

In [1]:

```
import pandas as pd
```

In [3]:

```
data=pd.read_csv(r"C:\Users\Bhavya's Surface\Documents\pandas\Udemy.csv")
```

In [4]:

```
data
```

Out[4]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_t
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hours	2014-09-18T
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Intermediate Level	1 hour	2017-04-12T
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Intermediate Level	1.5 hours	2017-04-26T
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1 hour	2017-02-21T
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37 mins	2017-02-21T
...
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 hours	2015-04-20T
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 hours	2015-10-26T
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	All Levels	6.5 hours	2015-11-11T
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False	Free	229	0	33	All Levels	2 hours	2017-05-26T
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	All Levels	1.5 hours	2016-09-26T
...

3682 rows x 11 columns

In [5]:

```
#unique courses offered
data.subject.unique()
```

Out[5]:

```
array(['Musical Instruments', 'Business Finance', 'Graphic Design',
      'Web Development'], dtype=object)
```

In [7]:

```
#max courses
data.subject.value_counts()
```

Out[7]:

```
Web Development      1200
Business Finance     1199
Musical Instruments   680
Graphic Design       603
Name: subject, dtype: int64
```

In [12]:

```
#free of cost subject
data[data.is_paid==False].count().max()
```

Out[12]:

310

In [13]:

```
#paid subjects
data[data.is_paid==True]
```

Out[13]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_t
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hours	2014-09-18T
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Intermediate Level	1 hour	2017-04-12T
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Intermediate Level	1.5 hours	2017-04-26T
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1 hour	2017-02-21T
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37 mins	2017-02-21T
...
3676	498488	Your First Successful Forex Trades - With Case...	True	200	1079	34	16	All Levels	2.5 hours	2015-05-26T
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 hours	2015-04-20T
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 hours	2015-10-26T
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	All Levels	6.5 hours	2015-11-11T
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	All Levels	1.5 hours	2016-09-26T

In [17]:

```
#top selling course
data.sort_values('num_subscribers', ascending=False).max()
```

Out[17]:

course_id	1282064
course_title	7日でマスター ビギナー向け Adobe Illustrator どきどきセミナー
is_paid	True
price	Free
num_subscribers	268923
num_reviews	27445
num_lectures	779
level	Intermediate Level
content_duration	9.5 hours
published_timestamp	2017-07-06T21:46:30Z
subject	Web Development
dtype:	object

In [23]:

```
#least selling course
data.sort_values('num_subscribers').min()
```

Out[23]:

course_id	8324
course_title	#1 Piano Hand Coordination: Play 10th Ballad i...
is_paid	False
price	100
num_subscribers	0
num_reviews	0
num_lectures	0
level	All Levels
content_duration	0
published_timestamp	2011-07-09T05:43:31Z
subject	Business Finance
dtype:	object

In [29]:

```
#graphic design courses where prices < 100
data[(data['subject']=='Graphic Design') & (data.price<'100')]
```

Out[29]:

course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp

In [30]:

```
#graphic design courses where prices == 100
data[(data['subject']=='Graphic Design') & (data.price=='100')]
```

Out[30]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp
47	1269190	7 Secrets To Designing In Black and White	True	100	1000	1	12	All Levels	1.5 hours	2017-06-27
169	983444	Adobe Illustrator Vectors For Hand Letterers	True	100	23	2	9	Beginner Level	37 mins	2016-10-21
184	638040	Adobe Photoshop Essentials: Master Adobe Photo...	True	100	1373	5	63	Beginner Level	2.5 hours	2015-11-18
520	978462	Blender Modelling Series - Volume Two	True	100	1526	3	24	Beginner Level	2 hours	2016-10-12
699	757900	Canva : Book Cover Design	True	100	3377	20	15	Beginner Level	2 hours	2016-02-26
1029	1160004	Design a logo for FREE in Inkscape	True	100	1148	26	42	All Levels	2 hours	2017-05-01
		Diseño impreso -								

1071	1161864	Preimpresión para offset en I...	True	100	33	9	29	All Levels	1.5 hours	2017-05-31'
1444	490392	Getting Started with Illustrator CC	True	100	92	10	57	Beginner Level	5.5 hours	2015-05-01'
1568	727510	How To Become An Etsy Wholesale Seller	True	100	1013	0	25	Beginner Level	2.5 hours	2016-03-29'
1616	996868	How to Design a Logo in Adobe Illustrator	True	100	972	44	24	All Levels	1 hour	2016-11-14'
1697	654038	How To Sell Your Art Online With ETSY	True	100	1338	38	35	Beginner Level	3 hours	2015-11-11'
1773	1012262	Icon & Logo Symbol Design in Adobe Illustrator	True	100	1043	27	30	All Levels	2 hours	2016-11-23'
1786	1246168	Illustrator para criação de peças gráficas, De...	True	100	33	3	41	Beginner Level	1.5 hours	2017-06-13'
1797	1266468	Indesign - Para quem quer trabalhar com Design...	True	100	27	7	12	Intermediate Level	2.5 hours	2017-06-27'
2137	927186	Learn Blender 3D - The introduction course	True	100	739	12	15	Beginner Level	1.5 hours	2016-08-19'
2481	1027080	Logo Portfolio in 1 Hour in Wordpress	True	100	734	9	36	All Levels	1 hour	2016-12-06'
2491	771044	Make Money With Photoshop: Logos, Business Car...	True	100	32	4	21	All Levels	5 hours	2016-08-14'
2576	482924	Mastering Retouching and Restoration (15 proje...	True	100	4927	15	22	All Levels	2.5 hours	2015-04-26'
2704	950894	photoshop - CURSO DE PHOTOSHOP DO BÁSICO AO AV...	True	100	1110	183	77	All Levels	10 hours	2017-02-06'
2706	1243016	Photoshop - Tratamento de pele profissional	True	100	50	5	16	Intermediate Level	1.5 hours	2017-06-06'
2713	1147664	Photoshop CC Egitim Seti (YENİ)	True	100	27	5	202	All Levels	16 hours	2017-03-30'
3479	575040	Typography From A to Z	True	100	317	15	76	All Levels	6 hours	2015-08-07'
3594	908664	Word Swag : Create Stunning Images with the Wo	True	100	2416	19	14	All Levels	1 hour	2016-08-09'

In [33]:

```
#course is related to python  
data[data.course_title.str.contains('Python')].count()
```

Out[33]:

```
course_id          29  
course_title       29  
is_paid            29  
price              29  
num_subscribers    29  
num_reviews        29  
num_lectures       29  
level              29  
content_duration   29  
published_timestamp 29  
subject            29  
dtype: int64
```

In [35]:

```
#courses published in 2015  
data['published_timestamp']=pd.to_datetime(data.published_timestamp)
```

In [36]:

```
data.dtypes
```

Out[36]:

```
course_id          int64  
course_title       object  
is_paid            bool  
price              object  
num_subscribers    int64  
num_reviews        int64  
num_lectures       int64  
level              object  
content_duration   object  
published_timestamp datetime64[ns, UTC]  
subject            object  
dtype: object
```

In [37]:

```
data['Year']=data['published_timestamp'].dt.year
```

In [38]:

```
data[data.Year==2015]
```

Out[38]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_time
10	591880	1 - Concepts of Statistics For Beginners Step ...	True	200	273	4	15	Beginner Level	31 mins	2015-22:48:34
16	302450	10 Numbers Every Business Owner Should Know	True	20	13	1	9	All Levels	1 hour	2015-19:11:24
19	384928	101 Blues riffs - learn how the harmonica supe...	True	200	1350	65	55	Intermediate Level	6.5 hours	2015-21:14:31
23	550842	16 Guitar Chords to Jam With - (Beginner - Int...	True	20	1224	19	20	Beginner Level	1 hour	2015-19:53:56
26	486240	2 Easy Steps To Investment And Avoiding Traps	True	20	828	1	20	All Levels	1 hour	2015-23:18:59
...	
3675	551170	Your First Course on Piano	True	70	2002	34	33	Beginner Level	4 hours	2015-17:07:49
3676	498488	Your First Successful Forex Trades - With Case...	True	200	1079	34	16	All Levels	2.5 hours	2015-20:48:48
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 hours	2015-22:15:17
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 hours	2015-20:04:21
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	All Levels	6.5 hours	2015-18:55:45

1014 rows × 12 columns

In [40]:

```
#max no. of subs for each level of course
data.groupby('level')['num_subscribers'].max()
data.groupby('level').max()
```

Out[40]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	content_duration	published_timestamp
level									
All Levels	1277924	6時間でインターバンク市場を攻略！最短距離でトレード基礎力	True	Free	268923	27445	544	9.5 hours	2017-07-06 21:16:13+00:00
Beginner Level	1282064	7日でマスター ビギナー向け Adobe Illustrator ときどきセミナー	True	Free	161029	5924	779	9.5 hours	2017-07-06 21:46:30+00:00
Expert Level	1275790	[Value Investing] Where White People Keep Their Money	True	95	5172	249	157	9 hours	2017-07-04 18:08:01+00:00
Intermediate Level	1276182	株式投資で本当のテクニカル分析ができるようになる	True	Free	29167	3326	320	9.5 hours	2017-07-06 04:41:54+00:00

In []: