DOWNLOAD

1. Visual Studio Code (Preferred IDE)
2. NodeJS (LTS version preferred)
3. Google Chrome ☺

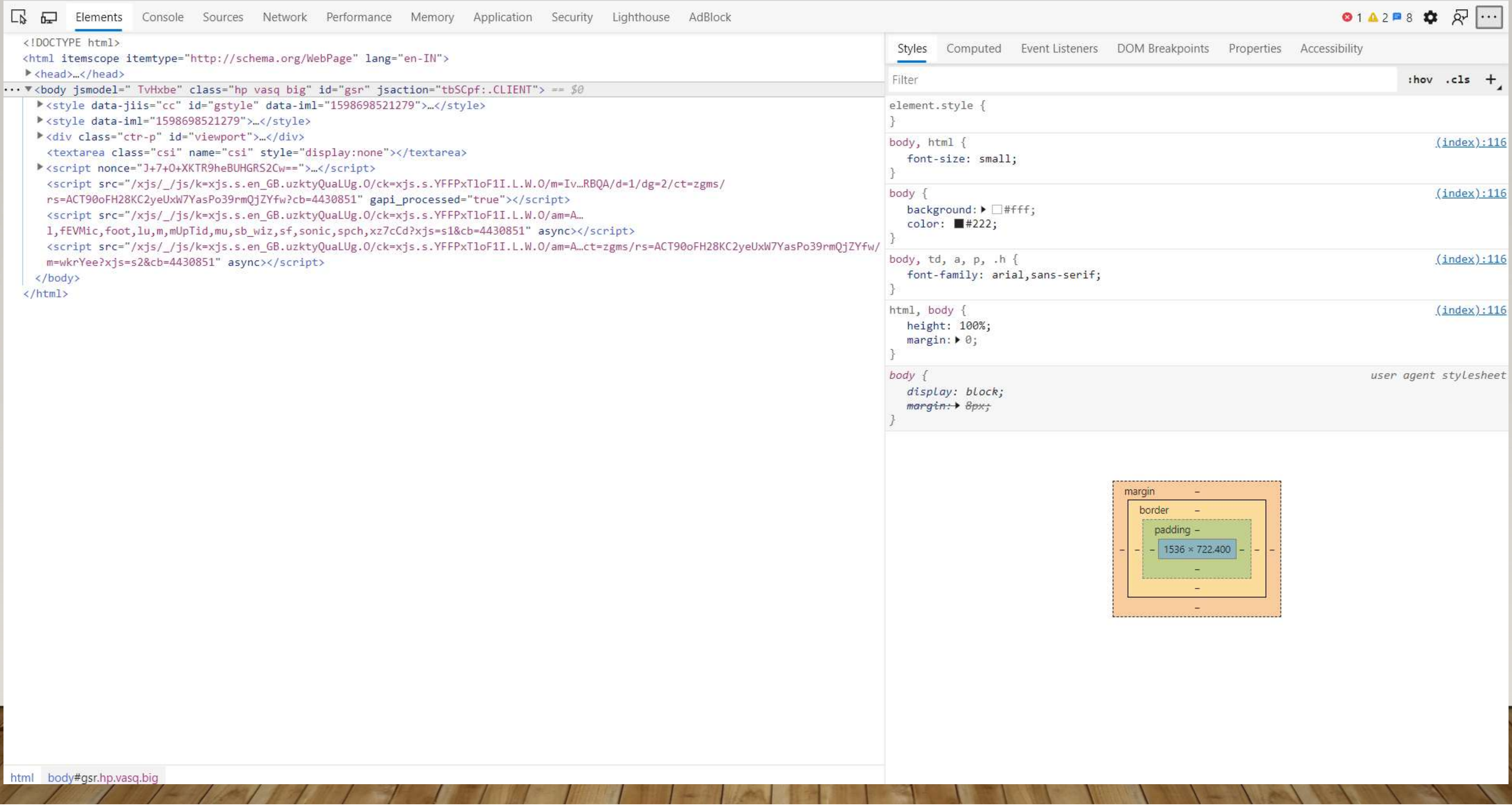
DEBUGGING

- Why Debugging?
  - Find errors in codes
  - Test new features on the fly
  - Saves time
  - (See others code using Debugging tools as well)

- How Debugging?
  - Tools used such as
    - Chrome Dev Tools,
    - VS Code Debugger Extensions (Debugger for Chrome),
    - POSTMAN,

CHROME DEV TOOLS (Press F12 on any page to open it up)

Used for HTML debugging,
CSS debugging
JS debugging

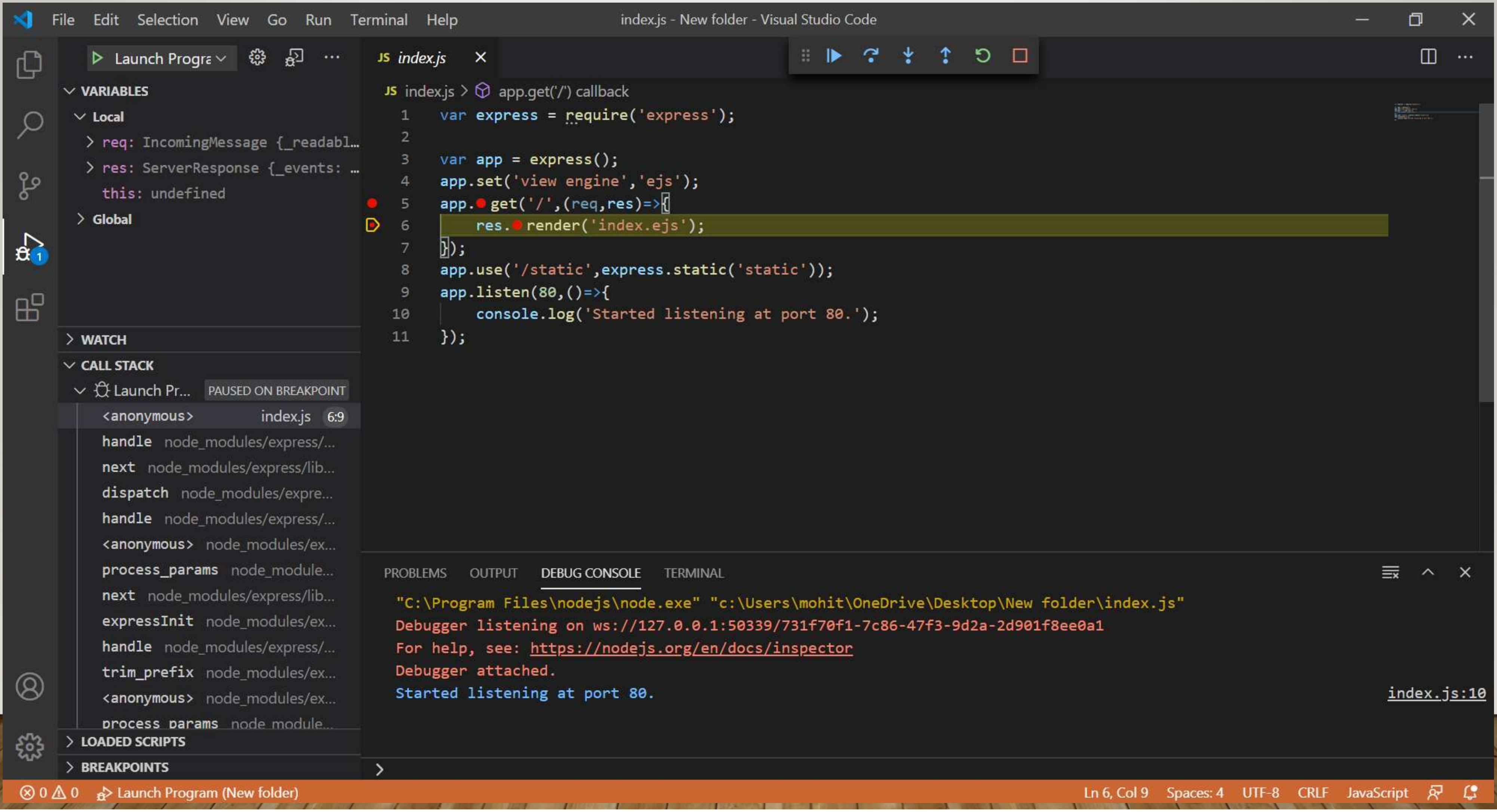


```
<!DOCTYPE html>
<html itemscope itemtype="http://schema.org/WebPage" lang="en-IN">
 ▶<head>…</head>
···▼<body jsmodel=" TvHxbe" class="hp vasq big" id="gsr" jsaction="tbSCpf:.CLIENT"> == $0
   ▶<style data-jiis="cc" id="gstyle" data-iml="1598698521279">…</style>
   ▶<style data-iml="1598698521279">…</style>
   ▶<div class="ctr-p" id="viewport">…</div>
    <textarea class="csi" name="csi" style="display:none"></textarea>
   ▶<script nonce="J+7+O+XKTR9heBUHGRS2Cw==">…</script>
    <script src="/xjs/_/js/k=xjs.s.en_GB.uzktyQuaLUg.O/ck=xjs.s.YFFPxTloF1I.L.W.O/m=Iv…RBQA/d=1/dg=2/ct=zgms/
    rs=ACT90oFH28KC2yeUxW7YasPo39rmQjZYfw?cb=4430851" gapi_processed="true"></script>
    <script src="/xjs/_/js/k=xjs.s.en_GB.uzktyQuaLUg.O/ck=xjs.s.YFFPxTloF1I.L.W.O/am=A…
    l,fEVMic,foot,lu,m,mUpTid,mu,sb_wiz,sf,sonic,spch,xz7cCd?xjs=s1&cb=4430851" async></script>
    <script src="/xjs/_/js/k=xjs.s.en_GB.uzktyQuaLUg.O/ck=xjs.s.YFFPxTloF1I.L.W.O/am=A…ct=zgms/rs=ACT90oFH28KC2yeUxW7YasPo39rmQjZYfw/
    m=wkrYee?xjs=s2&cb=4430851" async></script>
  </body>
</html>
```

```
element.style {
}
body, html {                                    (index):116
   font-size: small;
}
body {                                          (index):116
   background: ▶ □#fff;
   color: ■#222;
}
body, td, a, p, .h {                            (index):116
   font-family: arial,sans-serif;
}
html, body {                                    (index):116
   height: 100%;
   margin: ▶ 0;
}
body {                              user agent stylesheet
   display: block;
   ~~margin: ▶ 8px;~~
}
```

VS CODE DEBUGGING (Debugger for Chrome Extension required)

Used for NodeJS Debugging



```
req: IncomingMessage {_readabl…
res: ServerResponse {_events: …
this: undefined
```

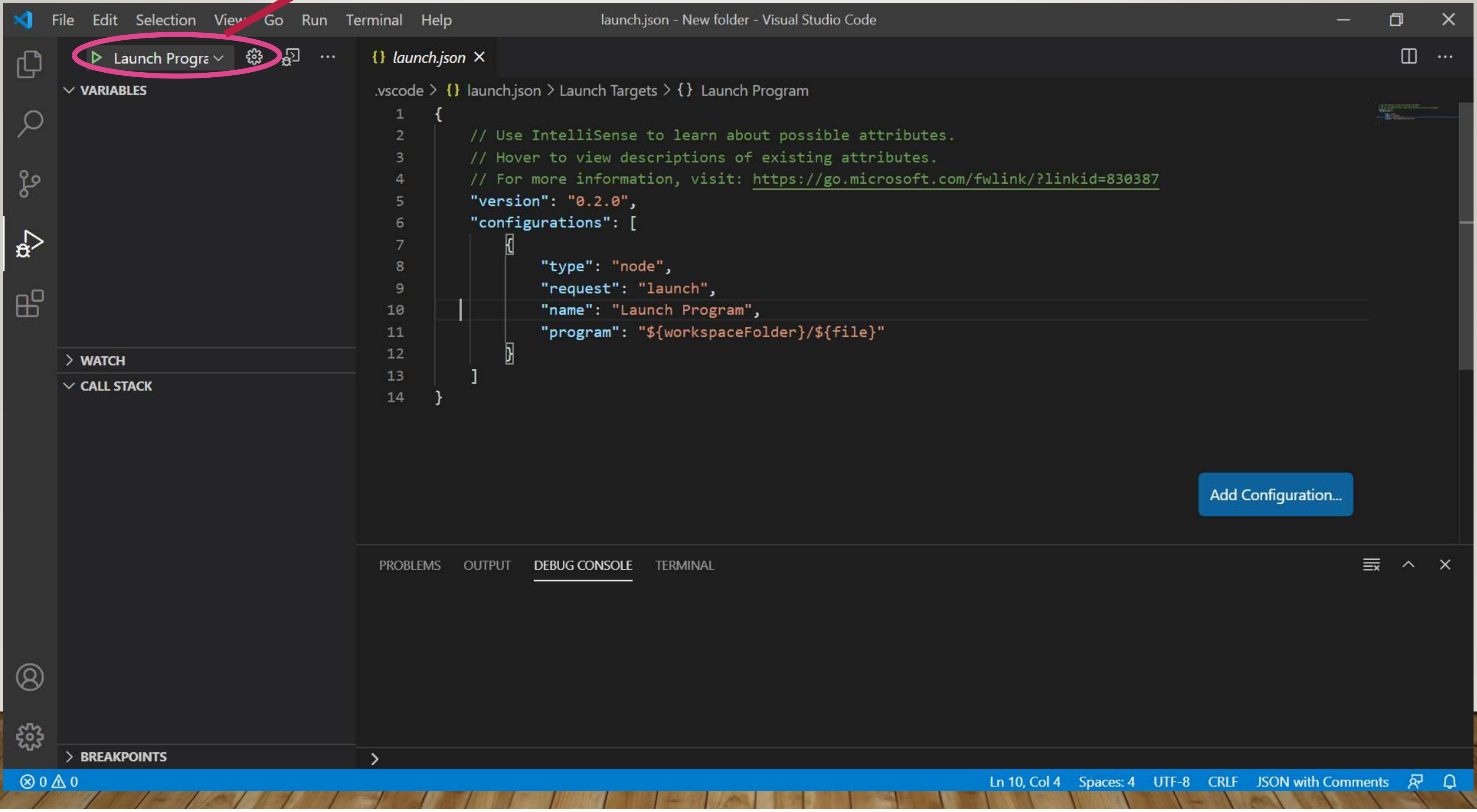
```
<anonymous>     index.js 6:9
handle          node_modules/express/...
next            node_modules/express/lib...
dispatch        node_modules/expre...
handle          node_modules/express/...
<anonymous>     node_modules/ex...
process_params  node_module...
next            node_modules/express/lib...
expressInit     node_modules/ex...
handle          node_modules/express/...
trim_prefix     node_modules/ex...
<anonymous>     node_modules/ex...
process_params  node_module...
```

```
var express = require('express');

var app = express();
app.set('view engine','ejs');
app.get('/',(req,res)=>{
    res.render('index.ejs');
});
app.use('/static',express.static('static'));
app.listen(80,()=>{
    console.log('Started listening at port 80.');
});
```

```
"C:\Program Files\nodejs\node.exe" "c:\Users\mohit\OneDrive\Desktop\New folder\index.js"
Debugger listening on ws://127.0.0.1:50339/731f70f1-7c86-47f3-9d2a-2d901f8ee0a1
For help, see: https://nodejs.org/en/docs/inspector
Debugger attached.
Started listening at port 80.
```

From the dropdown select Add configuration.
And add the following code to start debugging



```
{
    // Use IntelliSense to learn about possible attributes.
    // Hover to view descriptions of existing attributes.
    // For more information, visit: https://go.microsoft.com/fwlink/?linkid=830387
    "version": "0.2.0",
    "configurations": [
        {
            "type": "node",
            "request": "launch",
            "name": "Launch Program",
            "program": "${workspaceFolder}/${file}"
        }
    ]
}
```