

The screenshot shows a Google Sheets spreadsheet titled "students grades". The spreadsheet contains a table with the following data:

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	grade	average	first grade	second degree	third degree	fourth degree
2	456	ali	mohanad	4		56	65	59	67
3	222	ahmed	saad	4		78	66	78	80
4	89	mohmed	ismaiel	4		90	65	89	88
5	234	hassan	mazen	4		78	78	77	98
6									
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Part1: variables

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	grade	average	first grade	second degree	third degree	fourth degree				
2	456	ali	mohanad	4	61.75	56	65	59	67				
3	222	ahmed	saad	4	75.5	78	66	78	80				
4	89	mohmed	ismaiel	4	83	90	65	89	88				
5	234	hassan	mazen	4	82.75	78	78	77	98				
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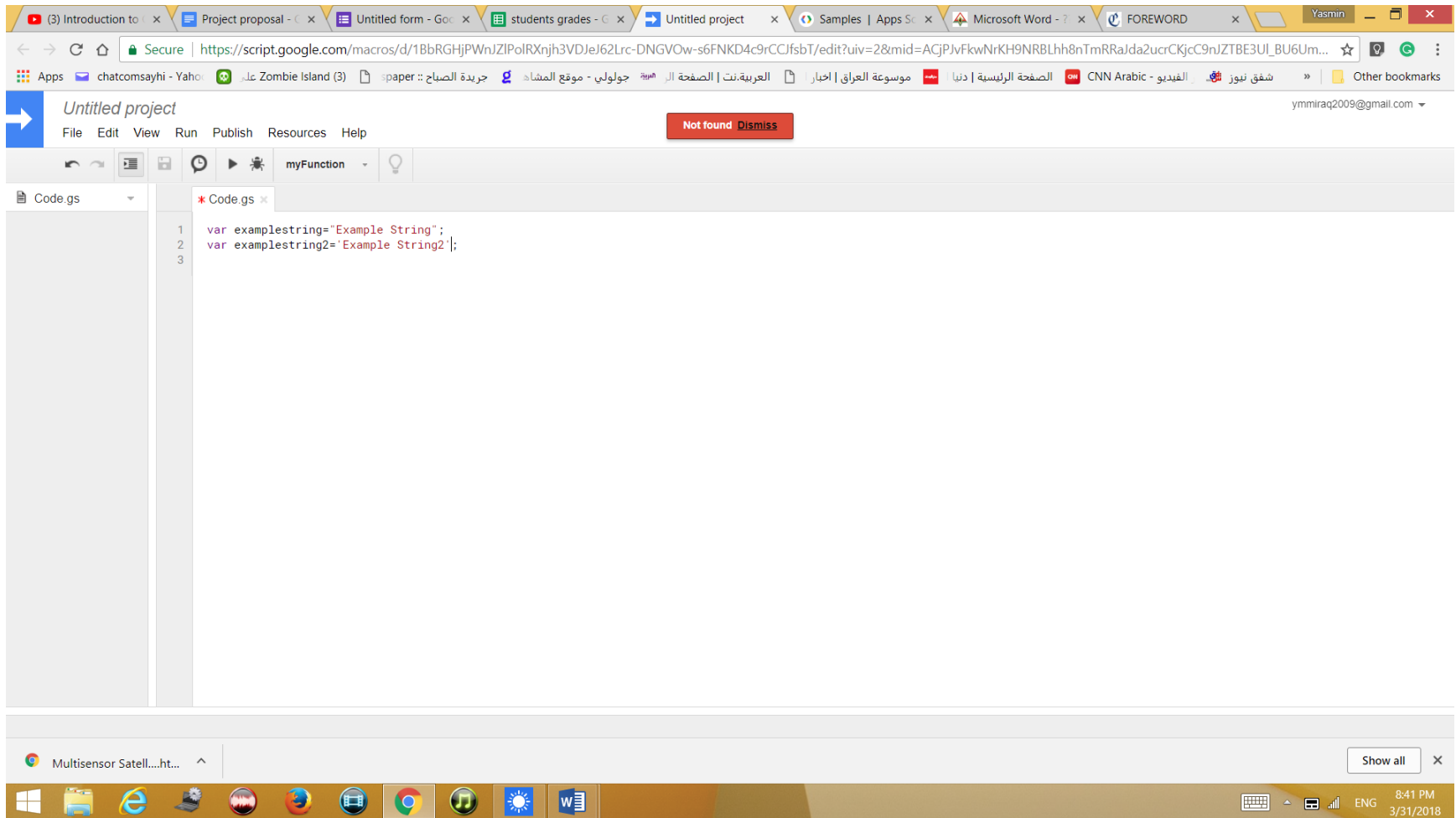
The screenshot shows a Google Sheets spreadsheet titled "students grades". The spreadsheet has columns for student information and grades. A formula bar at the top left shows the formula `=AVERAGE(F2:I2)`. The "Tools" menu is open, showing options like "Create a form", "Script editor", "Spelling", "Enable autocomplete", "Notification rules...", and "Protect sheet...".

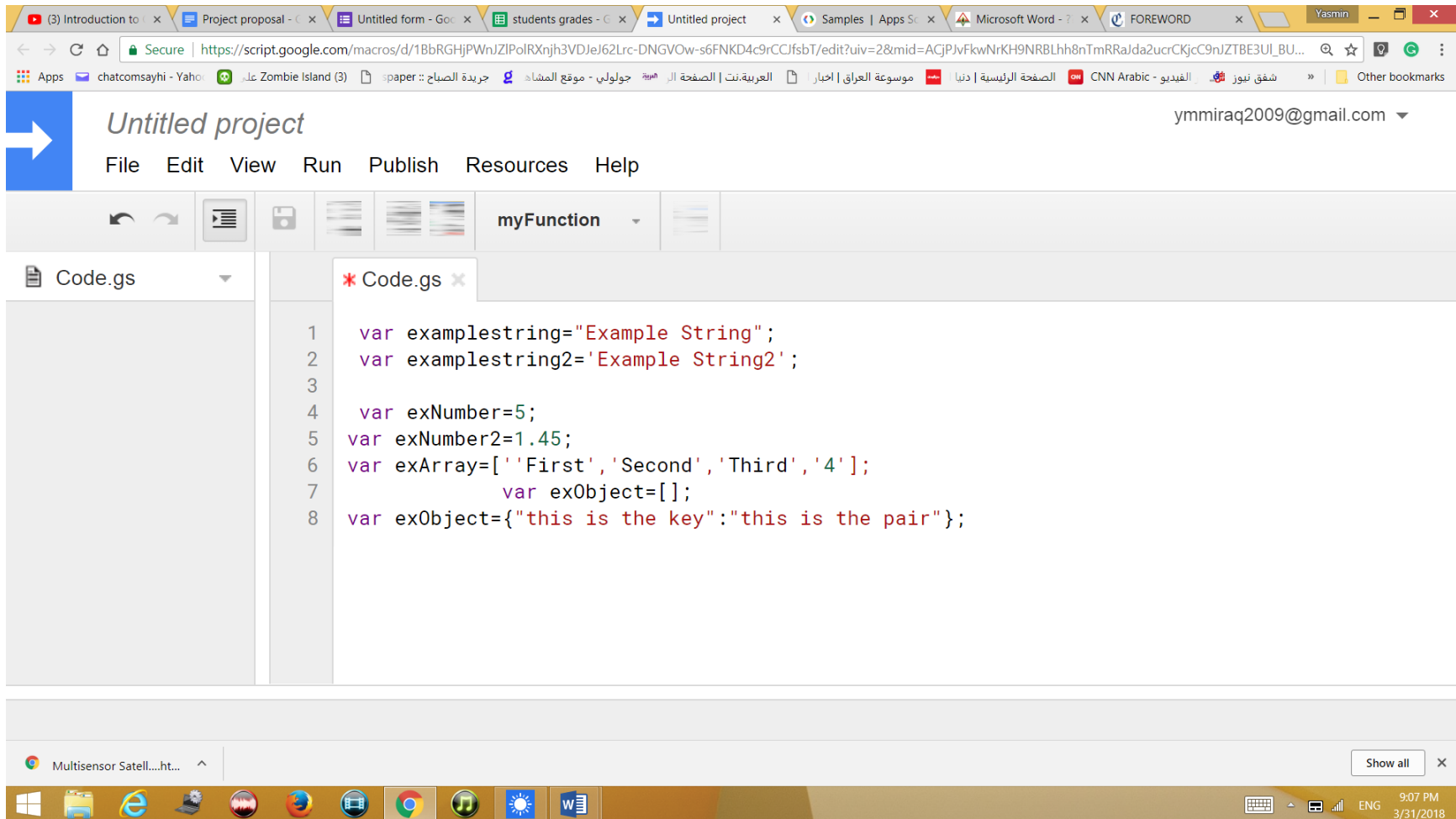
	A	B	C	F	G	H	I	J	K	L	M
1	student number	first name	last name	age	first grade	second degree	third degree	fourth degree			
2	456	ali	mohanad	15	56	65	59	67			
3	222	ahmed	saad	15	78	66	78	80			
4	89	mohmed	ismaiel	15	90	65	89	88			
5	234	hassan	mazen	15	78	78	77	98			
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The screenshot shows a web browser window with multiple tabs. The active tab is titled "Untitled project" and displays the Google Apps Script editor. The address bar shows the URL: https://script.google.com/macros/d/1BbRGHjPWnjZIPoRXnhj3VDJeJ62Lrc-DNGVOW-s6FNKD4c9rCCJfsbT/edit?uiv=2&mid=AGPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCKjcc9njZTBE3UI_BU6Um.... The editor interface includes a menu bar (File, Edit, View, Run, Publish, Resources, Help) and a toolbar with icons for undo, redo, save, and run. The main code area contains the following JavaScript code:

```
Code.gs
1 function myFunction() {
2   |
3   }
4
```

The Windows taskbar at the bottom shows various application icons, including File Explorer, Internet Explorer, and Google Chrome. The system tray on the right indicates the time as 8:16 PM on 3/31/2018.





Part 2 :string

The screenshot shows the Google Apps Script editor interface. The browser address bar displays the URL: https://script.google.com/macros/d/1BbRGHjPWnJZIPoLRxjh3VDJeJ62Lrc-DNGVOW-s6FNKD4c9rCCJfsbT/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCKjCC9nJZTBE3UI_BU.... The editor title is "Untitled project" and the user email is "ymmiraq2009@gmail.com". The menu bar includes File, Edit, View, Run, Publish, Resources, and Help. The toolbar shows icons for undo, redo, save, and a dropdown menu currently set to "myFunction". The code editor displays the following JavaScript code in "Code.gs":

```
1 function MyFunction(){
2
3   var exString="this the Example String";
4   Logger.
5
6 }
```

A tooltip is visible over the "Logger." code, listing the following methods:

- clear() : void
- getLog() : String
- log(Object data) : Logger
- log(String format, Object... values) : Logger

The Windows taskbar at the bottom shows the system tray with the date "3/31/2018" and time "9:16 PM".

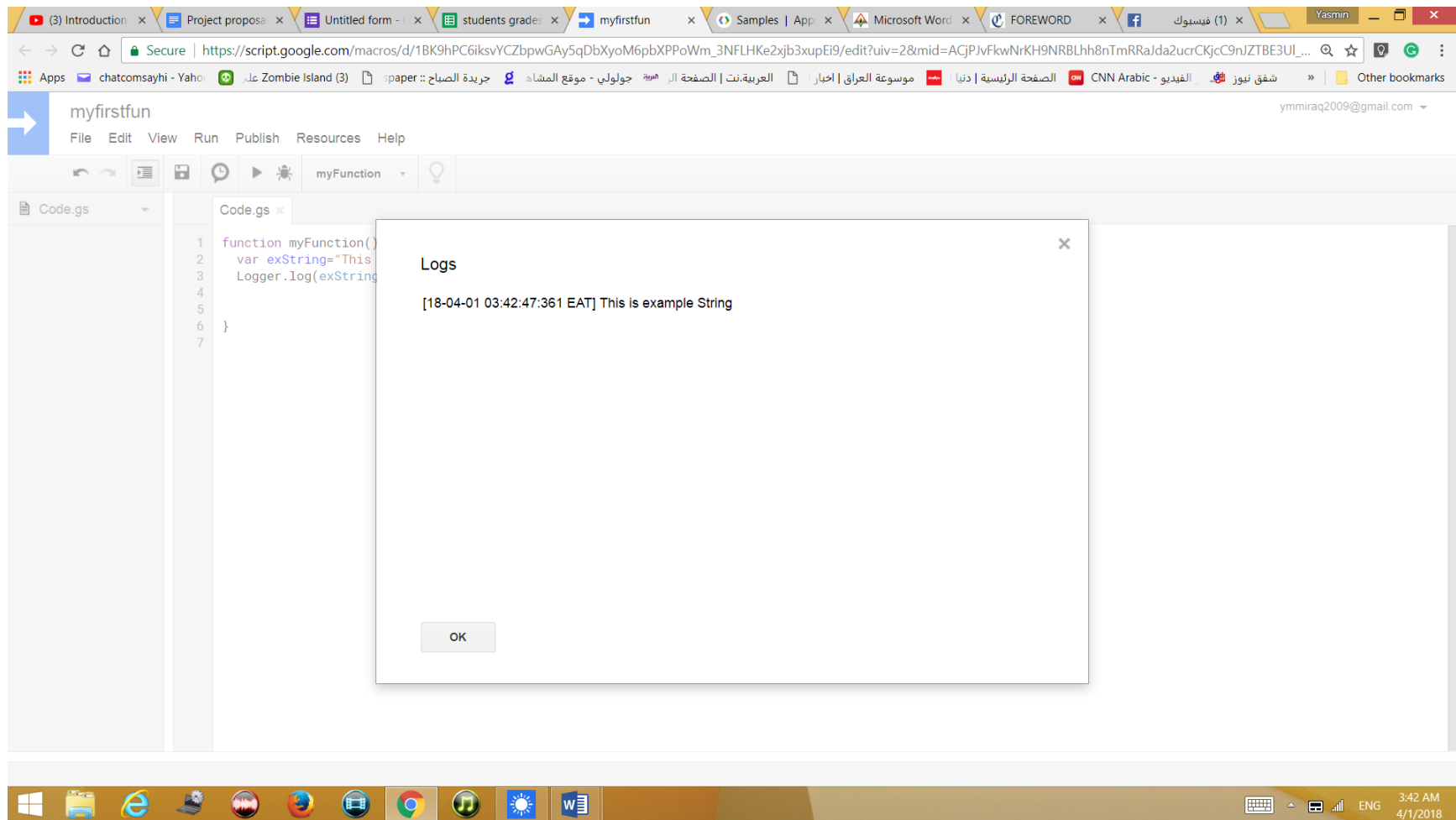


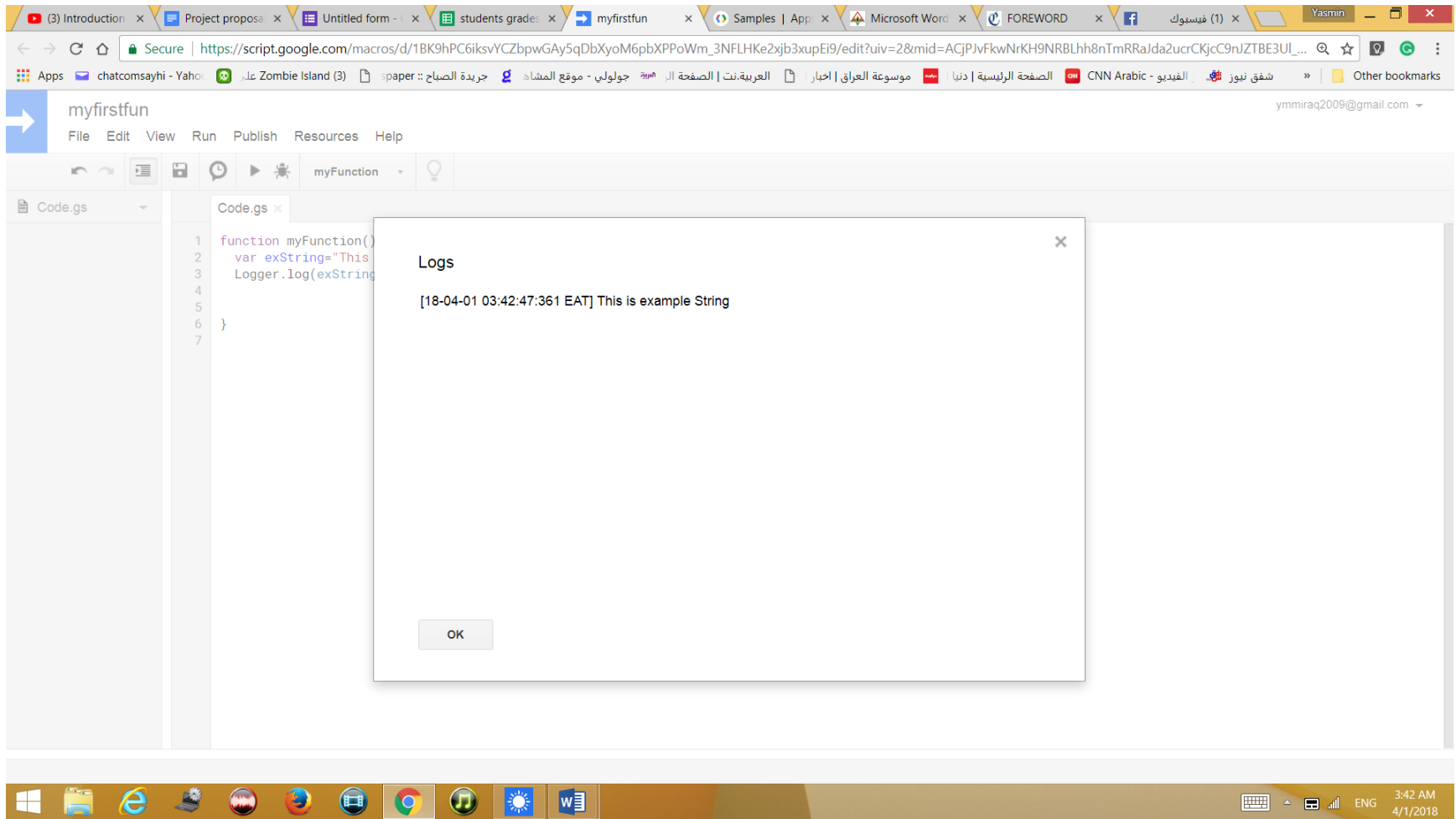
The screenshot displays the Google Apps Script editor interface. The browser's address bar shows the URL: https://script.google.com/macros/d/1BbRGHjPWnJZIPoLRXnjh3VDJeJ62Lrc-DNGVOW-s6FNKD4c9CCJfsbT/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCKjC9nJZTBE3UI_BU.... The editor title is "Untitled project" and the user is logged in as "ymmiraq2009@gmail.com". The menu bar includes "File", "Edit", "View", "Run", "Publish", "Resources", and "Help". The toolbar contains icons for undo, redo, save, and a dropdown menu currently set to "myFunction". The code editor shows a file named "Code.gs" with the following JavaScript code:

```
1 function MyFunction(){
2
3     var exString="this the Example String";
4     Logger.log(exString);
5 }
```

The Windows taskbar at the bottom shows the system tray with the date "3/31/2018" and time "9:17 PM".

View-log

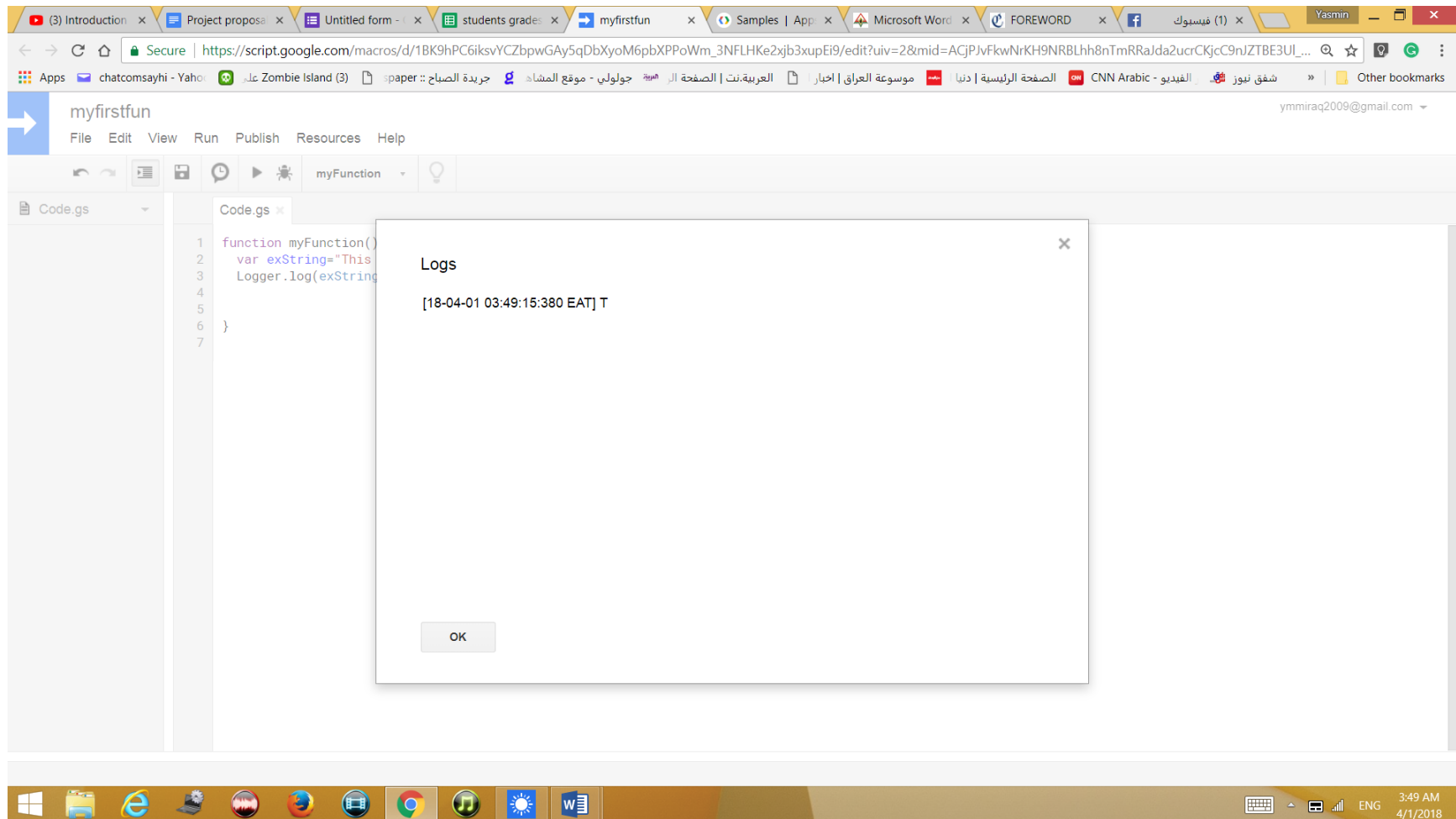




The screenshot shows a web browser window with multiple tabs. The active tab is titled "myfirstfun" and displays the Google Apps Script editor. The editor's address bar shows the URL: https://script.google.com/macros/d/1BK9hPC6iksYCYZbpwGAY5qDbXyoM6pbXPPoWm_3NFLHKe2xb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrkH9NRBLhh8nTmRRaJda2ucrCkjcC9nJZTBE3UI.... The editor interface includes a menu bar with "File", "Edit", "View", "Run", "Publish", "Resources", and "Help". Below the menu is a toolbar with icons for undo, redo, save, refresh, and a dropdown menu currently set to "myFunction". The main code editor area shows a JavaScript function:

```
Code.gs
Code.gs x
1 function myFunction() {
2   var exString="This is string";
3   Logger.log(exString[0]);
4
5
6 }
7
```

The Windows taskbar at the bottom of the screen shows various application icons, including Windows Explorer, Internet Explorer, and Google Chrome. The system tray on the right indicates the time as 3:48 AM on 4/1/2018.

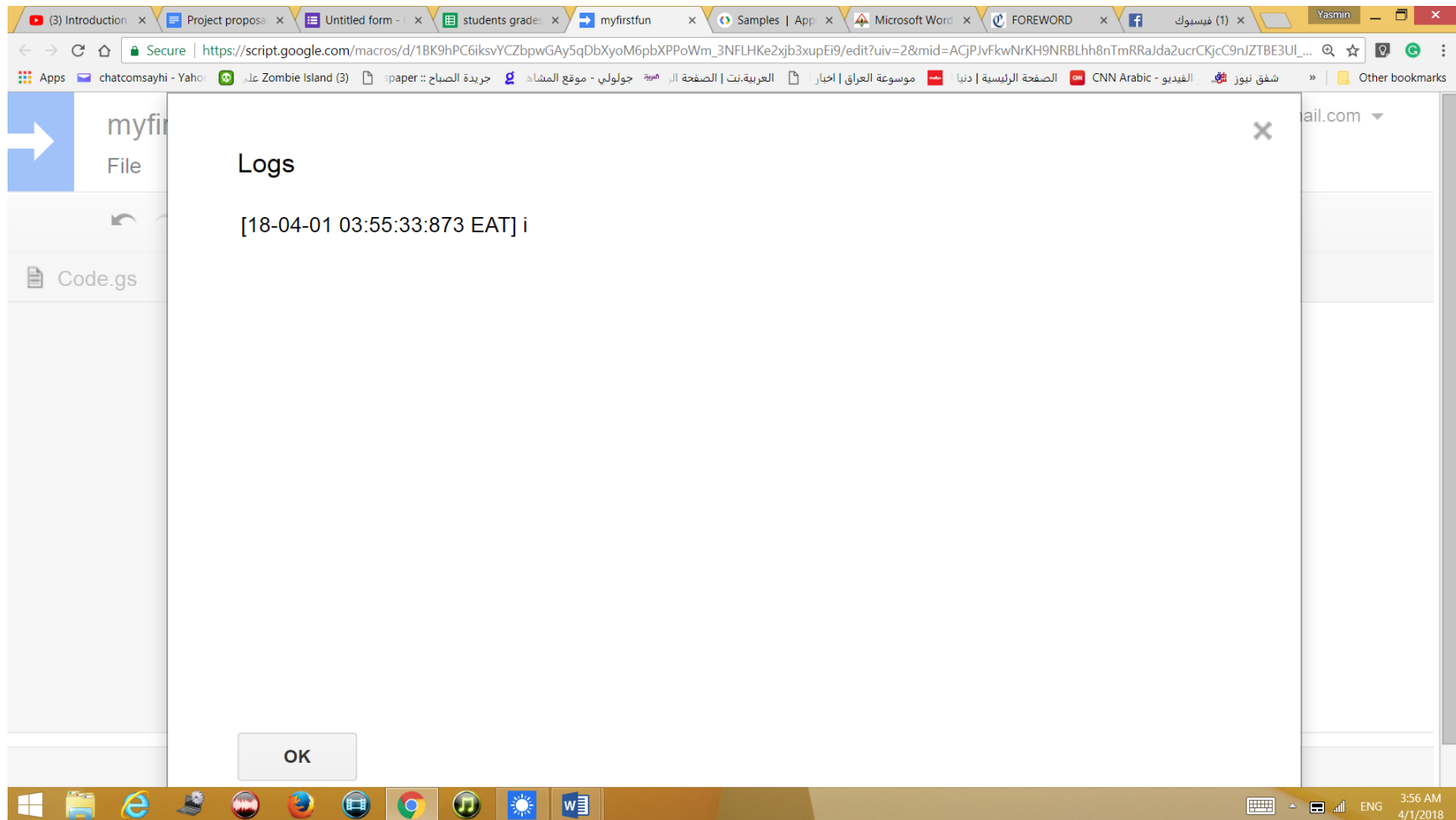


The screenshot shows a web browser window with multiple tabs. The active tab is titled 'myfirstfun' and displays the Google Apps Script editor interface. The editor's title bar shows 'myFunction'. The main workspace contains a code editor with the following JavaScript code:

```
Code.gs x
1 function myFunction() {
2   var exString="This is string";
3   Logger.log(exString[5]);
4
5
6 }
7
```

The browser's address bar shows the URL: https://script.google.com/macros/d/1BK9hPC6iksvYCZbpwGAy5qDbXyoM6pbXPPoWm_3NFLHKe2xjb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLh8nTmRRaJda2ucrCKjcC9nJZTBE3UI...

The Windows taskbar at the bottom shows the system tray with the date and time: 3:55 AM, 4/1/2018.



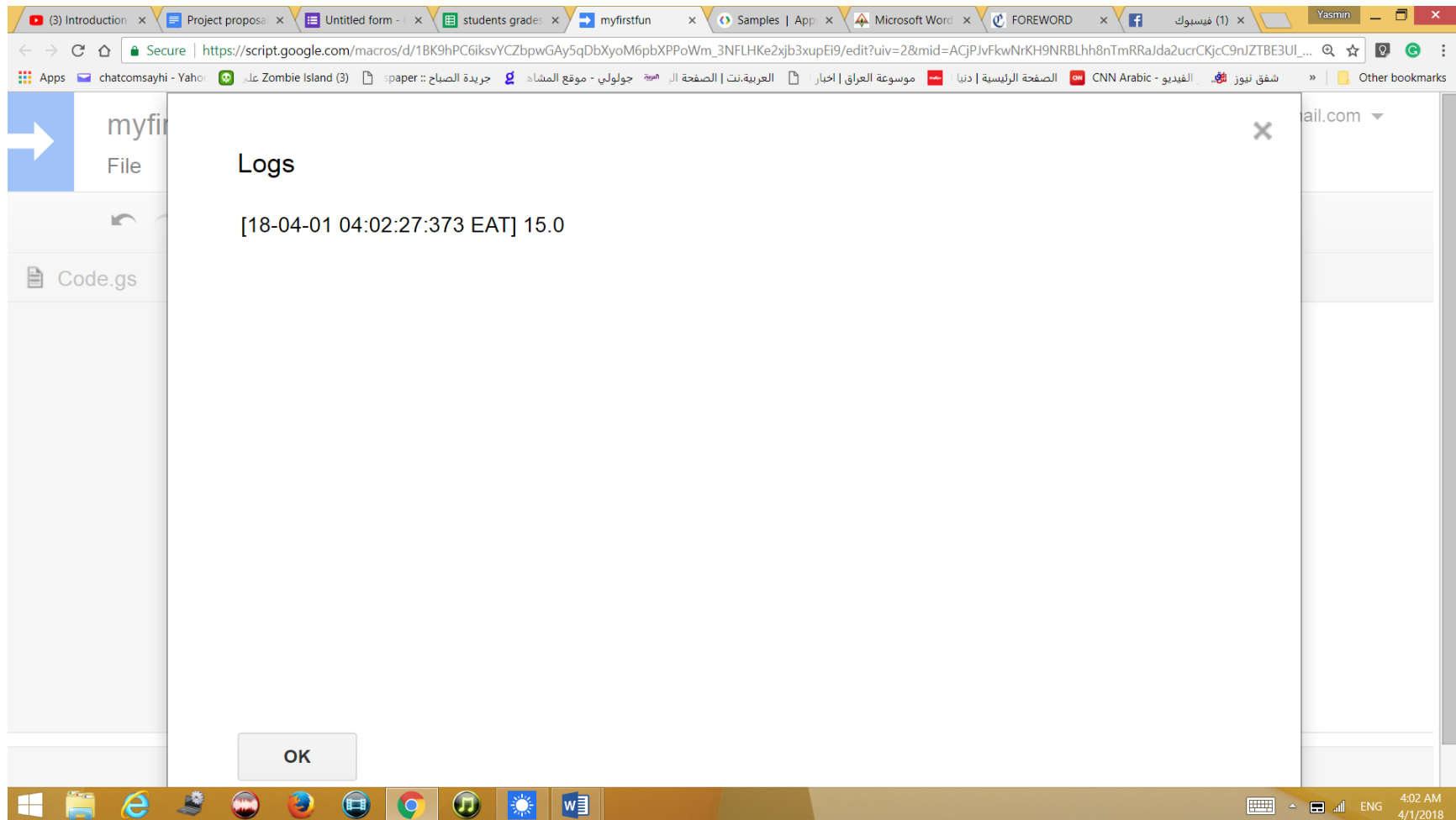
PART3: NUMBERS

1

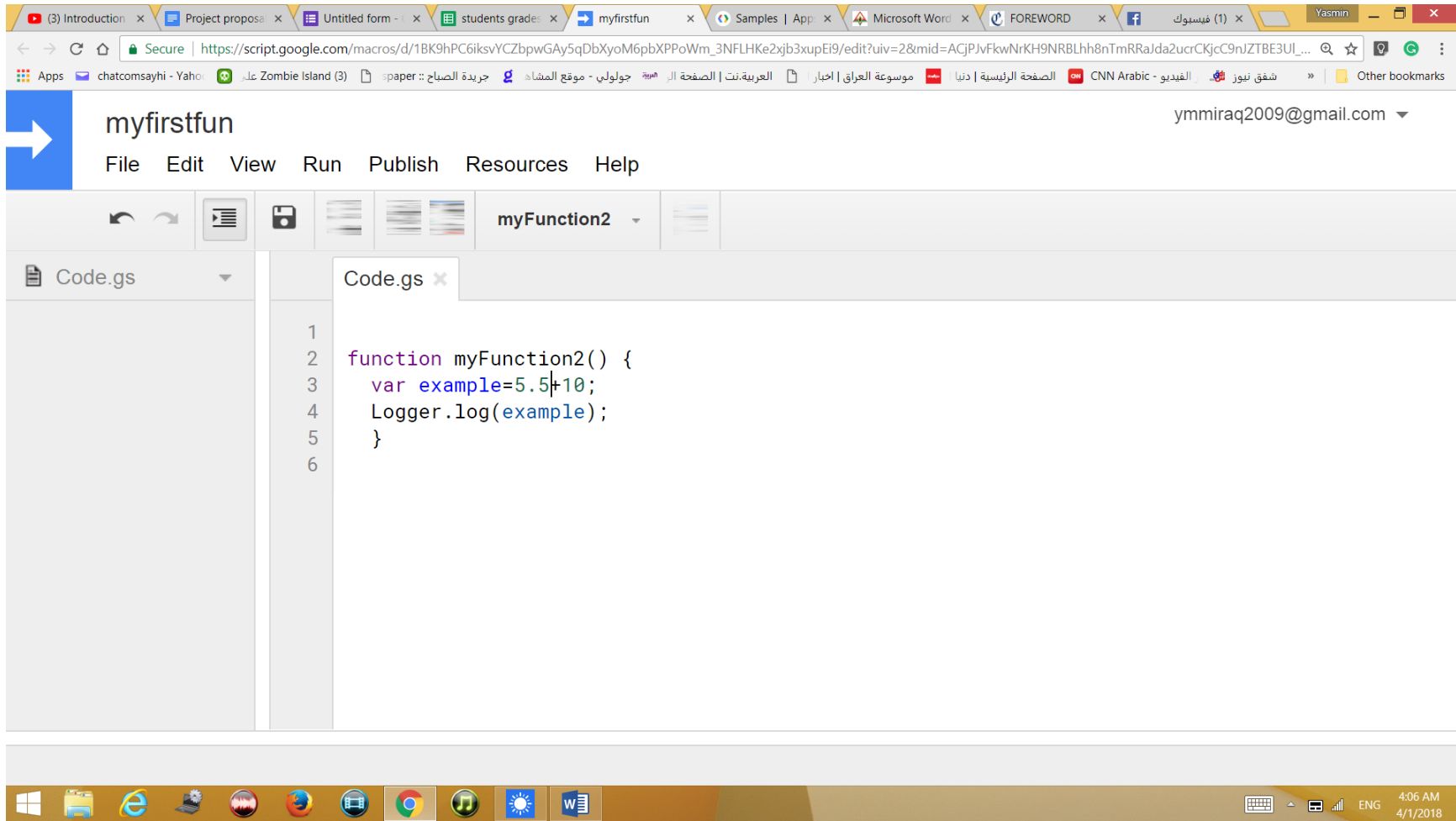
The screenshot shows a web browser window with the Google Apps Script editor open. The browser's address bar shows the URL: https://script.google.com/macros/d/1BK9hPC6iksYCYZbpwGAY5qDbXyOM6pbXPPoWm_3NFLHKe2xjb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrkH9NRBLhh8nTmRRaJda2ucrCKjcC9nJZTBE3U.... The page title is "myfirstfun" and the user is logged in as "ymmiraq2009@gmail.com". The editor interface includes a menu bar (File, Edit, View, Run, Publish, Resources, Help) and a toolbar with icons for undo, redo, save, and run. The main code editor displays the following JavaScript code:

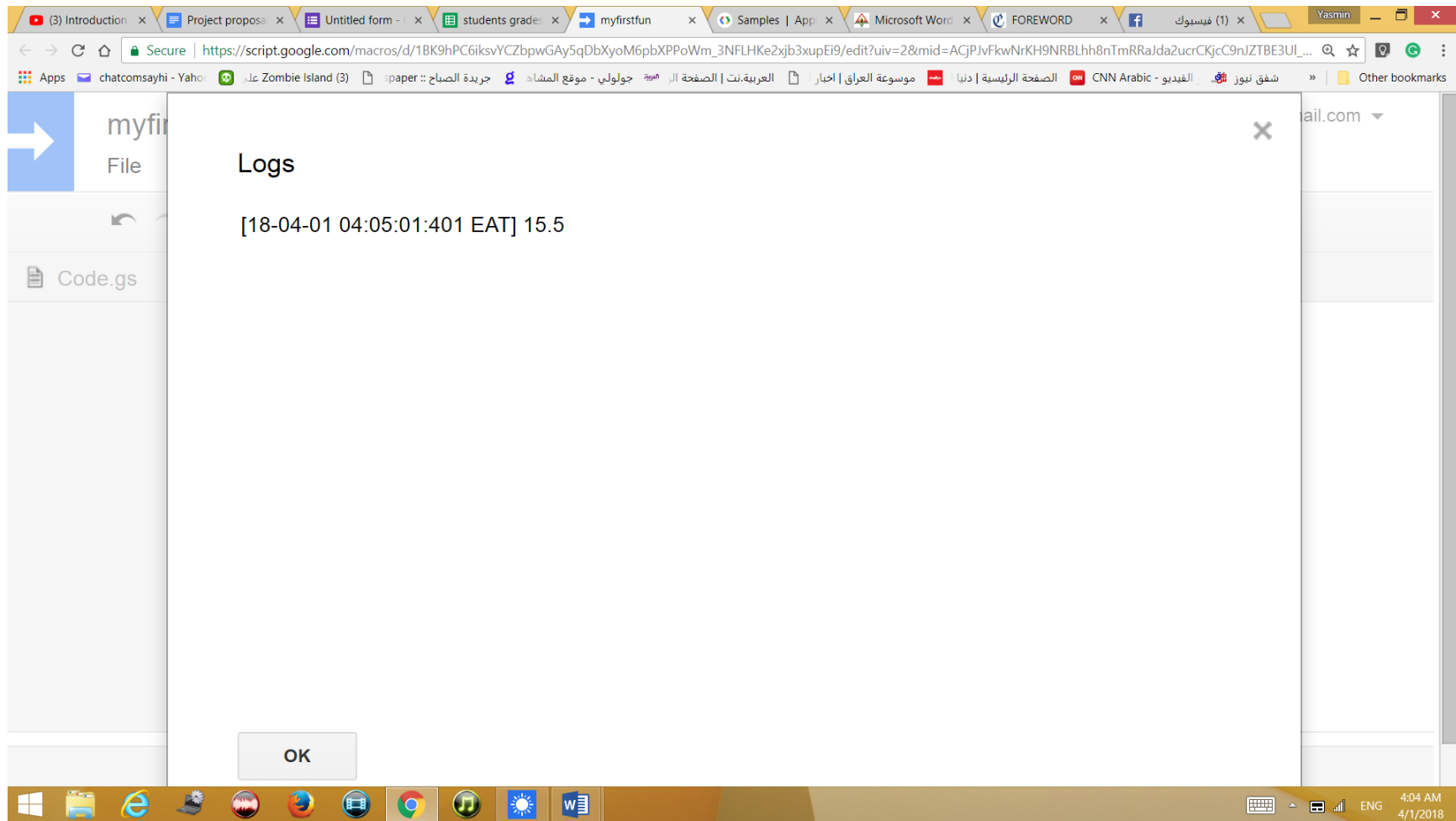
```
Code.gs x
1 function myFunction1() {
2   var exString="This is string";
3   Logger.log(exString[5]);
4 }
5 function myFunction2() {
6   var example=5+10;
7   Logger.log(example);
8 }
9
```

The Windows taskbar at the bottom shows the system tray with the date and time: 4:02 AM, 4/1/2018.

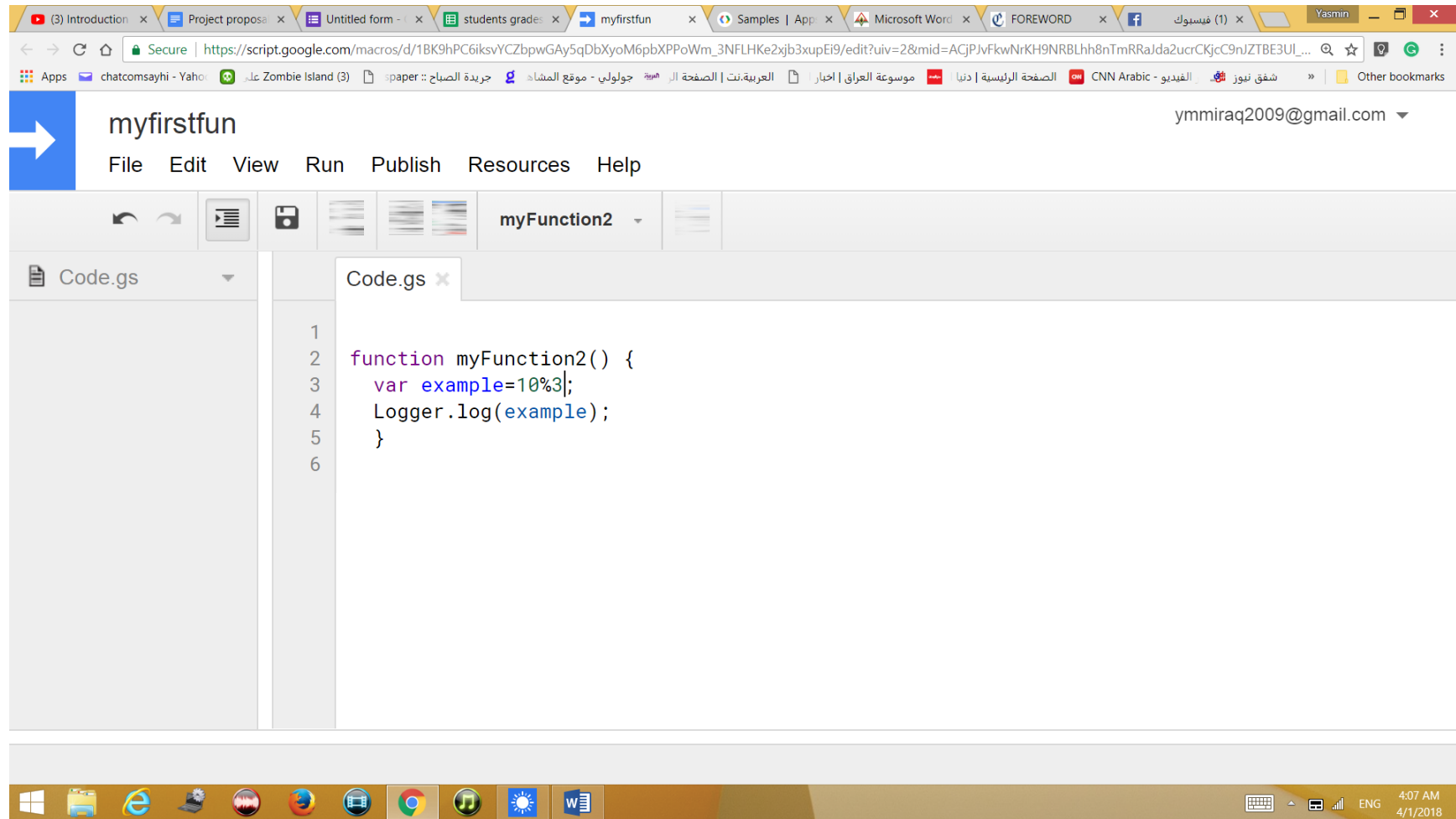


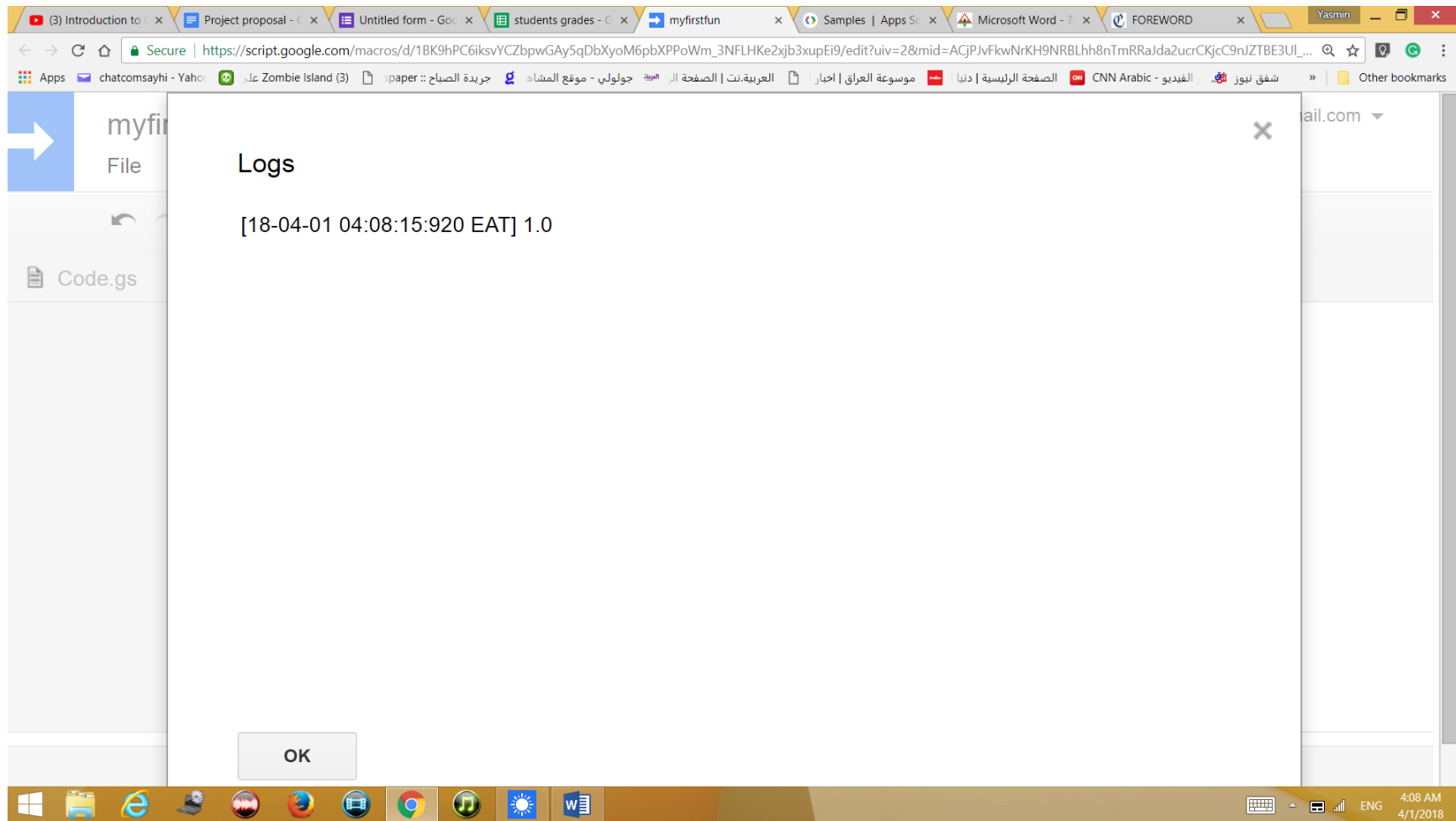
Integer+ float

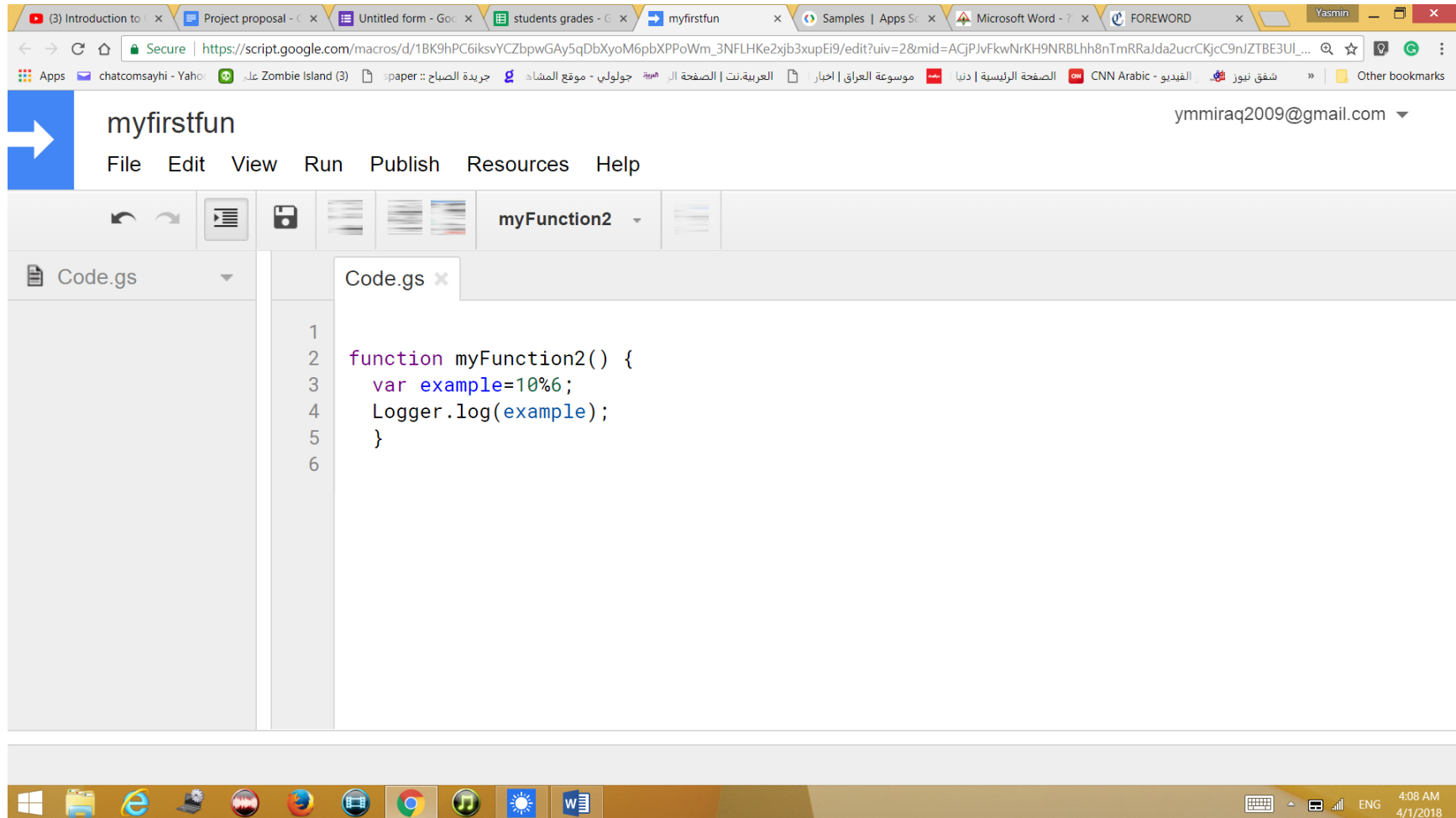




Reminder





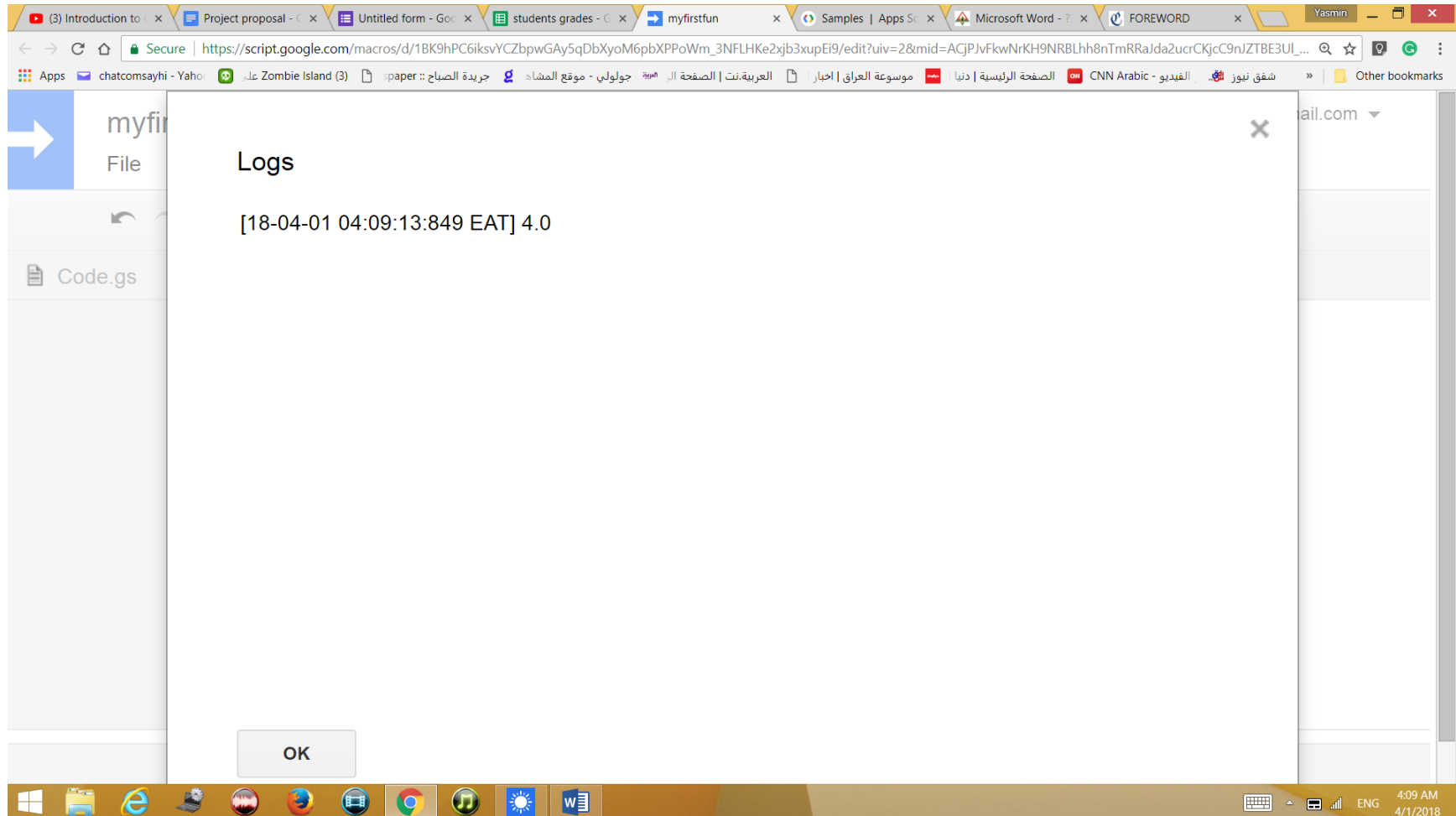


The screenshot displays a web browser window with multiple tabs. The active tab is titled "myfirstfun" and shows the Google Apps Script editor. The address bar contains the URL: https://script.google.com/macros/d/1BK9hPC6iksvYCZbpwGAy5qDbXyoM6pbXPPoWm_3NFLHKe2xjb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCKjcC9nJZTBE3UI.... The user's email address, ymmiraq2009@gmail.com, is visible in the top right corner. The editor interface includes a menu bar with "File", "Edit", "View", "Run", "Publish", "Resources", and "Help". Below the menu is a toolbar with icons for undo, redo, and other editing functions. The main editing area shows a code editor with a file named "Code.gs" open. The code contains a JavaScript function definition:

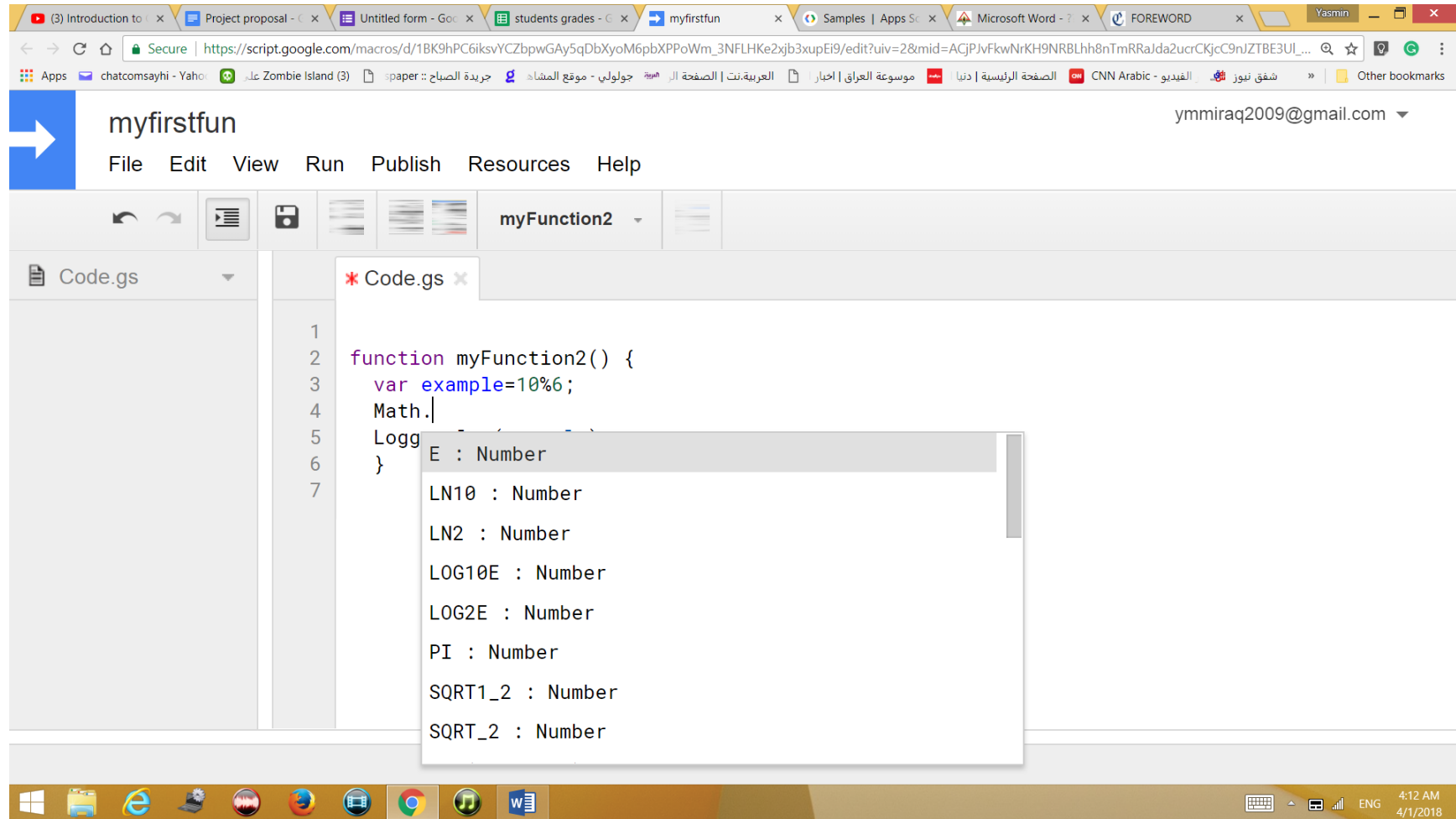
```
1
2 function myFunction2() {
3   var example=10%6;
4   Logger.log(example);
5 }
6
```

The Windows taskbar at the bottom of the screen shows various application icons, including the Start button, File Explorer, Internet Explorer, and several other programs. The system tray on the right indicates the time as 4:08 AM on 4/1/2018, along with keyboard, network, and language (ENG) icons.

11



Math Library



1

25

The screenshot shows a web browser window with multiple tabs. The active tab is 'myfirstfun' at the URL https://script.google.com/macros/d/1BK9hPC6iksYVCzbpwGAY5qDbXyoM6pbXPPoWm_3NFLHKe2xb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrkH9NRBLhh8nTmRRaJda2ucrCKjcC9nJZTBE3UI.... The user is logged in as 'ymmiraq2009@gmail.com'. The editor interface includes a menu bar (File, Edit, View, Run, Publish, Resources, Help) and a toolbar with icons for undo, redo, save, and other functions. The main editor area shows a code editor with a file named 'Code.gs' containing the following JavaScript code:

```
1  
2 function myFunction2() {  
3   var example=10%6;  
4   Math.  
5   Logg  
6   }  
7
```

A dropdown menu is open over the code, listing various Math methods with their return types:

- abs(Number x) : Number
- acos(Number x) : Number
- asin(Number x) : Number
- atan(Number x) : Number
- atan2(Number y, Number x) : Number
- ceil(Number x) : Integer
- cos(Number x) : Number
- exp(Number x) : Number

The Windows taskbar at the bottom shows the time as 4:14 AM on 4/1/2018, with system icons for keyboard, network, and language (ENG).

The screenshot shows a web browser window with multiple tabs. The active tab is titled "myfirstfun" and displays a Google Apps Script editor. The editor's address bar shows a URL from "script.google.com". The user's email "ymmiraq2009@gmail.com" is visible in the top right. The editor interface includes a menu bar (File, Edit, View, Run, Publish, Resources, Help) and a toolbar with icons for undo, redo, and save. The main workspace shows a code editor with a file named "Code.gs" containing the following JavaScript code:

```
1  
2 function myFunction2() {  
3   var example=10%6;  
4   Math.  
5   Logg  
6 }  
7
```

A dropdown menu is open over the code, listing various Math methods with their return types:

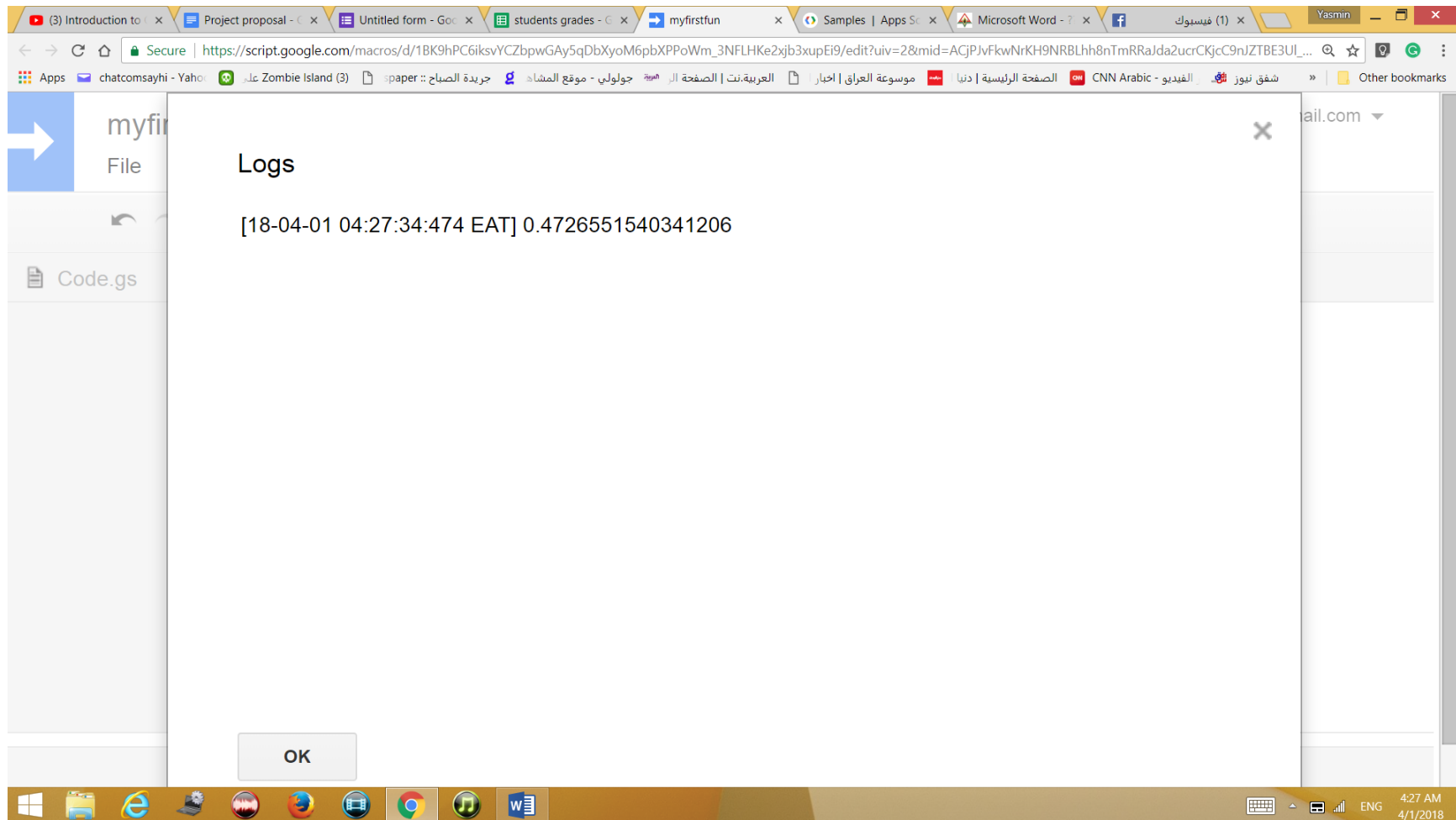
- max(Number... values) : Number
- min(Number... values) : Number
- pow(Number x, Number y) : Number
- random() : Number
- round(Number x) : Integer
- sin(Number x) : Number
- sqrt(Number x) : Number
- tan(Number x) : Number

The Windows taskbar at the bottom shows icons for various applications and the system tray on the right displays the date and time as "4:14 AM 4/1/2018".

The screenshot shows a web browser window with multiple tabs. The active tab is titled "myfirstfun" and displays the Google Apps Script editor interface. The browser's address bar shows the URL: https://script.google.com/macros/d/1BK9hPC6iksvYCZbpwGAy5qDbXyoM6pbXPPoWm_3NFLHKe2xjb3xupEi9/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCKjcC9nZTBE3UI_.... The user's email address, "ymmiraq2009@gmail.com", is visible in the top right corner of the editor. The editor's menu bar includes "File", "Edit", "View", "Run", "Publish", "Resources", and "Help". The toolbar contains icons for undo, redo, save, and other editing functions. A dropdown menu shows "myFunction2". The main code editor area displays a file named "Code.gs" with the following JavaScript code:

```
1  
2 function myFunction2() {  
3   var example=Math.random();  
4   | Logger.log(example);  
5 }  
6
```

The Windows taskbar at the bottom of the screen shows various application icons, including the Start button, File Explorer, Internet Explorer, and Google Chrome. The system tray in the bottom right corner displays the date and time as "4:27 AM 4/1/2018" along with system icons for keyboard, volume, and network.



Functions

Put a function in our spread sheet :

Built-in functions average/count /if statement ...etc

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	grade	average	first grade	second degree	third degree	fourth degree				
2	456	ali	mohanad	4	61.75	56	65	59	67				
3	222	ahmed	saad	4	75.5	78	66	78	80				
4	89	mohmed	ismaiel	4	83	90	65	89	88				
5	234	hassan	mazen	4	82.75	78	78	77	98				
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The formula bar shows: `=AVERAGE(F2:I2)`

User defined function (my own function)All the student email
first letter of first name and second name
@uomustansiriyah.edu.iq

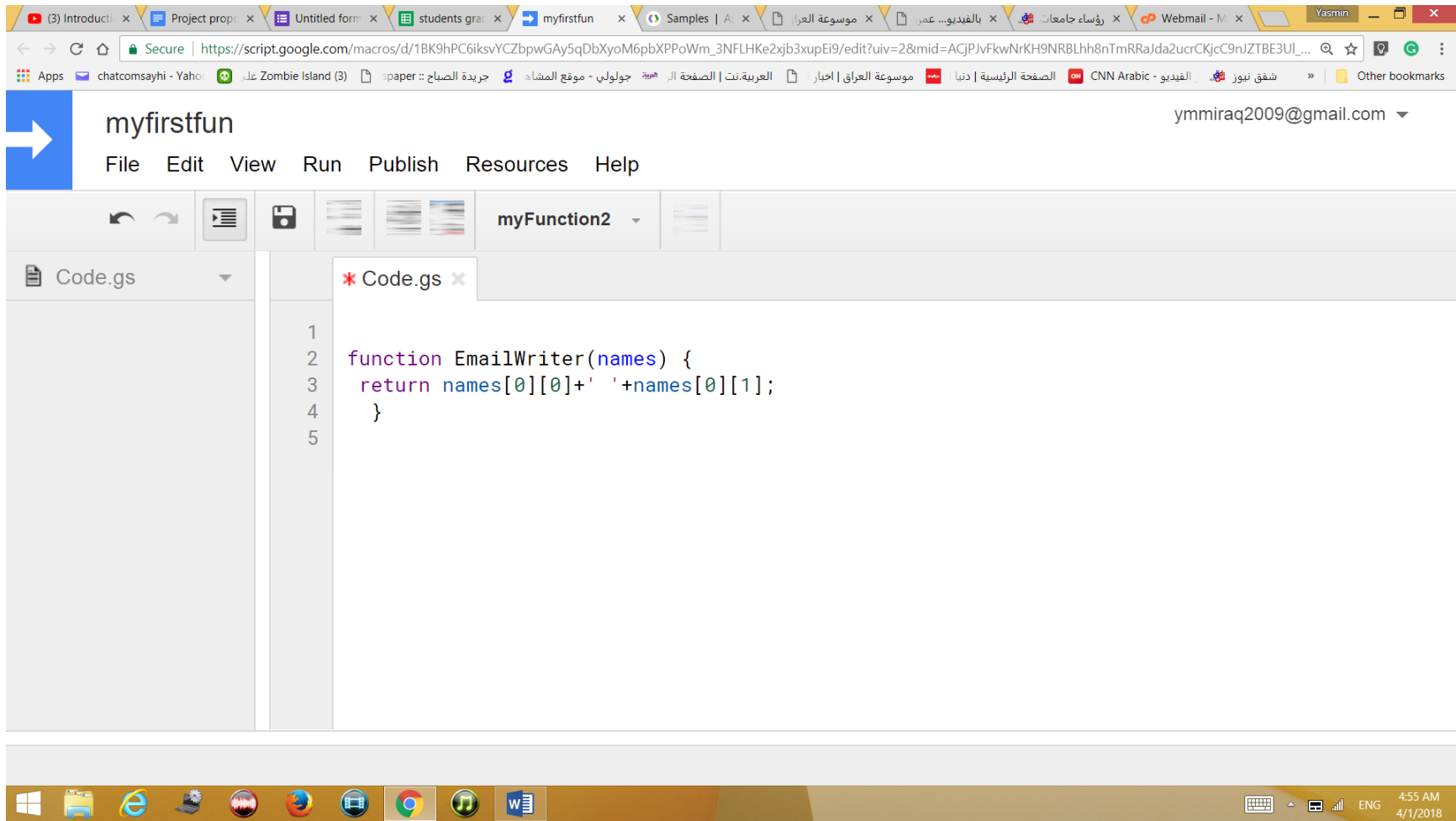
Write a function to do that we call it EmailWriter()

Send data from sheet to function using variable names

```
function EmailWriter(names) {  
  
}
```

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree			
2	456	ali	mohanad		4	61.75	56	65	59	67			
3	222	ahmed	saad		4	75.5	78	66	78	80			
4	89	mohmed	ismaiel		4	83	90	65	89	88			
5	234	hassan	mazen		4	82.75	78	78	77	98			
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The screenshot shows a Google Sheets spreadsheet with the following data table:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree			
2	456	ali	mohanad	=EmailWriter()	4	61.75	56	65	59	67			
3	222	ahmed	saad		4	75.5	78	66	78	80			
4	89	mohmed	ismaiel		4	83	90	65	89	88			
5	234	hassan	mazen		4	82.75	78	78	77	98			
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The formula bar at the top shows the formula: `=EmailWriter()`

The screenshot shows a Google Sheets spreadsheet with the following data table:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree			
2	456	ali	mohanad	=EmailWriter(B2:C2)	4	61.75	56	65	59	67			
3	222	ahmed	saad		4	75.5	78	66	78	80			
4	89	mohmed	ismaiel		4	83	90	65	89	88			
5	234	hassan	mazen		4	82.75	78	78	77	98			
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The formula bar shows the formula: `=EmailWriter(B2:C2)`

The screenshot shows a Google Sheets spreadsheet titled "students grades". The spreadsheet contains a table with student information. The formula bar at the top shows the formula `=EmailWriter(B2:C2)`. The table has the following data:

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree			
2	456	ali	mohanad	ali mohanad	4	61.75	56	65	59	67			
3	222	ahmed	saad	ahmed saad	4	75.5	78	66	78	80			
4	89	mohmed	ismaiel	mohmed ismaiel	4	83	90	65	89	88			
5	234	hassan	mazen	hassan mazen	4	82.75	78	78	77	98			
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```
function EmailWriter(names) {  
  return names[0][0]+' '+names[0][1];  
}
```

EmailWriter is a function that concatenates to elements of array

If I want the email contains the first letter of the first name person with last name the code will be changed

```
function EmailWriter(names) {  
  return names[0][0][0]+names[0][1];  
}
```

Add domain

```
function EmailWriter(names) {  
  return names[0][0][0]+names[0][1]+"@uomustansiriyah.edu.iq"; }
```

or

```
function EmailWriter(names) {  
  return names[0][0][0]+names[0][1]+'@uomustansiriyah.edu.iq';  
}
```

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree	
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	4	61.75	56	65	59	67	
3	222	ahmed	saad	asaad@uomustansiriyah.edu.iq	4	75.5	78	66	78	80	
4	89	mohmed	ismaiel	mismaiel@uomustansiriyah.edu.iq	4	83	90	65	89	88	
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	4	82.75	78	78	77	98	
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toLowerCase() funxtion

```
function EmailWriter(names) {
```

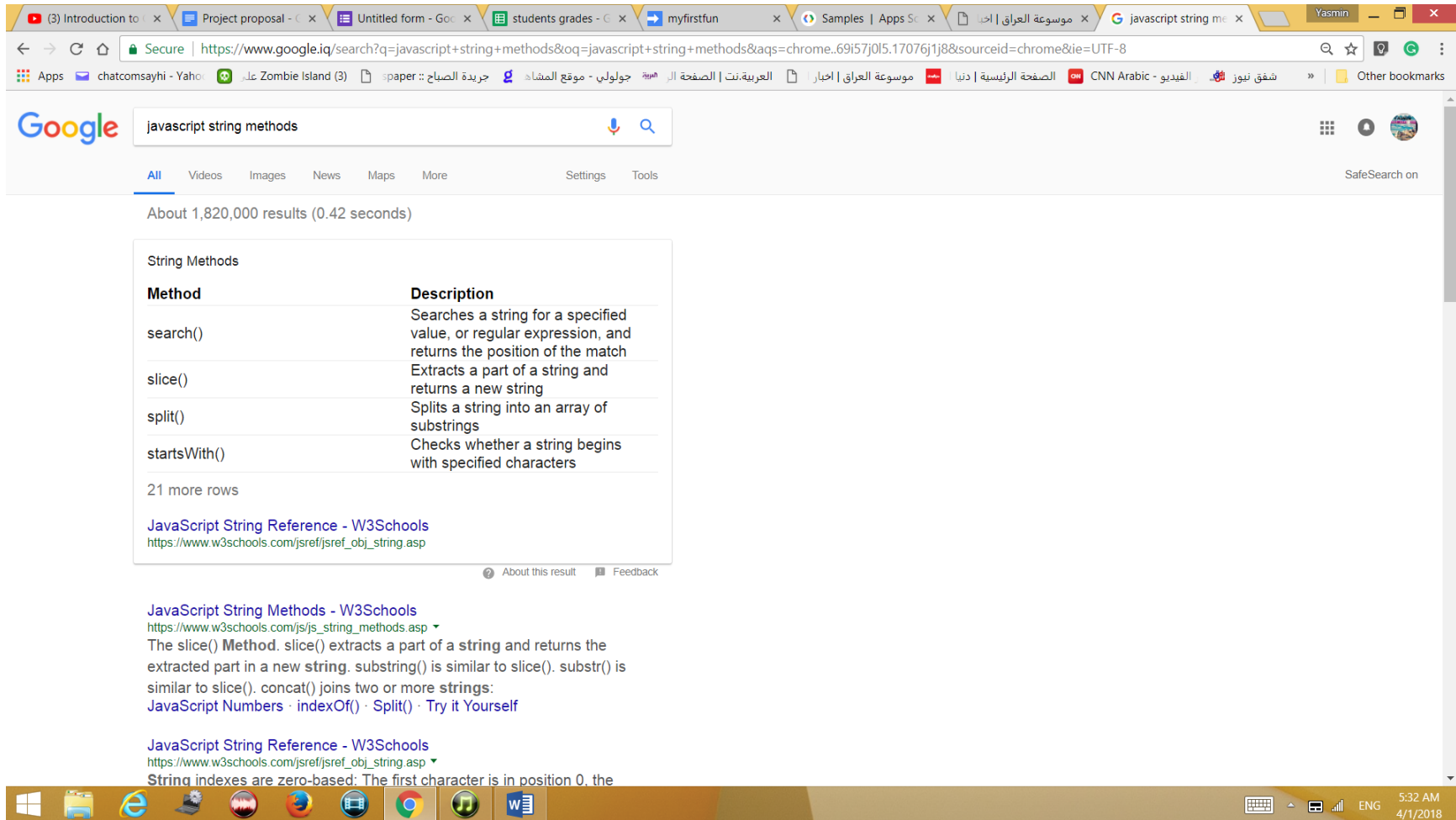
```
  return
```

```
  names[0][0][0].toLowerCase()+names[0][1].toLowerCase()+'@uomustansiriyah.edu  
.iq';
```

```
}
```


The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K
1	student number	first name	last name	Email	grade	average	first grade	second degree	third degree	fourth degree	
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	4	61.75	56	65	59	67	
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	4	75.5	78	66	78	80	
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	4	83	90	65	89	88	
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	4	82.75	78	78	77	98	
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Part5 arrayes

Add a new function random password generator

```
function GETPASSWORD(){  
    // array  
    var words=['pencile','paper','math','student','teacher','textbook','CS'];  
  
    // pick the words from the array randomly generated  
    var randomNumber=Math.random()*10;  
    var password=words[0]+randomNumber;  
  
    return password;  
}
```

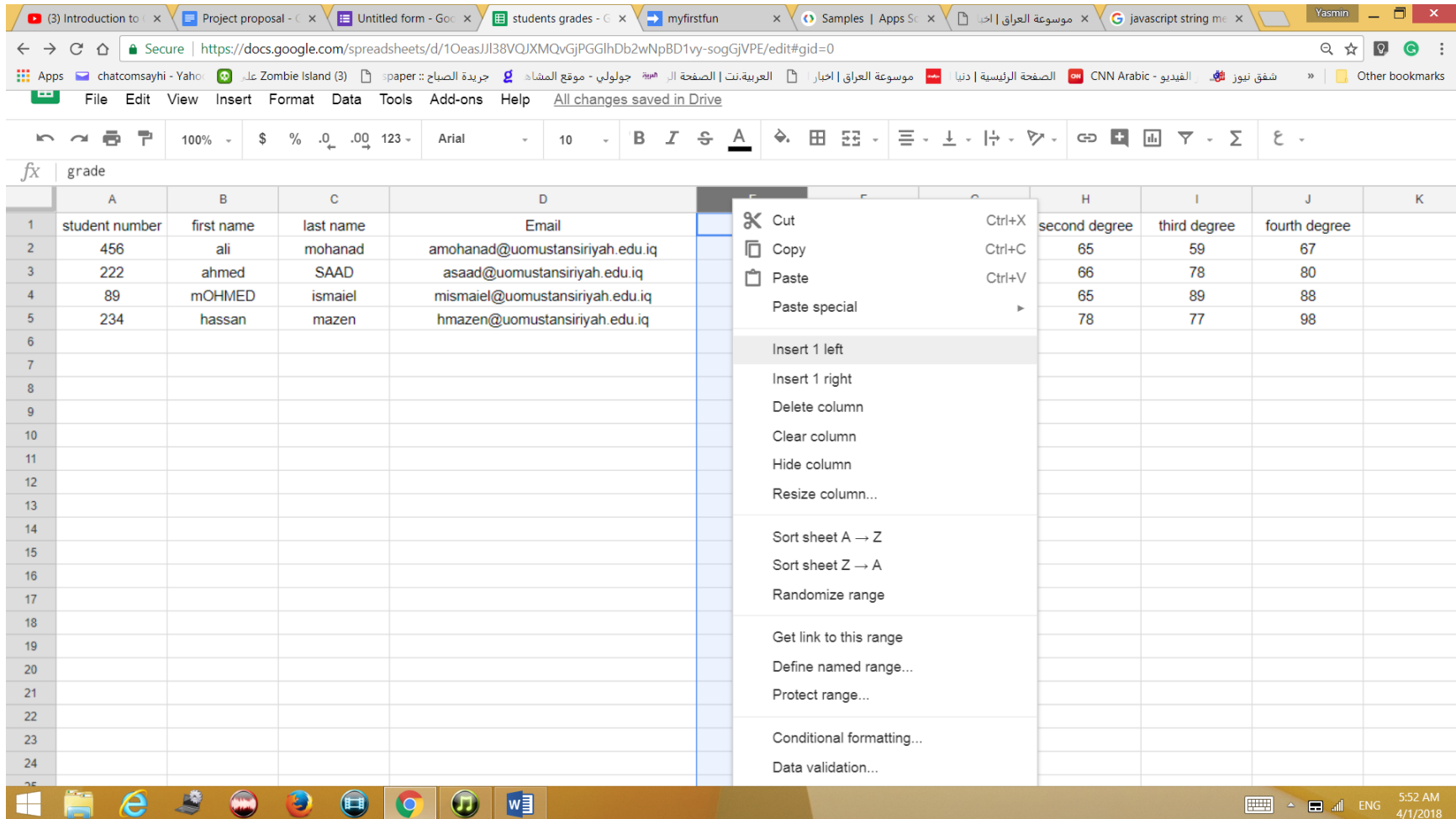
The screenshot shows a web browser window with the Google Apps Script editor open. The editor displays a JavaScript code snippet for a function named 'EmailWriter'. The code is as follows:

```

1
2 function EmailWriter(names) {
3   return names[0][0][0].toLowerCase()+names[0][1].toLowerCase()+'@uomustansiriyah.edu.iq';
4 }
5 function GETPASSWORD(){
6   // array
7   var words=['pencil', 'paper', 'math', 'student', 'teacher', 'textbook', 'CS'];
8
9   // pick the words from the array randomly generated
10  var randomNumber=Math.random()*10;
11  var password=words[0]+randomNumber;
12
13  return password;
14 }
15

```

The interface includes a menu bar with 'File', 'Edit', 'View', 'Run', 'Publish', 'Resources', and 'Help'. A toolbar contains icons for undo, redo, save, and other actions. The code editor is titled 'Code.gs' and shows line numbers from 1 to 15. The browser's address bar shows the URL: https://script.google.com/macros/d/1BK9hPC6iksYVCZbpwGAy5qDbXyoM6pbXPPoWm_3NFLHKe2xjb3xupEI9/edit?uiv=2&mid=ACJPJvFkwNrKH9NRBLhh8nTmRRaJda2ucrCkjcC9nJZTBE3UI...



The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I	J	K
1	student number	first name	last name	Email	password	grade	average	first grade	second degree	third degree	fourth degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	=GETPASSWORD	4	61.75	56	65	59	67
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq		4	75.5	78	66	78	80
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq		4	83	90	65	89	88
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq		4	82.75	78	78	77	98
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The spreadsheet interface includes a menu bar (File, Edit, View, Insert, Format, Data, Tools, Add-ons, Help), a toolbar with various icons, and a formula bar showing '=GETPASSWORD'. The taskbar at the bottom shows the Windows Start button, several application icons, and system tray information including the date and time (5:55 AM, 4/1/2018).

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	pencil0.17272391306543966	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq		4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq		4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq		4	82.75	78	78
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The screenshot shows a Google Sheets spreadsheet with the following data:

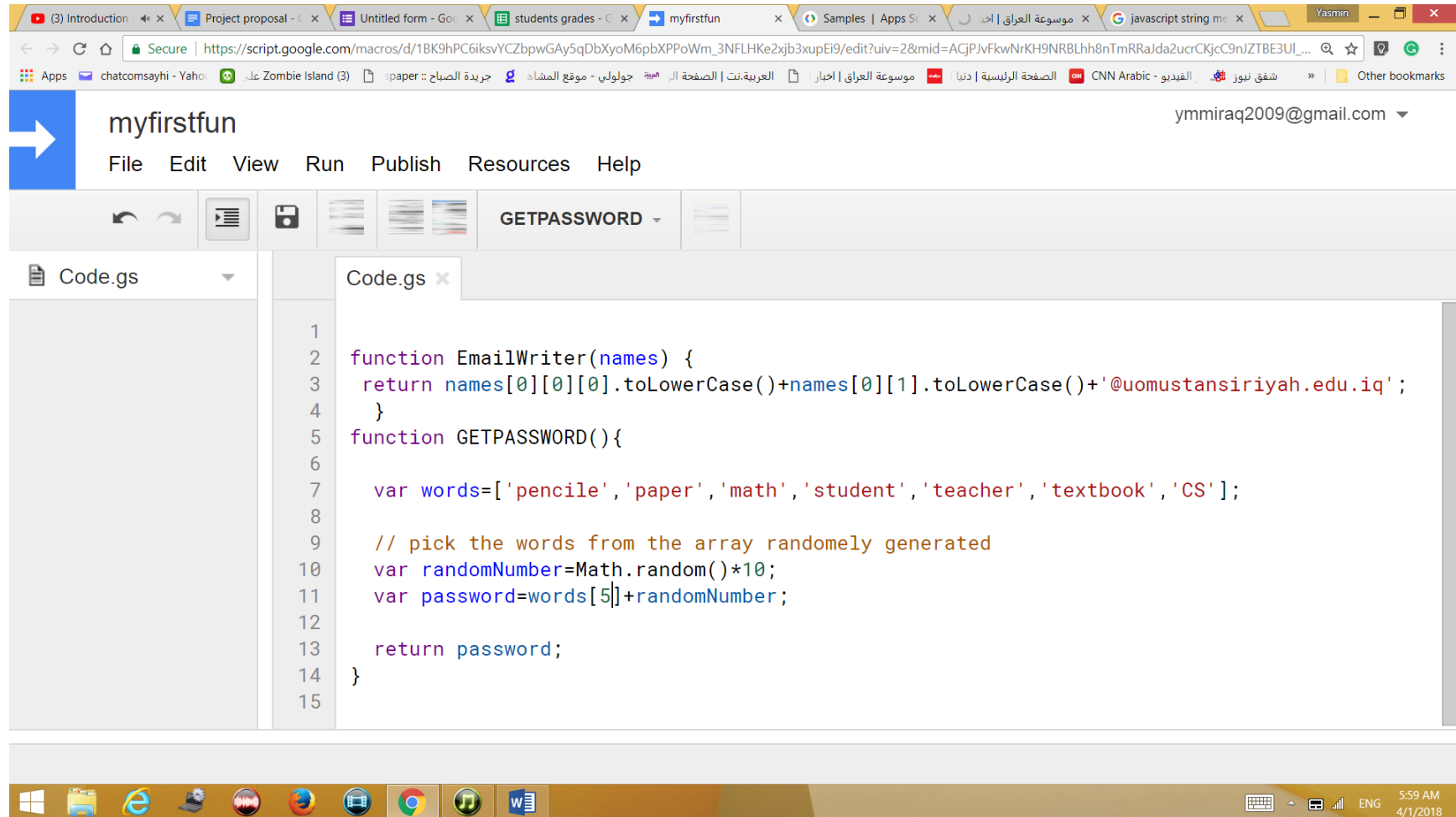
	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	pencile0.17272391306543966	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	Loading...	4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	Loading...	4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	Loading...	4	82.75	78	78
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The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	pencil0.7456513525899623	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	pencil0.5409614347775908	4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	pencil0.6310582964120139	4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	pencil0.031193564841782706	4	82.75	78	78
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1



The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	textbook7.287594210421377	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	textbook7.096303608797094	4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	textbook9.734625764660574	4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	textbook0.29626603423987485	4	82.75	78	78
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1

If I want to round the number of the password I must add another math function

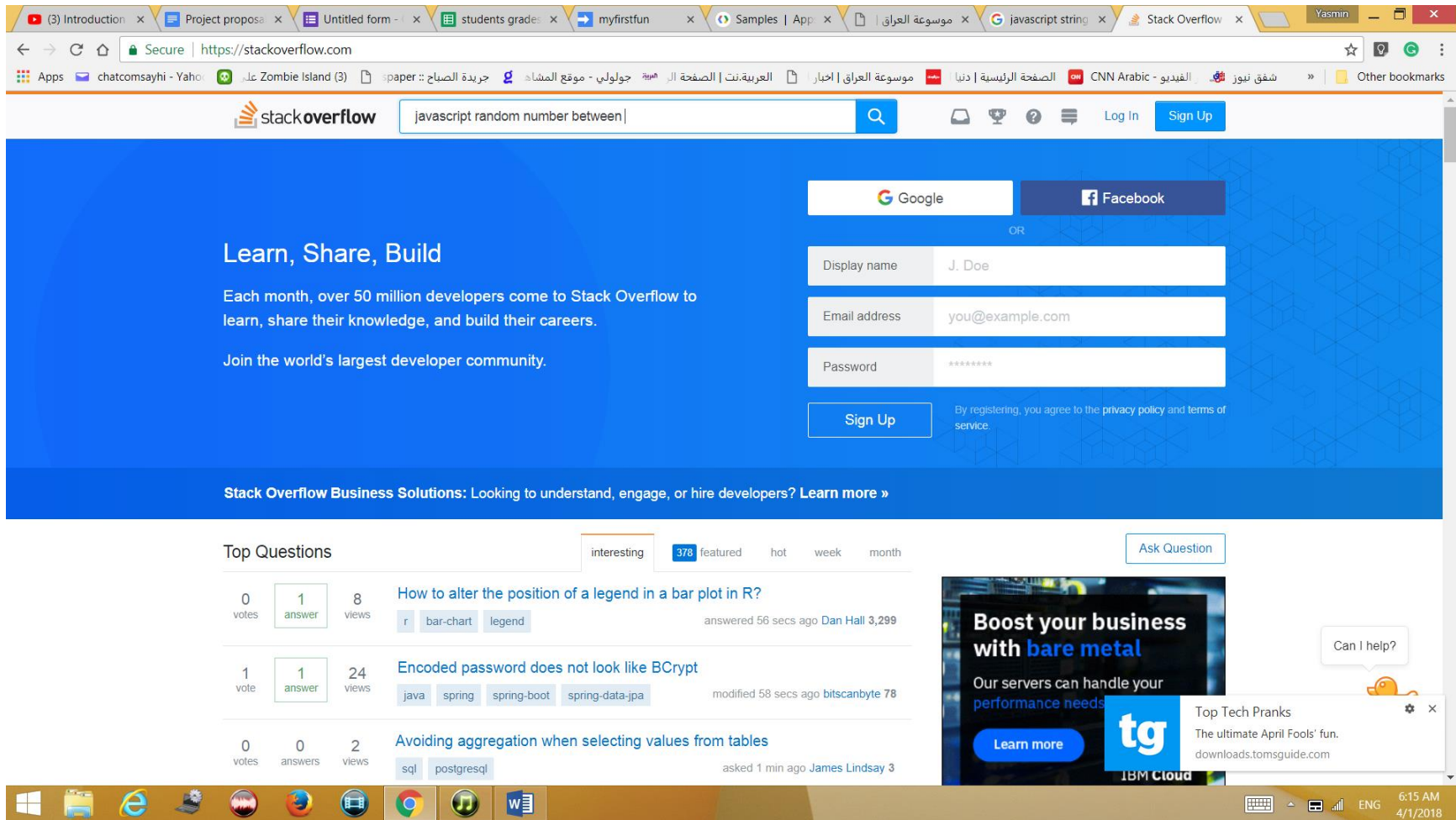
```
function GETPASSWORD(){  
  var  
  words=['pencile','paper','math','student','teacher','textbook','CS'];  
  
  // pick the words from the array randomly generated  
  var randomNumber=Math.floor(Math.random()*10);  
  var password=words[5]+randomNumber;  
  return password;  
}
```

The screenshot shows a Google Sheets spreadsheet with the following data:

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	textbook8	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	textbook4	4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	textbook6	4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	textbook6	4	82.75	78	78
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if I want the selection from array word also be randomly not just word[0] or word[5]

I must calculate how many words in the array and I can add



The screenshot shows a web browser window with multiple tabs. The active tab is a Stack Overflow search page for the query "javascript random number between". The search results are sorted by relevance and show 681 results. The top results are:

- 1162 votes**, 17 answers: "Q: Generate random number between two numbers in JavaScript". Description: "Is there a way to generate a random number in a specified range (e.g. from 1 to 6: 1, 2, 3, 4, 5, or 6) in JavaScript? ...". Asked Feb 10 '11 by Mirgorod.
- 1387 votes**, 21 answers: "Q: Generating random whole numbers in JavaScript in a specific range?". Description: "How can I generate a random whole number between two specified variables in Javascript, e.g. x = 4 and y = 8 would output any of 4, 5, 6, 7, 8? ...". Asked Oct 6 '09 by zacharylu.
- 235 votes**, 20 answers: "Q: Get a random number focused on center". Description: "Is it possible to get a random number between 1-100 and keep the results mainly within the 40-60 range? I mean, it will go out of that range rarely, but I want it to be mainly within that range... Is it possible with JavaScript/jQuery? Right now I'm just using the basic Math.random() * 100 + 1. ...". Asked May 27 '15 by Darryl Huffman.
- 21 votes**: "Q: Random number between -10 and 10 in JavaScript [duplicate]". Description: "Possible Duplicate: Generating random numbers in Javascript How do I get a random number between -10 and 10 in JavaScript?".

On the right side of the page, there are several advertisements and a chat window. The ads include "Boost your business with bare metal" by IBM Cloud, "Work from anywhere" by Amazon Web Services (AWS) Production Operations Engineer, and "DuckDuckGo Site Reliability (Remote OK)". A chat window for "Top Tech Pranks" is also visible.

The screenshot shows a Stack Overflow page with the following content:

- Question:** "Is there a way to generate a random number in a specified range (e.g. from 1 to 6: 1, 2, 3, 4, 5, or 6) in JavaScript?"
- Tags:** javascript, random
- Answers:**
 - Answer 1: `Math.floor(Math.random() * 7) - Amjad Masad` (Feb 10 '11 at 16:45)
 - Answer 2: `Sure.. Math.floor(Math.random()*6+1) - Amjad Masad` (Feb 11 '11 at 0:21)
 - Answer 3: "Nabil Kadimi wrote an article on how to generate negative random numbers too. - mads" (Sep 4 '12 at 13:44)
 - Answer 4: "possible duplicate of Generating random numbers in Javascript in a specific range? - user4463826" (Feb 1 '15 at 2:55)
- Top Answer (Accepted):**

If you wanted to get between 1 and 6, you would calculate:

```
Math.floor(Math.random() * 6) + 1
```

Where:

 - 1 is the start number
 - 6 is the number of possible results (1 + start (6) = end (11))
- Right Sidebar:**
 - BLOG: Quantum Computing Site Launches with the Help of Strangeworks
 - Work from anywhere
 - Wicked Good C# Developer - On-site or Remote (PDQ.COM, Salt Lake City, UT)
 - Front End Engineer - Angular2+ and Ionic2+ (Modus Create, No office location)
 - Machine Learning - Data Engineer (Elastic, No office location)
 - Web developer (Noite, Ciudad de México, Mexico)
- Bottom Bar:** "Join Stack Overflow to learn, share knowledge, and build your career." with sign-up options for Email, Google, and Facebook.

If you wanted to get between 1 and 6, you would calculate:

```
Math.floor(Math.random() * 6) + 1
```

Where:

- 1 is the start number
- 6 is the number of possible results (1 + start (6) - end (1))

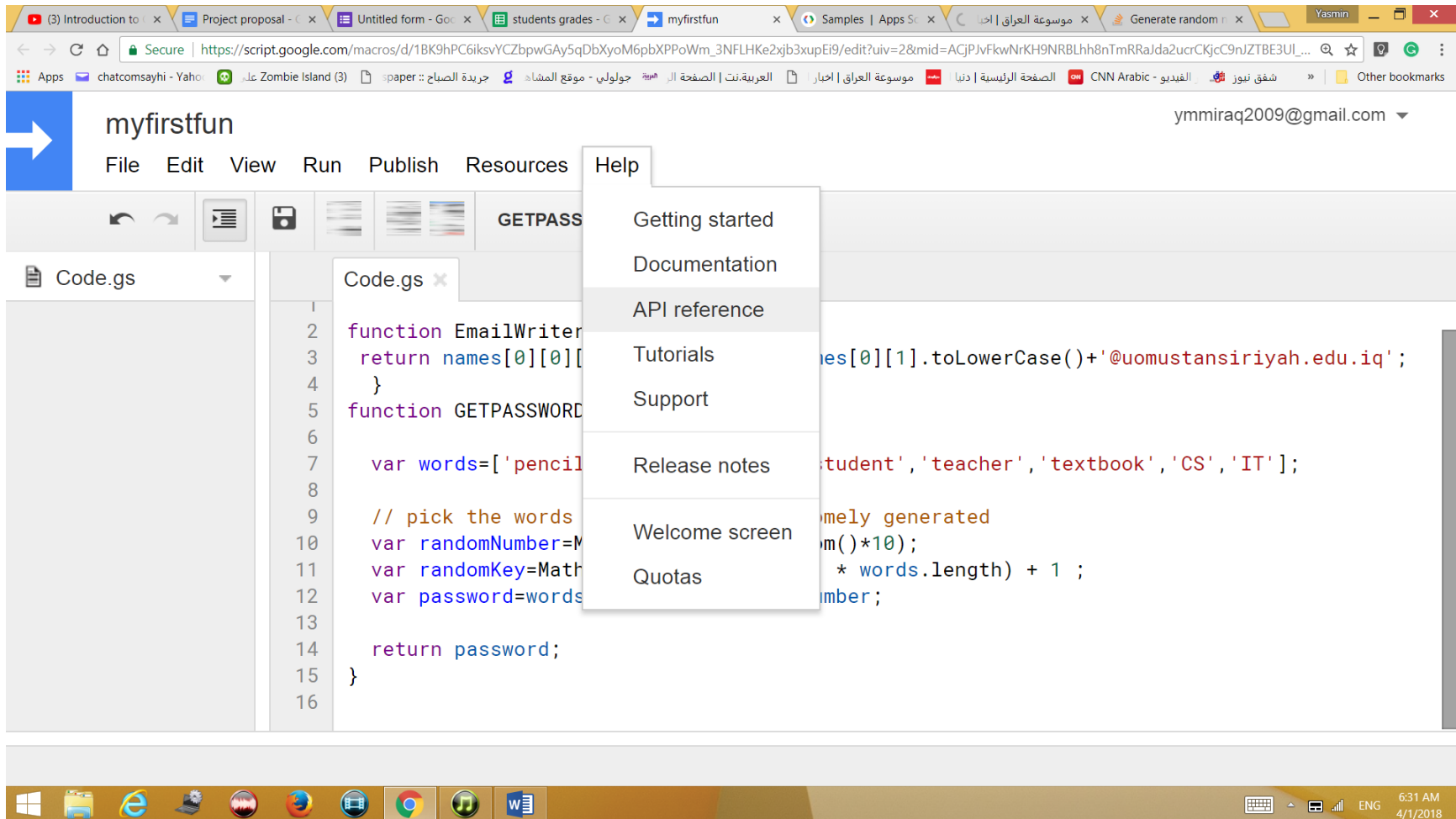
Our code will be

```
function GETPASSWORD(){  
    var words=['pencile','paper','math','student','teacher','textbook','CS','IT'];  
    // pick the words from the array randomly generated  
    var randomNumber=Math.floor(Math.random()*10);  
    var randomKey=Math.floor(Math.random() * words.length) + 1 ;  
    var password=words[5]+randomNumber;  
    return password;}
```

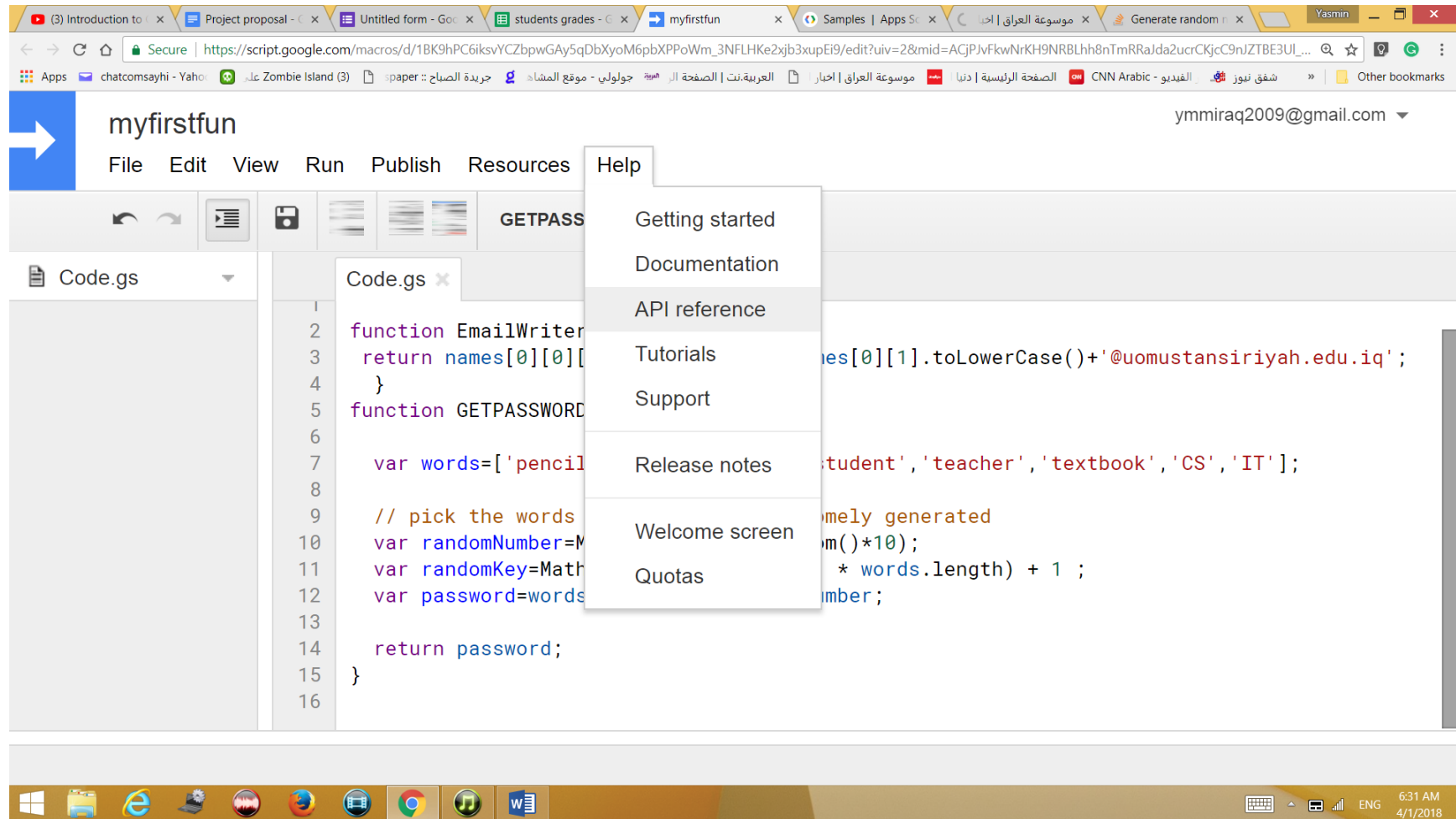
words.length= calculate the elements of the array

I must add randomkey to the password

	A	B	C	D	E	F	G	H	I
1	student number	first name	last name	Email	password	grade	average	first grade	second degree
2	456	ali	mohanad	amohanad@uomustansiriyah.edu.iq	teacher5	4	61.75	56	65
3	222	ahmed	SAAD	asaad@uomustansiriyah.edu.iq	math9	4	75.5	78	66
4	89	mOHMED	ismaiel	mismaiel@uomustansiriyah.edu.iq	student0	4	83	90	65
5	234	hassan	mazen	hmazen@uomustansiriyah.edu.iq	student7	4	82.75	78	78
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For more information you can click API reference and tutorials



The screenshot shows the Google Apps Script reference page for the Calendar Service. The browser address bar shows the URL <https://developers.google.com/apps-script/reference/calendar/>. The page has a purple navigation bar with links for HOME, GUIDES, REFERENCE, SAMPLES, SUPPORT, APPS SCRIPT API, and SEND FEEDBACK. A left sidebar lists 'G Suite Services' with a sub-menu for 'Calendar' containing links to Overview, CalendarApp, Classes, Calendar, CalendarEvent, CalendarEventSeries, EventGuest, EventRecurrence, RecurrenceRule, Enums, Color, EventColor, GuestStatus, and Visibility. The main content area is titled 'Calendar Service' with a 5-star rating. Below the title is a paragraph: 'This service allows a script to access and modify the user's Google Calendar, including additional calendars that the user is subscribed to.' Underneath is a section for 'Classes' with a table listing them. The table has two columns: 'Name' and 'Brief description'. The classes listed are Calendar, CalendarApp, CalendarEvent, CalendarEventSeries, Color, and EventColor. A right sidebar contains a 'Contents' list with links to various classes and their methods/properties. The Windows taskbar at the bottom shows the time as 6:33 AM on 4/1/2018.

Name	Brief description
Calendar	Represents a calendar that the user owns or is subscribed to.
CalendarApp	Allows a script to read and update the user's Google Calendar.
CalendarEvent	Represents a single calendar event.
CalendarEventSeries	Represents a series of events (a recurring event).
Color	An enum representing the named colors available in the Calendar service.
EventColor	An enum representing the named event colors available in the Calendar service.

If you want tutorials click help tutorials

Google Apps Script

HOME GUIDES REFERENCE **SAMPLES** SUPPORT APPS SCRIPT API SEND FEEDBACK

Samples ☆☆☆☆☆

This section provides samples, tutorials and learning resources for Apps Script.

Check out the [Apps Script video library](#) for links to Apps Script introduction videos. The [intro code lab](#) is a structured guide that shows how to build a simple Apps Script application connecting Google Sheets and Google Maps.

You can also find an annotated list of articles in the [Tutorial](#) page. These articles walk you through an Apps Script solution to a specific problem, or show you how to build a specific application, step-by-step.

The other samples listed in the left navigation menu are hosted on [GitHub](#). You can fork these repositories and use the code as a reference for your own projects.

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Windows taskbar: 6:34 AM 4/1/2018