Question 10.2

Describe a situation or problem from your job, everyday life, current events, etc., for which a logistic regression model would be appropriate. List some (up to 5) predictors that you might use.

Answer:

Problem: Predicting whether I will pass the Midterm 1 test.

Predictors:

- Hours studied (indicates preparation level)
- Attendance rate (reflects engagement in class)
- Previous test scores (shows academic history and consistency)
- Family income (proxy for access to resources like AI tools or tutoring)
- Number of extracurricular activities (suggests time management skills)

Explanation: This is a binary outcome (pass/fail), making logistic regression an appropriate model to estimate the probability of passing.