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STATISTICS FOR DATA SCIENCE

ASSIGNMENT 3

**1. Case Analysis:**

On April 20, 1999, Eric Harris and Dylan Klebold entered Columbine High School and began shooting teachers and students. Thirteen individuals died, and the psychological community was again asked to explain such violent behaviour. A psychologist might decide to interview Columbine students to obtain their perspectives on the factors that motivated the two young men to commit such a horrendous act. A group of ten students has already decided to meet and discuss the events of that day. The psychologist asks if it would be all right to attend the meeting and ask them some questions. The students agree, and the psychologist records their thoughts. Based on this information, the psychologist concludes that a primary reason for the violent behaviour was the peer dynamics in the school that created groups of outcasts.

**Questions**

1. Who appears to constitute the population of interest?

2. Which type of sampling procedure best describes that used by the psychologist?

3. What are the limitations of this sampling method, and in what specific ways could the sampling method have affected the findings?

4. What specific steps would you have taken to obtain a representative sample?

Answer.

1. Ten students from the Columbine High School appear to constitute the population of interest.
2. Simple Random Sampling best describes the procedure used by the psychologist.
3. The limitations of Simple Random Sampling are biased samples, does not reflect proportionate representation and difficult when population is larger. This finding might have missed out those students who could give the right information.
4. I would perform stratified sampling dividing the students based on which grade they study in. And then randomly handpick a few for the meeting.