Q1.Assembly Language Programming in MIPS

Definition: In this question, you are asked to implement an assembly application in MIPS ISA. Your application first asks a positive integer value; N, from the console. Then, it prints a NxN square to the screen by using * s. For input 7, your output should be as in the example:

```
* * * * * * * *
* * * * * * * *
* * * * * * * *
* * * * * * * *
* * * * * * * *
* * * * * * * *
* * * * * * * *
```

Q2.Assembly Language, Programming a Recursive Method in MIPS

Definition: In this question, you are asked to implement a recursive code assembly in MIPS ISA.

Your application should ask an X value from the console. Then it calculates the sum of all integer values between zero and x recursively.

Q3.Assembly Language, Programming with Arrays in MIPS

Definition: In this question, you are asked to implement an assembly code in MIPS which operates on arrays.

Your application first asks an integer value for the number of elements in an array. Than, that many times it gets an integer value from the console for the elements of the array. Then it sorts the array and prints the sorted array to the screen.

Example:

Size of the array?: 5

1: 13

2: 25

3: 2

4: 17

5: 21

Your sorted array is: 2 13 17 21 25

Rules:

- Your code will be tested in QtSpim simulator.