**Statistics Project: -**

**Relationship between Study Hours and Exam Scores of Students**

| **Student** | **Study Hours** | **Exam Score:** |
| --- | --- | --- |
| 1 | 2 | 45 |
| 2 | 3 | 48 |
| 3 | 4 | 50 |
| 4 | 5 | 55 |
| 5 | 6 | 60 |
| 6 | 7 | 65 |
| 7 | 8 | 68 |
| 8 | 9 | 70 |
| 9 | 10 | 72 |
| 10 | 11 | 74 |
| 11 | 12 | 76 |
| 12 | 13 | 79 |
| 13 | 14 | 82 |
| 14 | 15 | 85 |
| 15 | 16 | 87 |
| 16 | 17 | 89 |
| 17 | 18 | 91 |
| 18 | 19 | 93 |
| 19 | 20 | 95 |
| 20 | 21 | 97 |

**Descriptive Statistics: -**

| **Statistic** | **Study Hours** | **Exam Score** |
| --- | --- | --- |
| Mean | 11.5 | 75.5 |
| Median | 11.5 | 75 |
| Mode | None | None |
| Standard Deviation | 5.916 | 15.32 |
| Variance | 35 | 235.2 |
| Range | 19 | 52 |

**Inferential Statistics: -**

**Hypothesis Testing (t-Test):**

* **Null Hypothesis (H₀):** There is no significant relationship between study hours and exam scores.
* **Alternative Hypothesis (H₁):** There is a significant relationship between study hours and exam scores.

**Test Used:** Pearson Correlation & t-Test

* Correlation (r) = 0.98 (very strong positive correlation)
* Degrees of Freedom = 18
* t-value = 13.89
* p-value < 0.05

**Result:** Reject H₀.

S**ignificant positive relationship** between study hours and exam performance.