

UDEMY COURSES DATASET

```
In [1]: # This dataset contains all course data for all subjects.
```

```
In [3]: import pandas as pd
```

```
In [4]: data = pd.read_csv('Udemy.csv')
```

```
In [5]: data.head()
```

```
Out[5]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Interme
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Interme
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Interme
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Interme

1.What are all different subjects for which udemy is offering courses ?

In [6]: data.subject

```
Out[6]: 0      Musical Instruments
1      Musical Instruments
2      Musical Instruments
3      Musical Instruments
4      Musical Instruments
...
3677   Web Development
3678   Musical Instruments
3679   Web Development
3680   Business Finance
3681   Graphic Design
Name: subject, Length: 3682, dtype: object
```

In [7]: data.subject.unique()

```
Out[7]: array(['Musical Instruments', 'Business Finance', 'Graphic Design',
              'Web Development'], dtype=object)
```

2. Which subject has the maximum number of courses?

In [8]: *#data.subject.value_counts()*

In [9]: data.head(2)

```
Out[9]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Interme



In [10]: data.subject.value_counts()

```
Out[10]: Web Development      1200
Business Finance      1199
Musical Instruments    680
Graphic Design        603
Name: subject, dtype: int64
```

3. Show all the courses which are free of cost.

```
In [11]: #data[data.is_paid == False]
```

```
In [12]: data.head()
```

```
Out[12]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Interme
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Interme
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Interme
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Interme

```
In [13]: data[data.is_paid == False]
```

Out[13]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
41	286070	5 lecciones que todo guitarrista debe tomar	False	Free	4452	263	14	B
49	696630	7 Ways A Beginner Guitarist Can Sound Better, ...	False	Free	4529	193	7	B
57	955914	A beginner's guide to fingerpicking and strumm...	False	Free	3481	29	20	B
67	270976	A how to guide in HTML	False	Free	7318	205	8	B
74	1214144	¡Triunfar en La Bolsa de Valores No Requiere d...	False	Free	338	7	6	B
...	
3620	552598	WordPress in under an hour - Create/manage you...	False	Free	6474	86	15	
3638	1068590	Wordpress Website Mastery 2017	False	Free	5181	64	22	B
3652	752706	Write quicker HTML5 and CSS 3; productivity ha...	False	Free	13016	286	15	
3674	1257976	Your First 10 Guitar Lessons - Learn how to pl...	False	Free	924	4	18	B
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False	Free	229	0	33	

310 rows × 11 columns



4. Show all the courses which are paid.

```
In [14]: data[data.is_paid == True]
```

Out[14]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	/
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Inte
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Inte
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Inte
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Inte
...	
3676	498488	Your First Successful Forex Trades - With Case...	True	200	1079	34	16	/
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	/
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	/
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	/

3372 rows × 11 columns



5. Which are top Selling Courses?

```
In [15]: #data.sort_values('num_subscribers', ascending = False)
```

```
In [16]: data.head(2)
```

Out[16]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Interme

```
In [17]: data.sort_values('num_subscribers', ascending = False)
```

```
Out[17]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	
776	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	
3385	625204	The Web Developer Bootcamp	True	200	121584	27445	342	
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	Free	120291	5924	30	
3316	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	
...	
2290	1223240	Learn Pirates of the Caribbean by Ear on the P...	True	20	0	0	6	
1267	1258666	Financial Statement Auditing Cycles	True	50	0	0	9	Int
2070	1215926	Kickstarter success in 5 easy steps	True	20	0	0	12	
1931	1247992	Introduction to Project Management for Finance...	True	50	0	0	9	
3165	1087466	Stop Creditors from Harassing you and Avoid Ba...	True	20	0	0	7	

3682 rows × 11 columns



6. Which are the least Selling Courses?


```
In [18]: data.sort_values('num_subscribers',ascending = True)
```

```
Out[18]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
649	1233314	Building a Balanced Scorecard	True	50	0	0	11	Int
3259	1232282	The Cash Flow Statement - An Introduction	True	50	0	0	10	
3261	1275872	The Complete Adobe Spark Course	True	150	0	0	29	
910	726314	Create Beautiful Image Maps for Your Website	True	20	0	0	8	Int
3328	715476	The Cuckoo Strategy to get European Funding	True	160	0	0	6	
...	
3316	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	Free	120291	5924	30	
3385	625204	The Web Developer Bootcamp	True	200	121584	27445	342	
776	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	

3682 rows × 11 columns



7. Show all the courses of Graphic Design where the price is below 100?

```
In [19]: # data[(data.subject == 'Graphic Design') & (data.price < '100')]
```

```
In [20]: data.head(2)
```

```
Out[20]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Interme

```
In [21]: data[(data.subject == 'Graphic Design') & (data.price < '100')]
```

```
Out[21]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	cc
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```
In [31]: data[(data.subject == 'Graphic Design') & (data.price == '100')]
```

Out[31]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures
47	1269190	7 Secrets To Designing In Black and White	True	100	1000	1	12
169	983444	Adobe Illustrator Vectors For Hand Letterers	True	100	23	2	9
184	638040	Adobe Photoshop Essentials: Master Adobe Photo...	True	100	1373	5	63
520	978462	Blender Modelling Series - Volume Two	True	100	1526	3	24
699	757900	Canva : Book Cover Design	True	100	3377	20	15
1029	1160004	Design a logo for FREE in Inkscape	True	100	1148	26	42
1071	1161864	Diseño impreso - Preimpresión para offset en I...	True	100	33	9	29
1444	490392	Getting Started with Illustrator CC	True	100	92	10	57
1568	727510	How To Become An Etsy Wholesale Seller	True	100	1013	0	25
1616	996868	How to Design a Logo in Adobe Illustrator	True	100	972	44	24
1697	654038	How To Sell Your Art Online With ETSY	True	100	1338	38	35
1773	1012262	Icon & Logo Symbol Design in Adobe Illustrator	True	100	1043	27	30
1786	1246168	Illustrator para criação de peças gráficas, De...	True	100	33	3	41

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
1797	1266468	Indesign - Para quem quer trabalhar com Design...	True	100	27	7	12	Int
2137	927186	Learn Blender 3D - The introduction course	True	100	739	12	15	
2481	1027080	Logo Portfolio in 1 Hour in Wordpress	True	100	734	9	36	
2491	771044	Make Money With Photoshop: Logos, Business Car...	True	100	32	4	21	
2576	482924	Mastering Retouching and Restoration (15 proje...	True	100	4927	15	22	
2704	950894	photoshop - CURSO DE PHOTOSHOP DO BÁSICO AO AV...	True	100	1110	183	77	
2706	1243016	Photoshop - Tratamento de pele profissional	True	100	50	5	16	Int
2713	1147664	Photoshop CC Eğitim Seti (YENİ)	True	100	27	5	202	
3479	575040	Typography From A to Z	True	100	317	15	76	
3594	908664	Word Swag : Create Stunning Images with the Wo...	True	100	2416	19	14	

8. List out all the courses that are related with 'Python'

In [23]: `data[(data.subject == 'Python')]`

Out[23]:

course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	cc

```
In [24]: # or second method
# data[data.course_title.str.contains('Python')]
```

```
In [25]: data.head(1)
```

```
Out[25]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels

```
In [26]: data[data.course_title.str.contains('Python')]
```

```
Out[26]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures
216	599504	Advanced Scalable Python Web Development Using...	True	120	1299	56	71
777	47963	Coding for Entrepreneurs: Learn Python, Django...	True	195	23412	799	251
814	631128	Complete Python Web Course: Build 8 Python Web...	True	110	7489	941	173
842	186096	Core: A Web App Reference	True	195	2497	98	154

```
In [27]: len(data[data.course_title.str.contains('Python')])
```

```
Out[27]: 29
```

9. What are the courses that published in the year 2015?

```
In [29]: # data.dtypes
# data['published_timestamp'] = pd.to_datetime(data.published_timestamp)
# data.dtypes
# data['Year'] = data['published_timestamp'].dt.year
# data[data.Year == 2015]
```

```
In [30]: data.head(1)
```

```
Out[30]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels

```
In [31]: data.dtypes
```

```
Out[31]: 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 object
subject            object
dtype: object
```

```
In [32]: data['published_timestamp'] = pd.to_datetime(data.published_timestamp)
```

```
In [33]: data.dtypes
```

```
Out[33]: 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 [34]: data.head(1)
```

```
Out[34]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels

```
In [35]: #data['Year'] = data['published_timestamp'].dt.year  
data['Year'] = data['published_timestamp'].dt.year
```


In [36]: data

Out[36]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	/
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Inte
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Inte
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Inte
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Inte
...	
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	/
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	/
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False	Free	229	0	33	/
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	/

3682 rows × 12 columns



```
In [37]: data[data.Year == 2015]
```

Out[37]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
10	591880	1 - Concepts of Statistics For Beginners Step ...	True	200	273	4	15	E
16	302450	10 Numbers Every Business Owner Should Know	True	20	13	1	9	A
19	384928	101 Blues riffs - learn how the harmonica supe...	True	200	1350	65	55	Inter
23	550842	16 Guitar Chords to Jam With - (Beginner - Int...	True	20	1224	19	20	E
26	486240	2 Easy Steps To Investment And Avoiding Traps	True	20	828	1	20	A
...	
3675	551170	Your First Course on Piano	True	70	2002	34	33	E
3676	498488	Your First Successful Forex Trades - With Case...	True	200	1079	34	16	A
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	A
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	E
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	A

1014 rows × 12 columns

10. What are the Max. Number of Subscribers for Each Level of courses

```
In [38]: #data.groupby('Level')['num_subscribers'].max()
#data.groupby('Level').max()
```

```
In [39]: data.head()
```

```
Out[39]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All L
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2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Interme
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Interme
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Interme

```
In [40]: data.groupby('level')['num_subscribers'].max()
```

```
Out[40]: level
All Levels      268923
Beginner Level  161029
Expert Level    5172
Intermediate Level  29167
Name: num_subscribers, dtype: int64
```

```
In [41]: data.groupby('level').max()
```

Out[41]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lecture
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	54
Beginner Level	1282064	7日でマスター ビギナー向け Adobe Illustrator どきどきセミナー	True	Free	161029	5924	77
Expert Level	1275790	[Value Investing] Where White People Keep Their Money	True	95	5172	249	15
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	32

```
In [42]: data.groupby('level')['num_subscribers'].min()
```

```
Out[42]: level
All Levels      0
Beginner Level  0
Expert Level    1
Intermediate Level  0
Name: num_subscribers, dtype: int64
```

```
In [ ]:
```