Lesson 1

```
function test1() {
  var spreadsheet = SpreadsheetApp.getActive();
  spreadsheet.getRange('A1').activate();
  spreadsheet.getCurrentCell().setValue('Hello');
  spreadsheet.getRange('B1').activate();
  spreadsheet.getCurrentCell().setValue('World');
  spreadsheet.getRange('A1:B1').activate();
  spreadsheet.getActiveRangeList().setFontWeight('bold')
  .setFontSize(20)
  .setBackground('#0000ff');
  spreadsheet.getRange('D1').activate();
  spreadsheet.getCurrentCell().setValue('Done');
};
```

Lesson 2

```
function test2(){
  const ss = SpreadsheetApp.getActiveSpreadsheet();
  Logger.log(ss.getUrl());
  Logger.log(ss.getId());
  Logger.log(ss.getName());
}
```

Lesson 3

```
function testSheet1(){
  const ss = SpreadsheetApp.getActiveSpreadsheet();
  const sheet = ss.getActiveSheet();
  const data = sheet.getDataRange();
  const values = data.getValues();
  values.forEach((val)=>{
    Logger.log(val[1]);
  })
  Logger.log(values);
  Logger.log(sheet.getName());
}
```

Lesson 4

```
function test2(){
  const url =
'https://docs.google.com/spreadsheets/d/1rrORyEVHbvl_8I44q-_iIpO2SuY79qBKo66NEfKwg24
/';
  const ss = SpreadsheetApp.openByUrl(url);
  //const sheet = ss.getSheets()[1];
  const sheet = ss.getSheetByName('New 3');
  //sheet.setName('UPDATED 500');
  if(sheet != null){
  Logger.log(sheet.getIndex());
  }else{
  Logger.log(sheet);
  }
}



function test1() {
  const id = '1rrORyEVHbvl_8I44q-_iIpO2SuY79qBKo66NEfKwg24';
  const ss = SpreadsheetApp.openById(id);
  const sheets =  ss.getSheets();
  sheets.forEach((sheet,index)=>{
    Logger.log(sheet.getName());
    sheet.setName('Updated '+index);
  })
  Logger.log(sheets);
}
```

Lesson 5

```
function makeNewOne(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheets = ss.getSheets();
  Logger.log(sheets);
  const newName = 'Sheet New';
  let sheet = ss.getSheetByName(newName);
  if(sheet == null){
    sheet = ss.insertSheet();
    sheet.setName(newName);
  }
  Logger.log(sheet.getIndex());

}
```

Lesson 6

```
function addColors(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheet = ss.getSheets()[0];
  let counter = 0;
  for(let i=1;i<51;i++){
    let backColor = 'green';
    for(let x=0;x<5;x++){
      let val = 'A'.charCodeAt()+x;
      let letterVal = String.fromCharCode(val);
      Logger.log(letterVal);
      counter++;
      if((counter%2)==0){
        backColor = 'pink';
      }else{
        backColor = 'yellow';
      }
      sheet.getRange(letterVal+i).setBackground(backColor);
    }
  }
}
```

Lesson 7

```
function addColors2(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheet = ss.getSheets()[0];
  let backColor = 'red';
  let mySize = 10;
  for(let rows = 1;rows<51;rows++){
    for(let cols=1;cols<11;cols++){
        let total = rows + cols;
        if((total%2)==0){
          backColor = 'red';
        }else{
          backColor = 'pink';
        }
        let range = sheet.getRange(rows,cols);
        range.setBackground(backColor);
        range.setFontColor('white');
        range.setFontSize(mySize+cols);
        range.setValue(total);
    }
  }
}
```

Lesson 8

```
function getMyRange(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheet = ss.getSheets()[0];
  const range = sheet.getRange(1,4,2,2);
  const data = range.getValues();
  range.setValues([['test1','test2'],['test3','test4']]);
  range.setBackground('blue');
  Logger.log(data);

}
```

Lesson 9 & 10

```
function testData1(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const sheet = SpreadsheetApp.openById(id).getSheets()[0];
  const lastCol = sheet.getLastColumn();
  const lastRow = sheet.getLastRow();
  const range = sheet.getRange(1,1,lastRow,lastCol);
  const rangeData = sheet.getDataRange();
  const lastCorner = sheet.getRange(lastRow,lastCol);
  lastCorner.setBackground('red');
  Logger.log(lastCorner.getValue());
  Logger.log(rangeData.getValues());
  Logger.log(lastCol,lastRow);
  Logger.log(range.getValues());
}
```

Lesson 11

```
function test2(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  ss.setActiveSheet(ss.getSheets()[1]);
  const sheet = ss.getActiveSheet();
  const range = sheet.getRange('B2:G5');
  const dimArr =
[range.getLastRow(),range.getNumRows(),range.getLastColumn(),range.getNumColumns()];
  Logger.log(dimArr);

  sheet.setActiveRange(range);
  ///range.setBackground('yellow');
  Logger.log(sheet.getName());
  const selectedSel = sheet.getSelection();
  const selRange = selectedSel.getActiveRange();
  const data = selRange.getValues();
  selRange.setBackground('purple');
  Logger.log(data);

}
```

```
function test2(){
  const ss = SpreadsheetApp.getActiveSpreadsheet();
  const sheet = ss.getActiveSheet();
  Logger.log(sheet.getName());
  const selectedSel = sheet.getSelection();
  const selRange = selectedSel.getActiveRange();
  const data = selRange.getValues();
  Logger.log(data);

}
```

Lesson 12

```
function copyMe(){
  const ss = SpreadsheetApp.getActiveSpreadsheet();
  const sheet = ss.getActiveSheet();
  const range = sheet.getActiveRange();
  const data = range.getValues();
  createASheet(data,ss,range);
  range.setBackground('red');
}

function createASheet(data,ss,range){
  const numSheets = ss.getSheets();
  const sheetName = 'Sheet '+ numSheets.length;
  let newSheet = ss.getSheetByName(sheetName);
  if(newSheet == null){
    newSheet = ss.insertSheet();
    newSheet.setName(sheetName);
  }else{
    //newSheet.clearContents();
    //newSheet.clearFormats();
    newSheet.clear();
  }
  const newRange = newSheet.getRange(1,1,range.getNumRows(),range.getNumColumns());
  newRange.setValues(data);
}
```

Lesson 13

```
function onOpen(){
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('New Opts')
  .addItem('first','first')
  .addItem('two','second')
  .addSeparator()
  .addSubMenu(ui.createMenu('sub')
    .addItem('first','third')
    .addItem('two','fourth')
  )
  .addItem('five','fifth')
  .addToUi();
}

function first(){
  logOut('ran first');
}
function second(){
  logOut('ran second');
}
function third(){
  logOut('ran third');
}
function fourth(){
  logOut('ran fourth');
}
function fifth(){
  logOut('ran fifth');
}

function logOut(val){
  const ss = SpreadsheetApp.getActiveSpreadsheet().getActiveSheet();
  ss.appendRow([val]);
}
```

Lesson 14

```
function onOpen(){
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('adv')
  .addItem('copy','copytolog')
  .addToUi();
}

function copytolog(){
  const ss = SpreadsheetApp.getActiveSpreadsheet()
  const sheet = ss.getActiveSheet();
  const range = ss.getSelection().getActiveRange();
  const data = range.getValues();
  let sheetLog = ss.getSheetByName('log');
  if(sheetLog == null){
    sheetLog = ss.insertSheet();
    sheetLog.setName('log');
  }
  const newRange = sheetLog.getDataRange();
  const startRow = newRange.getLastRow() +1;
  const setRange =
sheetLog.getRange(startRow,1,range.getNumRows(),range.getNumColumns());
  setRange.setBackground('red');
  setRange.setValues(data);
  sheetLog.appendRow([startRow]);

}
```

Lesson 15

```
function onOpen(){
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('adv')
  .addItem('alert','popUp1')
  .addItem('prompt1','popUp2')
    .addItem('prompt2','popUp3')
  .addToUi();
}

function popUp3(){
  const ui = SpreadsheetApp.getUi();
  const rep = ui.prompt('Do you like Apps Script rate 1-5?',ui.ButtonSet.YES_NO_CANCEL);
  logVal(rep.getSelectedButton());
  if(rep.getSelectedButton() == ui.Button.YES){
    logVal('YES User rated ' + rep.getResponseText());
  }else if(rep.getSelectedButton() == ui.Button.NO){
    logVal('NO User rated ' + rep.getResponseText());
  }else{
    logVal('User Cancel');
  }
}


function popUp2(){
  const ui = SpreadsheetApp.getUi();
  const rep = ui.prompt('Tell me your name?');
  logVal(rep.getSelectedButton());
  if(rep.getSelectedButton() == ui.Button.OK){
    logVal(rep.getResponseText());
  }else{
    logVal('Prompt Closed');
  }
}



function popUp1(){
  const ui = SpreadsheetApp.getUi();
  const rep = ui.alert('confirm','Do you agree',ui.ButtonSet.YES_NO);
  logVal(rep);
  if(rep == ui.Button.YES){
    logVal('yes was pressed');
  }else{
    logVal('no was pressed');
  }
}

function logVal(val){
  const ss = SpreadsheetApp.getActiveSpreadsheet().getSheetByName('log');
  ss.appendRow([val]);
}
```

Lesson 16

```
const GLVAL = 'Testing Global Value';


function onOpen(){
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('adv')
  .addItem('showModal1','modal1')
  .addItem('showModal2','modal2')
    .addItem('showModal3','modal3')
  .addToUi();
}

function modal3(){
  const ui = SpreadsheetApp.getUi();
  const html = HtmlService.createHtmlOutput('<h1>Hello World</h1><p>Tested</p>');
  html.setHeight(500);
  html.setWidth(800);
  ui.showDialog(html);
}

function modal2(){
  const ui = SpreadsheetApp.getUi();
  //const html = HtmlService.createHtmlOutput('<h1>Hello World</h1><p>Tested</p>');
  const html = HtmlService.createHtmlOutputFromFile('temp');
  html.setHeight(500);
  html.setWidth(800);
  ui.showModelessDialog(html,'Modeless');
}

function modal1(){
  const ui = SpreadsheetApp.getUi();
  //const html = HtmlService.createHtmlOutput('<h1>Hello World</h1><p>Tested</p>');
  const html = HtmlService.createTemplateFromFile('temp1').evaluate();
  ui.showModalDialog(html,'test 1');
}
```

```
function logVal(val){
  const ss = SpreadsheetApp.getActiveSpreadsheet().getSheetByName('log');
  ss.appendRow([val]);
}
```

```
<!DOCTYPE html>
<html>
  <head>
```

```
    <base target="_top">
    <style>
      body{
        background:red;
      }
      </style>
  </head>
  <body>
    <h1>Hello</h1>
    <p>Testing</p>
    <script>
      document.querySelector('h1').innerHTML = 'JAVASCRIPT';
      </script>
  </body>
</html>
<!DOCTYPE html>
<html>
  <head>
    <base target="_top">
  </head>
  <body>
    <h1>Test 1</h1>
    <?= GLVAL ?>
  </body>
</html>
```

Lesson 17

```
const GLVAL = 'Testing Global Value';
let COUNTER = 0;


function onOpen(){
  PropertiesService.getDocumentProperties().setProperty('cnt',0);
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('adv')
  .addItem('showSide1','side1')
    .addItem('showSide2','side2')
      .addItem('showSide3','side3')
  .addToUi();
}
```

```
function side1(){
  const ui = SpreadsheetApp.getUi();
  const html = HtmlService.createHtmlOutput('<h1>Hello World</h1><p>Tested</p>');
  ui.showSidebar(html);
}
function side2(){
  const ui = SpreadsheetApp.getUi();
  const html = HtmlService.createHtmlOutputFromFile('temp');
  ui.showSidebar(html);
}
function side3(){
  COUNTER = PropertiesService.getDocumentProperties().getProperty('cnt');
  COUNTER++;
  PropertiesService.getDocumentProperties().setProperty('cnt',COUNTER);
  const ui = SpreadsheetApp.getUi();
  const html = HtmlService.createTemplateFromFile('temp1').evaluate();
  ui.showSidebar(html);
}
```

Lesson 18

```
function addContent(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheet = ss.getSheetByName('test');
  Logger.log(sheet);
  let startPos = 5;
  let startVal = sheet.getRange(startPos,1).getValue();
  sheet.getRange(startPos,1).setValue(startVal + ' START');
  sheet.insertRowAfter(startPos);
  sheet.getRange(startPos+1,1).setValue('AFTER');
  sheet.insertRowBefore(startPos);
  sheet.getRange(startPos,1).setValue('BEFORE');
  let tempArr = [sheet.getLastRow()+1,'test',2,'hello world'];
  sheet.appendRow(tempArr);
}
```

Lesson 19

```
function prepender(val,sheet){
  sheet.insertRowBefore(1);
  let cloneArr = val.map((x)=>x);
  cloneArr.push('START');
  const range = sheet.getRange(1,1,1,cloneArr.length);
  range.setValues([cloneArr]);
}

function addContent2(){
  const id = '1IooDMwg_ztAb2tiuRx6Xk3MXFtQ4yLc1vumVbiSnzu0';
  const ss = SpreadsheetApp.openById(id);
  const sheet = ss.getSheetByName('test');
  let tempArr = [sheet.getLastRow()+1,'NEW CONTENT'];
  prepender(tempArr,sheet);
  tempArr.push('END');
  sheet.appendRow(tempArr);

}
```

Lesson 20

```
function SELVALA1(){
  return SpreadsheetApp.getActive().getActiveRange().getA1Notation();
}

function addForm(){
  const ss = SpreadsheetApp.getActive();
  const sheet = ss.getSheetByName('test');
  const range = sheet.getRange('C1:C15');
  range.setFormula('=SUM(A1:B1)');
  range.setFontColor('red');
  range.setBackground('pink');

}
```

Lesson 21

```
function onOpen(){
  const ui = SpreadsheetApp.getUi();
  ui.createMenu('ADV')
  .addItem('addComment','adder')
  .addToUi();
}

function adder(){
  const ui = SpreadsheetApp.getUi();
  const cell = SpreadsheetApp.getActive().getActiveSheet().getActiveCell();
  const rep = ui.prompt('What comment would you like to add?');
  if(rep.getSelectedButton() == ui.Button.OK){
    cell.setComment(rep.getResponseText());
  }
}
```