Help to complete the tasks of this exercise can be found on the chapters from ch. 0 ” Setting Up Node.js and the JavaScript Engine” to ch. 2 “Running a Node.js Application” of our course book “Get Programming with Node.js” by Jonathan Wexler. The aims of the exercise are to teach to create a Node.js development environment, give you basic understanding of Node.js, and to help you to run your first Node.js application.

Embed your theory answers, drawings, codes and screenshots directly into this document. Always immediately after the relevant question. Return the document into your return box in itsLearning by the deadline.

It’s also recommendable to use Internet sources to supplement the information provided by the course book.

The maximum number of points you can earn from this exercise is 10.

Tasks:

1. Prepare a Node.js development environment for yourself. (2 points)
   * If necessary, install the latest version of Oracle VirtualBox virtual machine on your computer.
   * Install the latest version of Node.js.
   * If necessary, add node.js to the operating system’s PATH environmental variable.
   * Install Visual Studio Code editor.
   * Install Git

Please note that you can also prepare the development environment directly on your own computer without installing Oracle VirtualBox and without downloading the virtual image.

1. Explain with your own words what Node.js is. (1 point)
2. Explain shortly the concept of asynchronous programming. (1 point)
3. Node.js and its event loop (4 \* 0,5 = 2 points, you can leave one unanswered)
   * Explain with your own words what Node.js’ event loop is.
   * What is executed in the event loop, what is delegated?
   * What does it mean that Node.js is event-driven?
   * What does the event loop do when a delegated task is finished?
   * What does it mean that Node.js is single threaded?
4. Explain the types of application where Node.js is efficient. When it might not be efficient at all? (2 \* 0,5 = 1 point)
5. Run your first Node.js application “Hello World!”. Write the necessary code into a file. Display the greeting on the terminal window. (1 point)
6. Create an array containing the names of some of your Favorite songs. The length of the array is six. Create a small Node.js application that randomly selects one of the songs and then displays it at the terminal window. (2 points)