

UDEMY COURSES DATASET

This dataset contains all course data for all subjects.

I will analyze this data using Pandas Library.

Here, the questions, are given for the practise and learning purpose.

In [1]:

```
import pandas as pd
```

In [2]:

```
data = pd.read_csv(r'C:\Users\harsh\Desktop\Projects\Python\Udemy Courses Dataset Analysis\Udemy Courses.csv')
```

In [3]:

data

Out[3]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_dur
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 h
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Intermediate Level	1
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	75	482	1	47	Intermediate Level	1.5 h
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37
...
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 h
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 h
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True	40	723	130	37	All Levels	6.5 h
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False	Free	229	0	33	All Levels	2 h
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	All Levels	1.5 h

3682 rows × 11 columns

Q1) What are all different subjects for which Udemy is offering courses?

In [5]:

```
data.subject.unique()
```

Out[5]:

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

Q2) Which subject has the maximum number of courses.

In [6]:

```
data.subject.value_counts()
```

Out[6]:

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

Q3) Show all the courses which free of cost?

In [8]:

```
data[data.is_paid == False]
```

Out[8]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_durat
41	286070	5 lecciones que todo guitarrista debe tomar	False	Free	4452	263	14	Beginner Level	1 h
49	696630	7 Ways A Beginner Guitarist Can Sound Better, ...	False	Free	4529	193	7	Beginner Level	36 m
57	955914	A beginner's guide to fingerpicking and strumm...	False	Free	3481	29	20	Beginner Level	2 hc
67	270976	A how to guide in HTML	False	Free	7318	205	8	Beginner Level	35 m
74	1214144	¡Triunfar en La Bolsa de Valores No Requiere d...	False	Free	338	7	6	Beginner Level	1 h
...
3620	552598	WordPress in under an hour - Create/manage you...	False	Free	6474	86	15	All Levels	1 h
3638	1068590	Wordpress Website Mastery 2017	False	Free	5181	64	22	Beginner Level	2.5 hc
3652	752706	Write quicker HTML5 and CSS 3; productivity ha...	False	Free	13016	286	15	All Levels	1.5 hc
3674	1257976	Your First 10 Guitar Lessons - Learn how to pl...	False	Free	924	4	18	Beginner Level	1 h
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False	Free	229	0	33	All Levels	2 hc

310 rows × 11 columns



Q4) Show all the courses which are paid.

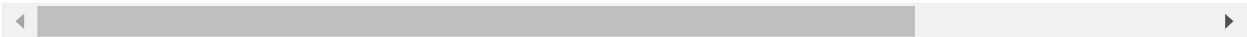
In [10]:

```
data[data.is_paid == True]
```

Out[10]:

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

3372 rows × 11 columns



Q5) Which are top selling courses?

In [11]:

```
data.head(2)
```

Out[11]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hour
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	75	1593	1	41	Intermediate Level	1 hou

In [12]:

```
data.sort_values(by = 'num_subscribers', ascending = False)
```

Out[12]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_dur
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	All Levels	10.5
776	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	Beginner Level	3.5
3385	625204	The Web Developer Bootcamp	True	200	121584	27445	342	All Levels	43
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	Free	120291	5924	30	Beginner Level	3
3316	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	All Levels	30.5
...
2290	1223240	Learn Pirates of the Caribbean by Ear on the P...	True	20	0	0	6	All Levels	32
1267	1258666	Financial Statement Auditing Cycles	True	50	0	0	9	Intermediate Level	2
2070	1215926	Kickstarter success in 5 easy steps	True	20	0	0	12	All Levels	31
1931	1247992	Introduction to Project Management for Finance...	True	50	0	0	9	Beginner Level	2
3165	1087466	Stop Creditors from Harassing you and Avoid Ba...	True	20	0	0	7	Beginner Level	37

3682 rows × 11 columns

Q6) Which are least selling courses?

In [13]:

```
data.sort_values(by = 'num_subscribers', ascending = True)
```

Out[13]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_dur
649	1233314	Building a Balanced Scorecard	True	50	0	0	11	Intermediate Level	2
3259	1232282	The Cash Flow Statement - An Introduction	True	50	0	0	10	Beginner Level	1.5
3261	1275872	The Complete Adobe Spark Course	True	150	0	0	29	All Levels	2
910	726314	Create Beautiful Image Maps for Your Website	True	20	0	0	8	Intermediate Level	37
3328	715476	The Cuckoo Strategy to get European Funding	True	160	0	0	6	All Levels	1
...
3316	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	All Levels	30.5
640	173548	Build Your First Website in 1 Week with HTML5	False	Free	120291	5924	30	Beginner Level	3
...
3385	625204	The Web Developer Bootcamp	True	200	121584	27445	342	All Levels	43
776	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	Beginner Level	3.5
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	All Levels	10.5

3682 rows × 11 columns



Q7) Show all the courses of Graphic Design where the price is 100?

In [17]:

```
data[(data.subject == "Graphic Design") & (data.price == '100')]
```


Out[17]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_dur
47	1269190	7 Secrets To Designing In Black and White	True	100	1000	1	12	All Levels	1.5
169	983444	Adobe Illustrator Vectors For Hand Letterers	True	100	23	2	9	Beginner Level	37
184	638040	Adobe Photoshop Essentials: Master Adobe Photo...	True	100	1373	5	63	Beginner Level	2.5
520	978462	Blender Modelling Series - Volume Two	True	100	1526	3	24	Beginner Level	2
699	757900	Canva : Book Cover Design	True	100	3377	20	15	Beginner Level	2
1029	1160004	Design a logo for FREE in Inkscape	True	100	1148	26	42	All Levels	2
1071	1161864	Diseño impreso - Preimpresión para offset en l...	True	100	33	9	29	All Levels	1.5
1444	490392	Getting Started with Illustrator CC	True	100	92	10	57	Beginner Level	5.5
1568	727510	How To Become An Etsy Wholesale Seller	True	100	1013	0	25	Beginner Level	2.5
1616	996868	How to Design a Logo in Adobe Illustrator	True	100	972	44	24	All Levels	1
1697	654038	How To Sell Your Art Online With ETSY	True	100	1338	38	35	Beginner Level	3
1773	1012262	Icon & Logo Symbol Design in Adobe Illustrator	True	100	1043	27	30	All Levels	2
1786	1246168	Illustrator para criação de peças gráficas, De...	True	100	33	3	41	Beginner Level	1.5
1797	1266468	Indesign - Para quem quer trabalhar com Design...	True	100	27	7	12	Intermediate Level	2.5
2137	927186	Learn Blender 3D - The introduction course	True	100	739	12	15	Beginner Level	1.5
2481	1027080	Logo Portfolio in 1 Hour in Wordpress	True	100	734	9	36	All Levels	1

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_dur
2491	771044	Make Money With Photoshop: Logos, Business Car...	True	100	32	4	21	All Levels	5
2576	482924	Mastering Retouching and Restoration (15 proje...	True	100	4927	15	22	All Levels	2.5
2704	950894	photoshop - CURSO DE PHOTOSHOP DO BÁSICO AO AV...	True	100	1110	183	77	All Levels	10
2706	1243016	Photoshop - Tratamento de pele profissional	True	100	50	5	16	Intermediate Level	1.5
2713	1147664	Photoshop CC Egitim Seti (YENİ)	True	100	27	5	202	All Levels	16
3479	575040	Typography From A to Z	True	100	317	15	76	All Levels	6
3594	908664	Word Swag : Create Stunning Images With the Wo...	True	100	2416	19	14	All Levels	1

Q8) List out all the courses that are related with 'Python'?

In [19]:

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

Out[19]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published
216	599504	Advanced Scalable Python Web Development Using...	True	120	1299	56	71	Intermediate Level	14 hours	2016-08
777	47963	Coding for Entrepreneurs: Learn Python, Django...	True	195	23412	799	251	All Levels	45 hours	2013-04
814	631128	Complete Python Web Course: Build 8 Python Web...	True	110	7489	941	173	All Levels	16 hours	2015-11

Q9) What are courses that published in year 2015?

In [21]:

```
data.dtypes
```

Out[21]:

```
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 [22]:

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

In [23]:

```
data.dtypes
```

Out[23]:

```
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 [24]:

```
data.head(1)
```

Out[24]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	pu
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hours	

In [25]:

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

In [26]:

```
data.head(1)
```

Out[26]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	pu
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hours	

In [29]:

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

Out[29]:

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

1014 rows × 12 columns



Q10) What are the max number of subscribers for each level of courses?

In [30]:

```
data.head(1)
```

Out[30]:

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	pu
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	35	3137	18	68	All Levels	1.5 hours	

In [34]:

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

Out[34]:

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