Exercise 1

1. To find the mean and standard deviation in R, we use the functions **mean()** and **sd()**. The results are presented in the table below, with accuracy up to 5 decimal places.

Variable	Mass	Height	Width	Length
Mean	238.07658	114.30488	41.73171	242.60976
Standard Deviation	99.58431	19.38415	10.48579	44.94627

Table 1: Table of mean and standard deviation of each variable.

2. Now, we create a scatter plot of the relationship between Length and Mass using the **plot()** function.

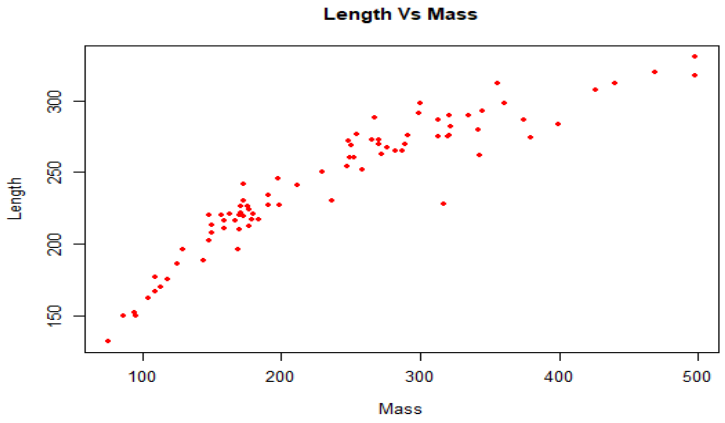

Figure 1: The figure shows the scatter plot of Length vs. Mass

Exercise 2

1. The code stores a vector of dimension 100×1 given by the function **seq(0, 1, len(100))** to **x**, which generates a regular sequence of numbers with the first term equals to 0 and the last (100th) term equals to 1. Meanwhile, **y** is a resulting vector given by a polynomial acting on **x** with correction to the values determined by a vector randomly generated by the **rnorm()** function.

2. Below are the scatter plot of **y** against **x** generated using the **plot()** function.

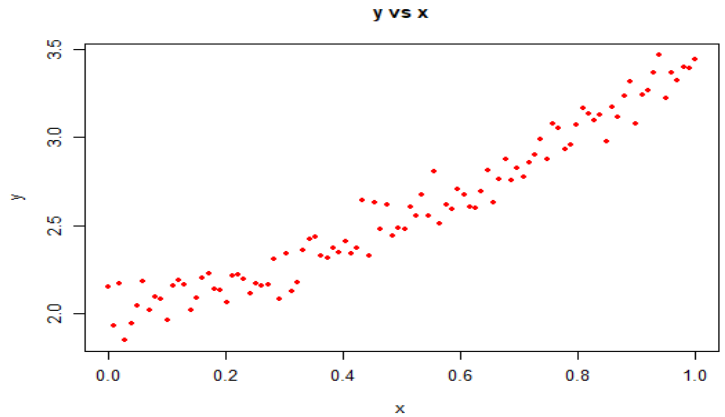

Figure 2: The figure shows the scatter plot of y vs x.