Q1

The distance a vehicle travels can be calculated as follows

*Distance = speed \* Time*

For example if a train travels 40 km per hour for three hours, the distance travelled is 120 km. Write a program that asks for the speed of a vehicle and the number of hours it has travelled. It should use a loop to display the distance a vehicle has travelled for each hour of a time period specified by the user. For example, if the vehicle is travelling at 40kmp for a three hour period, it should display a report like

Hour Distance Travelled

1 40

2 80

3 120

Input validation: Do not accept negative number for speed and do not accept any value less that 1 for time travelled

Q2

Write a program that uses nested loops to collect data and calculate the average rainfall over a period of years. The program should ask for the number of years. The outer loop will iterate once for each year. The inner loop will iterate 12 times, once for each month. Each iteration of the inner loop will ask the user for the inches of rainfall for that month. After all iteration, the program should display the number of months, the total inches of rainfall, and the average rainfall per month for the entire period.

Q3

Write a program that will predict the size of a populations of organisms. The programs should ask for the starting number of organisms, their average daily population increase as a percentage and the number of days they will multiply. For example a population might begin with two, have a daily increase of 50%, and will be allowed to multiply for 7 days. The program should use a loop to show the size of the population for each day.

Q4

Write a program that asks the user to enter today’s sales for five stores. The program should then display a bar chart comparing each stores sales. Create each bar char by display row of asterisks. Each asterisk represents €100 of sales.

For example:

Enter sales for store 1: 1000

Enter sales for store 2: 1200

Enter sales for store 3: 1800

Enter sales for store 4: 800

Enter sales for store 5: 1900

Sales Bar Chart

Store1 \*\*\*\*\*\*\*\*\*\*

Store2 \*\*\*\*\*\*\*\*\*\*\*\*

Store3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

Store4 \*\*\*\*\*\*\*\*

Store5 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*