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| Course | Machine Learning (IN221) | | Feb. 2025 |
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## Sheet 1: Linear Regression (Gradient Descent)

## Question 1:

We have a dataset of students' study hours (X) and their corresponding exam scores (Y):

Solve using Alpha = 0.01, 0.05, 0.1 and compare the results in terms of J (loss function).

| **Hours Studied (X)** | **Exam Score (Y)** |
| --- | --- |
| 1 | 2 |
| 2 | 2.5 |
| 3 | 3.5 |
| 4 | 4 |
| 5 | 5 |

We want to fit a **linear regression model** using **gradient descent**. (3 Iterations)