

Project 2 Solutions

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Collaborators: N/A

TA help: Kaite Brinkers, guided with problems 2-5, explained new concepts

Online resources used: Stat 190 Example Book (All problems)

Question 1

```
myDF <- read.csv("/class/datamine/data/disney/metadata.csv")
head(myDF)
```

	DATE	WDW_TICKET_SEASON	DAYOFWEEK	DAYOFYEAR	WEEKOFYEAR	MONTHOFYEAR
1	01/01/2015		5	0	0	1
2	01/02/2015		6	1	0	1
3	01/03/2015		7	2	0	1
4	01/04/2015		1	3	1	1
5	01/05/2015		2	4	1	1
6	01/06/2015		3	5	1	1

	YEAR	SEASON	HOLIDAYPX	HOLIDAYM	HOLIDAYN	HOLIDAY	WDWTICKETSEASON
1	2015	CHRISTMAS PEAK	0	5	nyd	1	
2	2015	CHRISTMAS	2	5		0	
3	2015	CHRISTMAS	3	0		0	
4	2015	CHRISTMAS	4	0		0	
5	2015	CHRISTMAS	5	0		0	
6	2015	CHRISTMAS	6	0		0	

	WDWRaceN	WDWeventN	WDWevent	WDWrace	WDWSEASON	WDWMAXTEMP	WDWMINTTEMP
1			0	0	CHRISTMAS PEAK	73.02	59.81
2			0	0	CHRISTMAS	78.00	60.72
3			0	0	CHRISTMAS	83.12	67.31
4			0	0	CHRISTMAS	83.93	67.97
5			0	0	CHRISTMAS	72.30	56.89
6			0	0	CHRISTMAS	77.67	54.88

	WDWMEANTEMP	MKeventN	MKevent	EPeventN	EPevent	HSeventN	HSevent	AKeventN
1	66.41		0		0		0	
2	69.36		0		0		0	
3	75.22		0		0		0	
4	75.95		0		0		0	
5	64.60		0		0		0	
6	66.28		0		0		0	

	AKevent	HOLIDAYJ	inSession	inSession_Enrollment	inSession_wdw
1	0		0%		0%
2	0		0%		0%
3	0		0%		0%
4	0		67%	74%	77%
5	0		67%	74%	77%
6	0		86%	92%	98%

	inSession_dlr	inSession_sqrt_WDW	inSession_sqrt_DLR	inSession_California
1	0%	0%	0%	0%
2	0%	0%	0%	0%
3	0%	0%	0%	0%

4	74%	74%	70%	66%		
5	74%	74%	70%	66%		
6	77%	96%	82%	69%		
	inSession_DC	inSession_Central_FL	inSession_Drive1_FL			
1	0%	0%	0%			
2	0%	0%	0%			
3	0%	0%	0%			
4	94%	68%	57%			
5	94%	68%	57%			
6	94%	100%	98%			
	inSession_Drive2_FL	inSession_Drive_CA	inSession_Florida			
1	0%	0%	0%			
2	0%	0%	0%			
3	0%	0%	0%			
4	56%	70%	79%			
5	56%	70%	79%			
6	98%	76%	100%			
	inSession_Mardi_Gras	inSession_Midwest	inSession_NY_NJ			
1	0%	0%	0%			
2	0%	0%	0%			
3	0%	0%	0%			
4	43%	93%	100%			
5	43%	93%	100%			
6	96%	93%	100%			
	inSession_NY_NJ_PA	inSession_New_England	inSession_New_Jersey			
1	0%	0%	0%			
2	0%	0%	0%			
3	0%	0%	0%			
4	100%	100%	100%			
5	100%	100%	100%			
6	100%	83%	100%			
	inSession_Nothingwest	INSESSION_PLANES	inSession_SoCal	inSession_Southwest		
1	0%	0%	0%	0%		
2	0%	0%	0%	0%		
3	0%	0%	0%	0%		
4	100%	48%	63%	84%		
5	100%	48%	63%	84%		
6	100%	92%	63%	93%		
	SUNSET_WDW	MKEMHMORN	MKEMHMYEST	MKEMHMTOM	MKEMHEVE	MKHOURSEMH
1	17:42	1	1	0	0	18
2	17:43	0	1	0	0	17
3	17:44	0	0	0	0	16
4	17:44	0	0	0	0	15
5	17:45	0	0	0	0	14
6	17:46	0	0	0	0	12
	MKHOURSEMHYEST	MKHOURSEMHTOM	MKEMHEYEST	MKEMHETOM	EPEMHMORN	EPEMHMYEST
1	19	17	0	0	0	0
2	18	16	0	0	0	0
3	17	15	0	0	0	0
4	16	14	0	0	0	0
5	15	12	0	0	0	0
6	14	12	0	0	1	0
	EPEMHMTOM	EPEMHEVE	EPEMHEYEST	EPEMHETOM	EPHOURSEMH	EPHOURSEMHYEST
1	0	0	0	1	13	17

2	0	1	0	0	15	13
3	0	0	1	0	12	15
4	0	0	0	0	12	12
5	1	0	0	0	12	12
6	0	0	0	0	13	12

	EPHOURSEMHTOM	HSEMHMORN	HSEMHMYEST	HSEMHMTOM	HSEMHEVE	HSEMHEYEST
1	15	0	0	0	0	1
2	12	0	0	1	0	0
3	12	1	0	0	0	0
4	12	0	1	0	0	0
5	13	0	0	0	1	0
6	12	0	0	0	0	1

	HSEMHETOM	HSHOURSEMH	HSHOURSEMHYEST	HSHOURSEMHTOM	AKEMHMORN	AKEMHMYEST
1	0	14	16	14	0	1
2	0	14	14	14	0	0
3	0	14	14	11	0	0
4	1	11	14	13	1	0
5	0	13	11	10	0	1
6	0	10	13	10	0	0

	AKEMHMTOM	AKEMHEVE	AKEMHEYEST	AKEMHETOM	AKHOURSEMH	AKHOURSEMHYEST
1	0	0	0	0	11	15
2	0	0	0	0	12	11
3	1	0	0	0	11	12
4	0	0	0	0	12	11
5	0	0	0	0	8	12
6	1	0	0	0	8	8

	AKHOURSEMHTOM	MKOPEN	MKCLOSE	MKHOURS	MKEMHOPEN	MKEMHCLOSE	MKOPENYEST
1	12	8:00	25:00	17	7:00	25:00	8:00
2	11	8:00	25:00	17	8:00	25:00	8:00
3	12	9:00	25:00	16	9:00	25:00	8:00
4	8	9:00	24:00	15	9:00	24:00	9:00
5	8	9:00	23:00	14	9:00	23:00	9:00
6	9	9:00	21:00	12	9:00	21:00	9:00

	MKCLOSEYEST	MKHOURS	MKOPENTOM	MKCLOSETOM	MKHOURSTOM	EPOPEN	EPCLOSE
1	26:00	18	8:00	25:00	17	8:00	21:00
2	25:00	17	9:00	25:00	16	8:00	21:00
3	25:00	17	9:00	24:00	15	9:00	21:00
4	25:00	16	9:00	23:00	14	9:00	21:00
5	24:00	15	9:00	21:00	12	9:00	21:00
6	23:00	14	9:00	21:00	12	9:00	21:00

	EPHOURS	EPEMHOPEN	EPEMHCLOSE	EPOPENYEST	EPCLOSEYEST	EPHOURS	EPHOURS
1	13	8:00	21:00	8:00	25:00	17	
2	13	8:00	23:00	8:00	21:00	13	
3	12	9:00	21:00	8:00	21:00	13	
4	12	9:00	21:00	9:00	21:00	12	
5	12	9:00	21:00	9:00	21:00	12	
6	12	8:00	21:00	9:00	21:00	12	

	EPOPENTOM	EPCLOSETOM	EPHOURSTOM	HSOPEN	HSCLOSE	HSHOURS	HSEMHOPEN
1	8:00	21:00	13	8:00	22:00	14	8:00
2	9:00	21:00	12	8:00	22:00	14	8:00
3	9:00	21:00	12	9:00	22:00	13	8:00
4	9:00	21:00	12	9:00	20:00	11	9:00
5	9:00	21:00	12	9:00	20:00	11	9:00
6	9:00	21:00	12	9:00	19:00	10	9:00

	HSEMHCLOSE	HSOPENYEST	HSCLOSEYEST	HSHOURLSYEST	HSOPENTOM	HSCLOSETOM	
1	22:00	8:00	24:00	16	8:00	22:00	
2	22:00	8:00	22:00	14	9:00	22:00	
3	22:00	8:00	22:00	14	9:00	20:00	
4	20:00	9:00	22:00	13	9:00	20:00	
5	22:00	9:00	20:00	11	9:00	19:00	
6	19:00	9:00	20:00	11	9:00	19:00	
	HSHOURSTOM	AKOPEN	AKCLOSE	AKHOURS	AKEMHOPEN	AKEMHCLOSE	AKOPENYEST
1	14	8:00	19:00	11	8:00	19:00	8:00
2	13	8:00	20:00	12	8:00	20:00	8:00
3	11	8:00	19:00	11	8:00	19:00	8:00
4	11	9:00	20:00	11	8:00	20:00	8:00
5	10	9:00	17:00	8	9:00	17:00	9:00
6	10	9:00	17:00	8	9:00	17:00	9:00
	AKCLOSEYEST	AKHOURLSYEST	AKOPENTOM	AKCLOSETOM	AKHOURSTOM		
1	22:00		14	8:00	20:00	12	
2	19:00		11	8:00	19:00	11	
3	20:00		12	9:00	20:00	11	
4	19:00		11	9:00	17:00	8	
5	20:00		11	9:00	17:00	8	
6	17:00		8	9:00	17:00	8	
	MKDAYSBFORENONEVENT	MKDAYSSINCENONEVENT	MKEVENTSTREAK	MKEVENTSTREAK_F			
1		1	1	0			0
2		1	1	0			0
3		1	1	0			0
4		1	1	0			0
5		1	1	0			0
6		1	1	0			0
	PARTYSEASON_WDW	WDWMINTMP_mean	WEATHER_WDWHIGH	WEATHER_WDWLOW			
1	NONE	53.37571	70.3	50.2			
2	NONE	53.75071	70.3	50.0			
3	NONE	49.21286	70.3	49.9			
4	NONE	48.27071	70.3	49.8			
5	NONE	48.97154	70.3	49.6			
6	NONE	50.09357	70.2	49.5			
	WEATHER_WDWPRECIP	CapacityLost_MK	CapacityLost_EP	CapacityLost_HS			
1	0.12	616246	367265	296273			
2	0.12	616246	367265	296273			
3	0.07	616246	367265	296273			
4	0.12	616246	367265	296273			
5	0.12	616246	367265	306272			
6	0.12	615046	367265	296273			
	CapacityLost_AK	CapacityLostWGT_MK	CapacityLostWGT_EP	CapacityLostWGT_HS			
1	236654	53904354	34718635	26907827			
2	236654	53904354	34718635	26907827			
3	236654	53904354	34718635	26907827			
4	236654	53904354	34718635	26907827			
5	236654	53904354	34718635	27897728			
6	236654	53894754	34718635	26907827			
	CapacityLostWGT_AK	EP09CAPACITY	HS20CAPACITY	MKPRDDAY	MKPRDDT1	MKPRDDT2	
1	20971646	1600	1000	2	12:00	15:30	
2	20971646	1600	1000	2	12:00	15:30	
3	20971646	1600	1000	2	12:00	15:30	
4	20971646	1600	1000	1	15:00		

5	20971646	1600	1000	1	15:00			
6	20971646	1600	1000	1	15:00			
						MKPRDDN	MKPRDNGT	MKPRDNT1 MKPRDNT2
1	Disney Festival of Fantasy Parade		1	22:15				
2	Disney Festival of Fantasy Parade		1	22:15				
3	Disney Festival of Fantasy Parade		1	22:15				
4	Disney Festival of Fantasy Parade		2	20:00	22:00			
5	Disney Festival of Fantasy Parade		2	20:00	22:00			
6	Disney Festival of Fantasy Parade		0					
						MKPRDNN	MKFIREWK	MKFIRET1 MKFIRET2
1	Main Street Electrical Parade		1	21:00				
2	Main Street Electrical Parade		1	21:00				
3	Main Street Electrical Parade		1	21:00				
4	Main Street Electrical Parade		1	21:00				
5	Main Street Electrical Parade		1	21:00				
6			1	20:00				
						MKFIREN	EPFIREWK	EPFIRET1 EPFIRET2
1	Wishes Nighttime Spectacular		1	21:00				
2	Wishes Nighttime Spectacular		1	21:00				
3	Wishes Nighttime Spectacular		1	21:00				
4	Wishes Nighttime Spectacular		1	21:00				
5	Wishes Nighttime Spectacular		1	21:00				
6	Wishes Nighttime Spectacular		1	21:00				
						EPFIREN	HSPRDDAY	HSPRDDT1 HSPRDDN HSFIREWK
1	IllumiNations: Reflections of Earth		0	NA	NA	0		
2	IllumiNations: Reflections of Earth		0	NA	NA	0		
3	IllumiNations: Reflections of Earth		0	NA	NA	0		
4	IllumiNations: Reflections of Earth		0	NA	NA	0		
5	IllumiNations: Reflections of Earth		0	NA	NA	0		
6	IllumiNations: Reflections of Earth		0	NA	NA	0		
						HSFIRET1 HSFIRET2 HSFIREN	HSSHWNGT	HSSHWNT1 HSSHWNT2 HSSHWNN
1			3	18:30	20:00	Fantasmic!		
2			3	18:30	20:00	Fantasmic!		
3			2	18:30	20:00	Fantasmic!		
4			2	19:00	20:30	Fantasmic!		
5			2	19:00	20:30	Fantasmic!		
6			1	19:00		Fantasmic!		
						HSFIREWKS	AKPRDDAY	AKPRDDT1 AKPRDDT2 AKPRDDN AKFIREN AKSHWNGT AKSHWNT1
1		1	0	NA	NA	NA	NA	0
2		1	0	NA	NA	NA	NA	0
3		1	0	NA	NA	NA	NA	0
4		1	0	NA	NA	NA	NA	0
5		1	0	NA	NA	NA	NA	0
6		1	0	NA	NA	NA	NA	0
						AKSHWNT2	AKSHWNN	
1								
2								
3								
4								
5								
6								

Question 2

```
our_vec <- myDF$WDWMAXTEMP  
our_vec[1]
```

```
[1] 73.02
```

```
our_vec[50]
```

```
[1] 51.24
```

```
typeof(our_vec)
```

```
[1] "double"
```

Question 3

```
first50 <- head(our_vec,n=50)  
last50 <- tail(our_vec,n=50)  
mymix = first50 + last50
```

Question 4

```
hot <- myDF$WDWMAXTEMP[myDF$WDWMAXTEMP>=80]  
length(hot)
```

```
[1] 1255
```

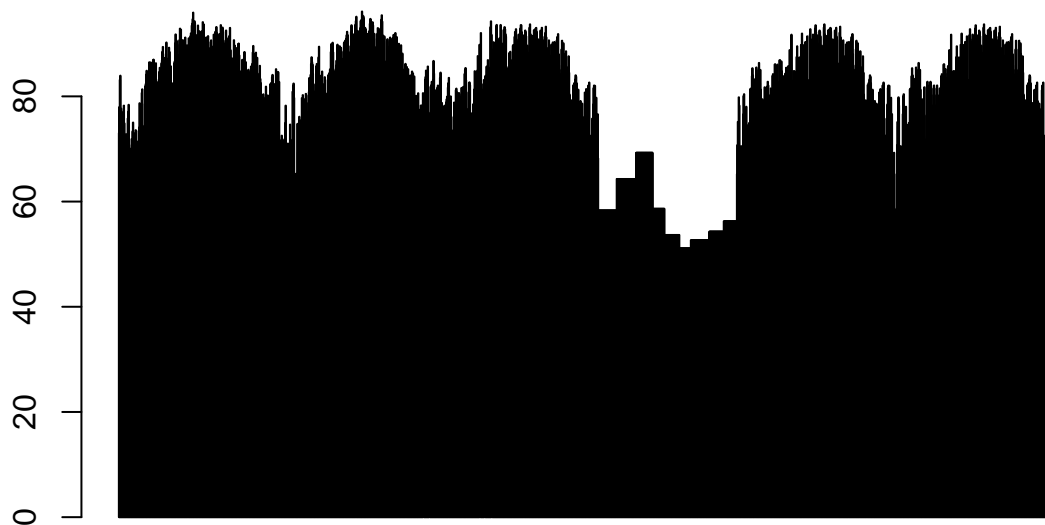
```
mymix = hot + first50
```

Warning in hot + first50: longer object length is not a multiple of shorter
object length

R sums up the vectors by recycling the elements in the shorter one until it is long enough to match it

Question 5

```
barplot(our_vec)
```



Question 6

I like the Average temperature range because it is visually appealing and simple to understand. It gets the message across well without too many distractions. This could be improved by adding colors relating to the seasons. For example white for colder months and yellow for warmer months. One interesting observation is that there is a space around the plot area to indicate the highs and lows range around the average temperature of each month.

Pledge

By submitting this work I hereby pledge that this is my own, personal work. I've acknowledged in the designated place at the top of this file all sources that I used to complete said work, including but not limited to: online resources, books, and electronic communications. I've noted all collaboration with fellow students and/or TA's. I did not copy or plagiarize another's work.

As a Boilermaker pursuing academic excellence, I pledge to be honest and true in all that I do.
Accountable together - We are Purdue.