Import the following flow into your NodeRED pallet by selecting Import from the clipboard from the flow editor menu.

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1  [{"id":"6f32262d.90cdd8","type":"debug","z":"d23ac9e3.2dc538","name":"Output"
   ,"active":true,"console":"false","complete":"payload","x":950,"y":300,"wires"
   :[]},{"id":"95059387.6afa7","type":"debug","z":"d23ac9e3.2dc538","name":"2nd
   Output","active":true,"console":"false","complete":"payload","x":970,"y":380
   ,"wires":[]},{"id":"97654ce1.689ab","type":"debug","z":"d23ac9e3.2dc538"
   ,"name":"3rd Output","active":true,"console":"false","complete":"payload","x"
   :970,"y":460,"wires":[]},{"id":"e8249c22.17db6","type":"function","z"
   :"d23ac9e3.2dc538","name":"Array","func":"var msg1 = { payload:\"first
   message\" };\nvar msg2 = { payload:\"second message\" };\nvar msg3 = { payload
   :\"third message\" };\nvar msg4 = { payload:\"fourth message\" };\nreturn
   [msg1, msg2, msg3, msg4];","outputs":1,"noerr":0,"x":450,"y":200,"wires"
   :[["6f32262d.90cdd8"]]},{"id":"1f8a8903.e07577","type":"function","z"
   :"d23ac9e3.2dc538","name":"Array in Array","func":"var msg1 = { payload
   :\"first message\" };\nvar msg2 = { payload:\"second message\" };\nvar msg3 =
   { payload:\"third message\" };\nvar msg4 = { payload:\"fourth message\" }
   ;\nreturn [[msg1, msg2, msg3, msg4]]","outputs":1,"noerr":0,"x":420,"y":240
   ,"wires":[["6f32262d.90cdd8"]]},{"id":"2bf5496c.d40ab6","type":"function","z"
   :"d23ac9e3.2dc538","name":"Multiple returns","func":"var msg1 = { payload
   :\"first message\" };\nvar msg2 = { payload:\"second message\" };\nvar msg3 =
   { payload:\"third message\" };\nvar msg4 = { payload:\"fourth message\" }
   ;\nreturn [msg1, msg2, msg3, msg4];\n","outputs":"3","noerr":0,"x":420,"y":320
   ,"wires":[["6f32262d.90cdd8"],["95059387.6afa7"],["97654ce1.689ab"]]},{"id"
   :"18539f43.e7ac61","type":"function","z":"d23ac9e3.2dc538","name":"Multiple
   returns array in array","func":"var msg1 = { payload:\"first message\" };\nvar
   msg2 = { payload:\"second message\" };\nvar msg3 = { payload:\"third message\"
   };\nvar msg4 = { payload:\"fourth message\" };\nreturn [msg1, [msg2, msg3],
   msg4];\n","outputs":"3","noerr":0,"x":380,"y":380,"wires":[["6f32262d.90cdd8"]
   ,["95059387.6afa7"],["97654ce1.689ab"]]},{"id":"867e2ae4.7981d8","type"
   :"function","z":"d23ac9e3.2dc538","name":"Create JSON Object","func":"msg
   .payload = {\"a\" : { \"b\" : \"test\"}};\nreturn msg;","outputs":1,"noerr":0
   ,"x":400,"y":460,"wires":[["6f32262d.90cdd8","324dc2f3.cdb23e"]]},{"id"
   :"989dc3f3.67624","type":"function","z":"d23ac9e3.2dc538","name":"Create JSON
   String","func":"msg.payload = '{\"a\" : { \"b\" : \"test\"}}';\nreturn msg;"
   ,"outputs":1,"noerr":0,"x":410,"y":500,"wires":[["6f32262d.90cdd8","324dc2f3
   .cdb23e"]]},{"id":"ca4a9a05.35b568","type":"function","z":"d23ac9e3.2dc538"
   ,"name":"Create JSON String in msg.payload","func":"msg.payload = '{\"a\" : {
   \"b\" : \"test\"}}';\nreturn msg;","outputs":1,"noerr":0,"x":360,"y":540
   ,"wires":[["6f32262d.90cdd8","48150def.b7eaf4"]]},{"id":"6aa765b7.95589c"
   ,"type":"function","z":"d23ac9e3.2dc538","name":"return string in object"
   ,"func":"return {\"payload\" : \"Hello Coursera\"};","outputs":1,"noerr":0,"x"
   :400,"y":100,"wires":[["6f32262d.90cdd8"]]},{"id":"48150def.b7eaf4","type"
   :"json","z":"d23ac9e3.2dc538","name":"","x":590,"y":540,"wires":[["95059387
   .6afa7","324dc2f3.cdb23e"]]},{"id":"324dc2f3.cdb23e","type":"function","z"
   :"d23ac9e3.2dc538","name":"retrieve data from Object","func":"msg.payload =
   msg.payload.a.b;\nreturn msg;","outputs":1,"noerr":0,"x":750,"y":450,"wires"
   :[["97654ce1.689ab"]]},{"id":"199f701e.e6609","type":"inject","z":"d23ac9e3
   .2dc538","name":"","topic":"","payload":"","payloadType":"none","repeat":""
   ,"crontab":"","once":false,"x":110,"y":200,"wires":[["e8249c22.17db6"]]},{"id"
   :"e069c78e.1f9638","type":"inject","z":"d23ac9e3.2dc538","name":"","topic":""
   ,"payload":"","payloadType":"none","repeat":"","crontab":"","once":false,"x"
   :110,"y":240,"wires":[["1f8a8903.e07577"]]},{"id":"184455e6.e7bbaa","type"
   :"inject","z":"d23ac9e3.2dc538","name":"","topic":"","payload":""
   ,"payloadType":"str","repeat":"","crontab":"","once":false,"x":110,"y":320
   ,"wires":[["2bf5496c.d40ab6"]]},{"id":"bedfe3a7.41202","type":"inject","z"
   :"d23ac9e3.2dc538","name":"","topic":"","payload":"","payloadType":"str"
   ,"repeat":"","crontab":"","once":false,"x":110,"y":380,"wires":[["18539f43
   .e7ac61"]]},{"id":"b816de9.f47e92","type":"inject","z":"d23ac9e3.2dc538"
   ,"name":"","topic":"","payload":"","payloadType":"none","repeat":"","crontab"
   :"","once":false,"x":110,"y":460,"wires":[["867e2ae4.7981d8"]]},{"id"
   :"a1442874.5ebbd8","type":"inject","z":"d23ac9e3.2dc538","name":"","topic":""
```

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,"payload":"","payloadType":"none","repeat":"","crontab":"","once":false,"x"
:110,"y":500,"wires":[["989dc3f3.67624"]]},{"id":"fd13e6ab.02ec18","type"
:"inject","z":"d23ac9e3.2dc538","name":"","topic":"","payload":""
,"payloadType":"str","repeat":"","crontab":"","once":false,"x":110,"y":540
,"wires":[["ca4a9a05.35b568"]]},{"id":"b85f2925.47a0d8","type":"inject","z"
:"d23ac9e3.2dc538","name":"","topic":"","payload":"","payloadType":"none"
,"repeat":"","crontab":"","once":false,"x":110,"y":100,"wires":[["6aa765b7
.95589c"]]},{"id":"9e4aa39b.61b56","type":"function","z":"d23ac9e3.2dc538"
,"name":"Status and logging functions","func":"node.status({text:\"started\"}
);\n\nsetTimeout(function() {\n    node.status({fill:\"red\",shape:\"ring\"
,text:\"stage 1\"});\n    \n    setTimeout(function() {\n        node.status
({fill:\"green\",shape:\"dot\",text:\"stage 2\"});\n        node.error(\"This
is an error\", {'payload' : 'Caught error'});\n        \n        setTimeout
(function() {\n        node.error(\"Second error\");\n        node
.status({});\n        node.send({'payload' : 'Completed'});\n        },
1000);\n        \n    }, 1000);\n    \n}, 1000);\n\nnode.warn(\"Exiting node\"
);\nreturn;","outputs":1,"noerr":0,"x":380,"y":600,"wires":[["6f32262d
.90cdd8"]]},{"id":"c0816f04.3f7e9","type":"inject","z":"d23ac9e3.2dc538"
,"name":"","topic":"","payload":"","payloadType":"str","repeat":"","crontab"
:"","once":false,"x":110,"y":600,"wires":[["9e4aa39b.61b56"]]},{"id":"4c6c003f
.b394","type":"catch","z":"d23ac9e3.2dc538","name":"Catch node","scope"
:["9e4aa39b.61b56"],"x":430,"y":640,"wires":[["2aada32c.d5525c"]]},{"id"
:"2a128c69.d5ed74","type":"function","z":"d23ac9e3.2dc538","name":"return
string","func":"return 'This is a string';","outputs":1,"noerr":0,"x":430,"y"
:60,"wires":[["6f32262d.90cdd8"]]},{"id":"e04ef678.1fb108","type":"inject","z"
:"d23ac9e3.2dc538","name":"","topic":"","payload":"","payloadType":"str"
,"repeat":"","crontab":"","once":false,"x":110,"y":60,"wires":[["2a128c69
.d5ed74"]]},{"id":"2aada32c.d5525c","type":"debug","z":"d23ac9e3.2dc538"
,"name":"entire msg","active":true,"console":"false","complete":"true","x":970
,"y":540,"wires":[]}]
```

Go through each path through the sample flows and ensure you understand how the function node handles arrays and objects and how you can control the output from a function node by using multiple outputs and also splitting arrays over multiple output messages.