

    - How will you select your sample?i will first identify the target group which is the student the decide the data requirements

      Describe your sampling method.my sampling method is simple random sampling.This is where by a subset individual is chosen from a larger set of individuals or the no. of students will be chosen randomly.

    - How many students will you include in your sample? I will include 15 students out of the total number of students which is 100
2. **Data Organization**:
    - Create a table to display your data clearly, listing each student's score or hours studied.

No of student.	Students' score
001	85
002	90
003	78
004	88
005	92
006	70
007	65
008	95
009	80
010	75
011	82

012	84
013	91
014	89
015	76

3. **Calculating Measures**:
    -
    - For your sample data, calculate:
        - **Mean**: What is the average score/hours studied?

          mean = 84+90+78+88+92+70+65+95+80+75+82+84+91+89+76=1239/15=82.7

          mean=**82.7**

        - **Median**: What is the middle value when the data is arranged in order?

          65,70,75,76,78,80,82,84,85,88,89,90,91,92,95 the middle value is **84**

        - **Mode**: Which score/hours studied appears most frequently**?none**

    - What do these measures indicate about the data?The measures indicate that the data is ordinal since it can be arranged in order
4. **Data Interpretation**:
    - What do the calculated measures tell you about your sample?the calculated measures tells us the sample can be compared and interpret the data effectively.

    - Were there any outliers in your data? If so, how did they affect the mean and median?No
    - How might the measures of central tendency differ if you collected data from the entire class instead of a sample?some values might be missing !!

5. **Conclusion**:
    - Summarize your key findings and insights based on your analysis.

      Introduction -My analyisis was to analyze the students based on their performance, my target group was the students .i used the sampling method whereby i took a subset of the total no of students. Out of the 100 students i only took 15 students scores

      Key findings

      1. Average grade- most students are on a average level no student is below average whereby the least student has 65% and the highest has 95%,.which is commendable.

      2.scores comparison -

      - Only one student scored 65%
      - Four students scored 70% to 78%
      - Six students scored between 80%to 89%
      - Four students scored between 90% to 95%This shows clearly an upward trend in scores

      3.students at risk

      The student who scored 65% is at risk because is the only one with less than 70%

      4.The students score rate suggest that all students are above the average , how ever we need to improve and eliminate the 60%and the 70% scores so that the mean can go up,addresing this issue could significantly improve the students scores and indicate the increase of the meanscore.

      Conclusion

      To improve the students scores i would recommend that effort to be put especially on the students with 65% and 70% not forgetting the once also with the 90% to maintain on their scores.

    - Reflect on what you learned about data analysis and the importance of central tendency.

      What i have learnt about central tendency is that it is simple it comprises a complex data therefore making it easier to understand, also central tendency

helps in analysis measures eg the mean and the median for statistic interpretation

Project Guidelines

1. **Data Collection**:
    - Use the following sample data for the project:
        - **Sample Data for Exam Scores** (out of 100):
            - 85, 90, 78, 88, 92, 70, 65, 95, 80, 75, 82, 84, 91, 89, 76
        - **Sample Data for Hours Studied** (per week):
            - 5, 10, 8, 6, 12, 4, 3, 9, 7, 11, 10, 5, 6, 8, 9
2. **Data Organization**:
    - Organize your data in a simple table format, listing the scores or hours studied for each student.
3. **Calculations**:
    - Show all calculations clearly, step by step, for mean, median, and mode.
    - Discuss how each measure is relevant to understanding the dataset.
4. **Report Writing**:
    - Write a brief report (1-2 pages) summarizing your findings, interpretations, and any patterns observed.
    - Include a section on what you learned about central tendency.
5. **Submission**:
    - Submit your report with calculations and findings by the project deadline.

Timeline

- **Submission**: 13/10/2024