BUSINESS ANALYTICS CLUB

Workshop Series 10.24

VBA-pardy

Janet Ye

BAC

VBA-pardy

100 200 300

400 500

Rules

- The teams will be made up of Left and Right halves of the room. Think of a team name!
- Objective is to score as many points as possible.
- The problem / point value will be projected.
- First team to post a correct answer to the problem on the BAC facebook wall wins: www.facebook.com/SternBAC (specify your team name)
- Team with the winning points will receive a mysterious prize

BAC

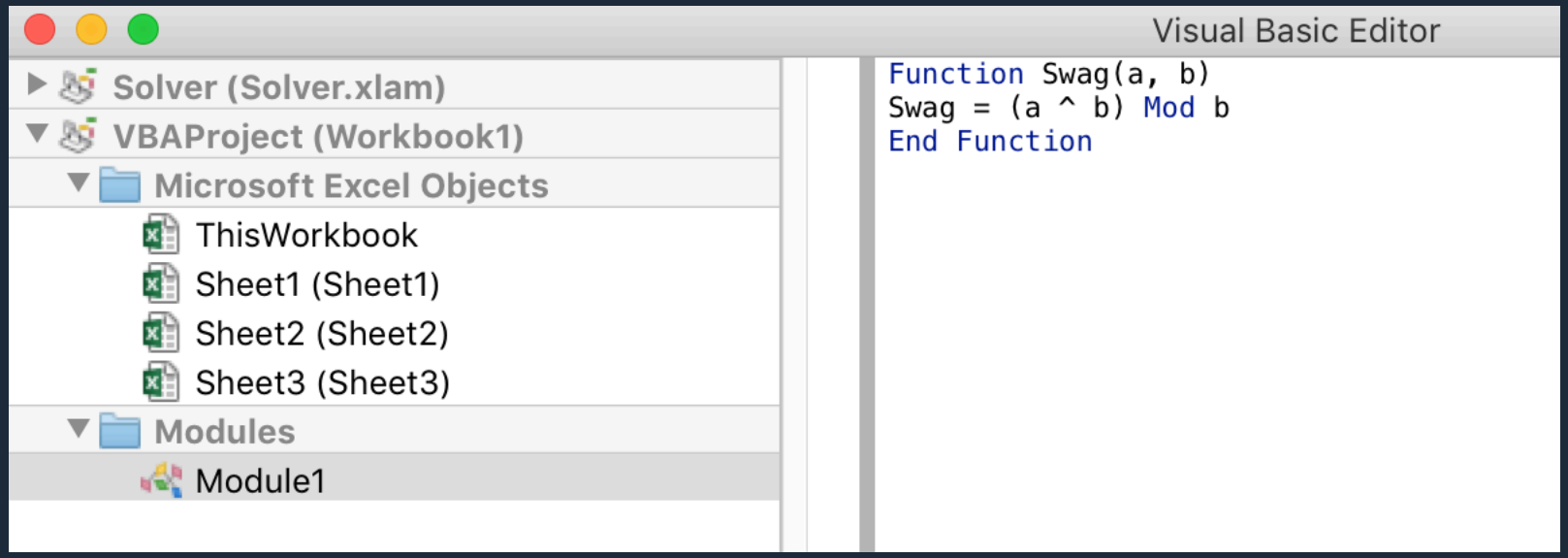
For 100 Points

- Write your own functions `swag`:
  - Take in 2 integers
  - Find their average
  - Take that result and modulo by the second integer
  - Return final result
  - Name this function swag
- Hint: a modulo b is the reminder after a/b (i.e. 5 modulo 3 is 2), performed in Excel via *a Mod b*

BAC

Solution: 100 Points

```
Function Swag(a,b)
Swag = (a^b) Mod b
End Function
```



BAC

VBA-pardy

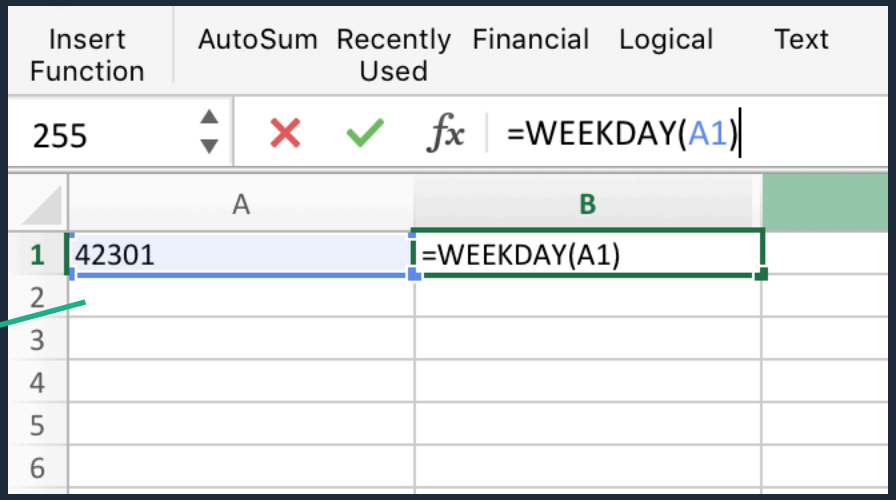
🤗	200	300
400	500	

For 200 Points

- Write your own functions `datecheck`:
  - Take a date (ex: 1/1/2013) and an integer representing day of week
  - Check if the date matches up with the integer
  - *weekday* function should return TRUE if date matches up with the integer, FALSE otherwise
- Hint: Weekday("10/24/2015") returns 7, representing Saturday
  - Sun = 1, Mon = 2, …, Sat = 7

Solution: 200 Points

```
Function datecheck(d, n)
dayofweek = Weekday(d, 1)
datecheck = (n = dayofweek)
End Function
```



10/24/2015

VBA-pardy

🤗	🤖	300
400	500	

BAC

For 300 Points

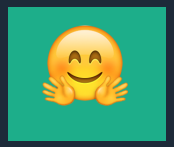
- Write your own subroutine `multtable`:
  - The subroutine should generate a multiplication table like the following
  - For instance, cell(3,4) should give the value 12, cell(5,7) gives 35, etc.
- Hint: consider using a loop within a loop

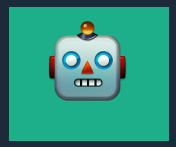
	A	B	C	D	E	F	G	H	I
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

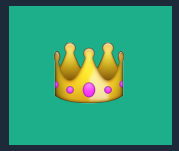
Solution: 300 Points

```
Sub multtable()
For Row = 1 To 9
For Col = 1 To 9
Cells(Row, Col) = Row * Col
Next Col
Next Row
End Sub
```

VBA-pardy







400

500

For 400 Points

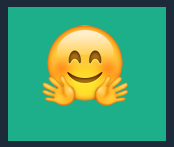
- Modify `buysellsignal`:
  - Fill Column J with 5-day moving average

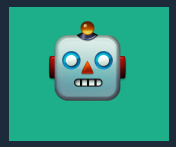
	A	B	C	D	E	F	G	H	I	J
1	Date	Open	High	Low	Close	Volume	Adj Close	Return	3D MA	5D MA
2	10/23/15	52.299999	54.07	52.25	52.869999	134828500	52.869999	0.01089866	0.00213112	0.00351344
3	10/22/15	47.529999	48.950001	47.09	48.029999	54435700	48.029999	0.01051967	0.00081696	0.00341791
4	10/21/15	47.919998	47.990002	47.110001	47.200001	25144300	47.200001	-0.015025	-0.0012837	0.00131398
5	10/20/15	47.439999	47.810001	47.02	47.77	30574000	47.77	0.00695618	0.00719829	0.00444759
6	10/19/15	47.419998	47.880001	47.02	47.619999	29106800	47.619999	0.00421765	0.00487957	0.00447387
7	10/16/15	47.02	47.540001	46.900002	47.509998	25779300	47.509998	0.01042105	0.00368803	0.00371548
8	10/15/15	47.009998	47.029999	46.529999	47.009998	27118900	47.009998	0	0.00257688	0.00019818
9	10/14/15	46.650002	47.099998	46.529999	46.68	24645400	46.68	0.00064304	0.00271878	0.00402121
10	10/13/15	46.560001	47.130001	46.560001	46.889999	18937100	46.889999	0.00708759	0.00011595	0.00261872
11	10/12/15	46.98	47.07	46.5	47	19734100	47	0.00042571	0.00412513	0.00301427
12	10/9/15	47.450001	47.540001	46.919998	47.110001	28397400	47.110001	-0.0071654	0.00186009	0.00677613
13	10/8/15	46.560001	47.52	46.5	47.450001	33679300	47.450001	0.01911512	0.00727036	0.01408226
14	10/7/15	47.099998	47.349998	45.950001	46.799999	27381400	46.799999	-0.0063694	0.00731032	0.00963355
15	10/6/15	46.330002	47.18	46.220001	46.75	27017200	46.75	0.00906536	0.01922187	0.01263941

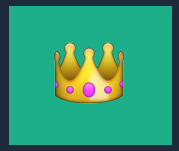
Solution: 400 Points

```
Cells(1, 10) = "5D MA"

five_day_ma_col = 10


If (Cells(Row + 1, return_col) <> "") And (Cells(Row +
2, return_col) <> "") And (Cells(Row + 3, return_col)
<> "") And (Cells(Row + 4, return_col) <> "") Then
Cells(Row, five_day_ma_col) = (Cells(Row, return_col)
+ Cells(Row + 1, return_col) + Cells(Row + 2,
return_col) + Cells(Row + 3, return_col) + Cells(Row +
4, return_col)) / 5
End If
```

VBA-pardy







500

For 500 Points

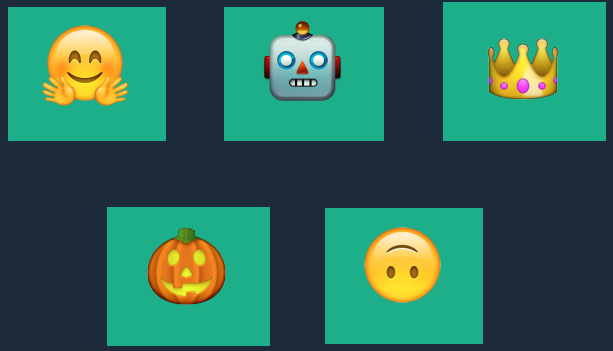
- Modify `buysellsignal`:
  - Fill Column K with Buy/Sell Signal
  - If 3D > 5D, we should BUY
  - If 5D > 3D, we should SELL

	A	B	C	D	E	F	G	H	I	J	K
1	Date	Open	High	Low	Close	Volume	Adj Close	Return	3D MA	5D MA	Buy or Sell
2	10/23/15	52.299999	54.07	52.25	52.869999	134828500	52.869999	0.01089866	0.00213112	0.00351344	SELL
3	10/22/15	47.529999	48.950001	47.09	48.029999	54435700	48.029999	0.01051967	0.00081696	0.00341791	SELL
4	10/21/15	47.919998	47.990002	47.110001	47.200001	25144300	47.200001	-0.015025	-0.0012837	0.00131398	SELL
5	10/20/15	47.439999	47.810001	47.02	47.77	30574000	47.77	0.00695618	0.00719829	0.00444759	BUY
6	10/19/15	47.419998	47.880001	47.02	47.619999	29106800	47.619999	0.00421765	0.00487957	0.00447387	BUY
7	10/16/15	47.02	47.540001	46.900002	47.509998	25779300	47.509998	0.01042105	0.00368803	0.00371548	SELL
8	10/15/15	47.009998	47.029999	46.529999	47.009998	27118900	47.009998	0	0.00257688	0.00019818	BUY
9	10/14/15	46.650002	47.099998	46.529999	46.68	24645400	46.68	0.00064304	0.00271878	0.00402121	SELL
10	10/13/15	46.560001	47.130001	46.560001	46.889999	18937100	46.889999	0.00708759	0.00011595	0.00261872	SELL

Solution: 500 Points

```
Cells(1, 11) = "Buy or Sell"
buy_sell_col = 11

If (Cells(Row, three_day_ma_col) <> "") And
(Cells(Row, five_day_ma_col) <> "") Then
If Cells(Row, three_day_ma_col) > Cells(Row,
five_day_ma_col) Then
Cells(Row, buy_sell_col) = "BUY"
End If
If Cells(Row, three_day_ma_col) < Cells(Row,
five_day_ma_col) Then
Cells(Row, buy_sell_col) = "SELL"
End If
End If
```

VBA-pardy



The mysterious prize…

BAC