# Node tutorials

### Starting a Node Application

* Go to a convenient location on your computer and create a folder named NodeJS. Then move to this folder.
* Now create a folder named node-examples and then move into this folder.
* At the prompt, type the following to initialize a package.json file in the node-examples folder:

npm init

* Accept the standard defaults suggested and then update the package.json file until you end up with the file containing the following:

{

"name": "node-examples",

"version": "1.0.0",

"description": "Simple Node Examples",

"main": "index.js",

"scripts": {

"test": "echo \"Error: no test specified\" && exit 1",

"start": "node index"

},

"author": "Jogesh Muppala",

"license": "ISC"

}

* Create a file named index.js and add the following code to this file:

var rect = {

perimeter: (x, y) => (2\*(x+y)),

area: (x, y) => (x\*y)

};

function solveRect(l,b) {

console.log("Solving for rectangle with l = " + l + " and b = " + b);

if (l <= 0 || b <= 0) {

console.log("Rectangle dimensions should be greater than zero: l = "

+ l + ", and b = " + b);

}

else {

console.log("The area of the rectangle is " + rect.area(l,b));

console.log("The perimeter of the rectangle is " + rect.perimeter(l,b));

}

}

solveRect(2,4);

solveRect(3,5);

solveRect(0,5);

solveRect(-3,5);

* To run the Node application, type the following at the prompt:

npm start

* To initialize a Git repository and add the current files in the folder to the repository, type the following at the prompt:

git init

git add .

* Then, do a Git commit with the message "Simple Node Example".

### A Simple Node Module

* Now, create a file named rectangle.js, and add the following code to it:

exports.perimeter = (x, y) => (2\*(x+y));

exports.area = (x, y) => (x\*y);

* Then, update index.js as follows:

var rect = require('./rectangle');

Here ./ signifies that the file rectangle.js is in the same directory, you can write it by bith ways ‘./rectangle’ as well as ‘./rectangle.js’

. . .

* Run the Node application like before and observe that the result will be the same.
* Do a Git commit with the message "Simple Node Module".
  + Callback and error handeliing
* Index.js
* var rec = require('./rectangle.js');
* function solveRect(l,b){
* console.log("hello enter l n b"+l+ " "+b);

Here we are referencing the callback object(err,rectangle)

* rec(l,b,(err,rectangle)=>{
* if(err)
* {
* console.log("Error:",err.message);
* }
* else{
* console.log(rectangle.area());
* console.log(rectangle.perimeter());
* }
* });
* }
* solveRect(2,4);
* solveRect(-1,8);

rectangle.js

module.exports=(x,y,callback)=>{

if (x<=0 || y<=0)

{

setTimeout(()=>

callback(new Error("Enter valid values "),null),3000);

}

else{

setTimeout(()=>

callback(null,{

perimeter:()=>(2\*(x+y)),

area:()=>(x\*y)

}),3000);

}}