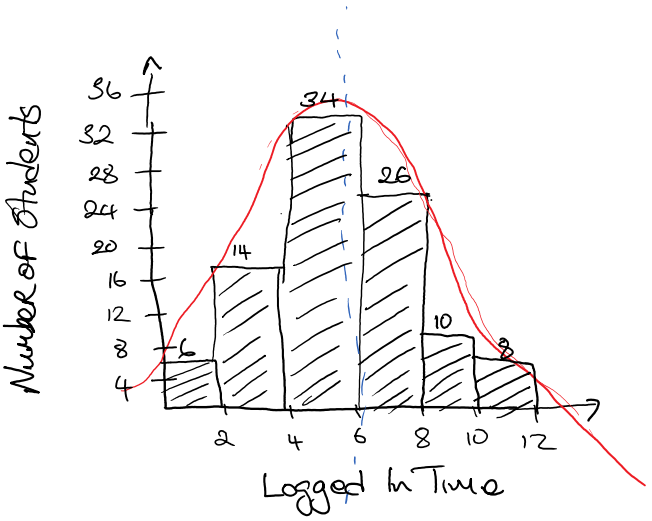
3. Complete the table below and use a bar chart to display the data:

Country	Frequency	Relative Frequency
Ireland	10	10/70 → 0.14
England	12	12/70 → 0.17
Scotland	11	11/70
Wales	9	9/70
France	13	13/70
Spain	15	15/70
	70	

Logged In Time	Frequency (No. of Students)
< 2 hours	6
≥ 2 hours and < 4 hours	14
≥ 4 hours and < 6 hours	34
≥ 6 hours and < 8 hours	26
≥ 8 hours and < 10 hours	10
≥ 10 hours and < 12 hours	8



mean 38, 40, 55, 60, 65

$$\bar{x} = \frac{\sum x_i}{n} = \frac{38+40+55+60+65}{5} = \frac{258}{5} = 51.6$$

Stdev:

$$S^2 = \frac{\sum x_i^2 - n(\bar{x})^2}{n-1}$$

$$= \frac{38^2 + 40^2 + 55^2 + 60^2 + 65^2 - 5(51.6)^2}{5-1}$$

$$= \frac{13,894 - 13,312.8}{4} = \frac{581.2}{4}$$

$$S^2 = 145.3$$

$$\Rightarrow S = \sqrt{145.3} = 12.05$$

$$S = \text{Stdev} = 12.05$$

median: sort the values in ascending order

38, 40, (55), 60, 65

Median

$$S^2 = \frac{\Sigma(x_i - \bar{x})^2}{n-1}$$

$\Rightarrow 38 - 51.6 = (-13.6)^2 = 184.96$

$40 - 51.6 = (-11.6)^2 = 134.56$

$55 - 51.6 = (3.4)^2 = 11.56$

$60 - 51.6 = (8.4)^2 = 70.56$

$65 - 51.6 = (13.4)^2 = 179.56$

581.2

$= \frac{581.2}{4} = 145.3$

$S = \sqrt{145.3} = 12.05.$