

Udemy Courses Dataset

```
In [46]: import pandas as pd
```

```
In [47]: data = pd.read_csv(r"C:\Users\Shivam\Downloads\7. Udemy Courses.csv", encoding = "unicode escape")
data
```

```
Out[47]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject	
	0	289842	#1 Piano Hand Coordination: Play 10th Ballad...	True	35	3137	18	68	All Levels	1.5 hours	2014-09-18T05:07:05Z	Musical Instruments
1	1170074	#10 Hand Coordination - Transfer Chord Ballad...	True	75	1593	1	41	Intermediate Level	1 hour	2017-04-12T19:06:34Z	Musical Instruments	
2	1193886	#12 Hand Coordination: Let your Hands dance w...	True	75	482	1	47	Intermediate Level	1.5 hours	2017-04-26T18:34:57Z	Musical Instruments	
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1 hour	2017-02-21T23:48:18Z	Musical Instruments	
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37 mins	2017-02-21T23:44:48Z	Musical Instruments	
...	
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 hours	2015-04-20T22:55:17Z	Web Development	
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 hours	2015-10-26T20:04:21Z	Musical Instruments	
3679	631754	Zend Framework 2: Learn the PHP Framework 2F2 ...	True	40	723	130	37	All Levels	6.5 hours	2015-11-11T18:55:45Z	Web Development	
3680	1225384	Zoho Books Gestion Financiera e Empresarial pa...	False	Free	229	0	33	All Levels	2 hours	2017-09-26T18:45:55Z	Business Finance	
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	All Levels	1.5 hours	2016-09-26T22:19:48Z	Graphic Design	

3682 rows × 11 columns

```
In [48]: data.info()

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 3682 entries, 0 to 3681
Data columns (total 11 columns):
#   Column                Non-Null Count  Dtype  ---
 0   course_id             3682 non-null    int64
 1   course_title          3682 non-null    object
 2   is_paid               3682 non-null    bool
 3   price                3682 non-null    object
 4   num_subscribers       3682 non-null    int64
 5   num_reviews           3682 non-null    int64
 6   num_lectures          3682 non-null    int64
 7   level                 3682 non-null    object
 8   content_duration      3682 non-null    object
 9   published_timestamp   3682 non-null    object
10   subject               3682 non-null    object
dtypes: bool(1), int64(4), object(6)
memory usage: 291.4+ KB
```

```
In [49]: data.head(18)
```

```
Out[49]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
0	289842	#1 Piano Hand Coordination: Play 10th Ballad...	True	35	3137	18	68	All Levels	1.5 hours	2014-09-18T05:07:05Z	Musical Instruments
1	1170074	#10 Hand Coordination - Transfer Chord Ballad...	True	75	1593	1	41	Intermediate Level	1 hour	2017-04-12T19:06:34Z	Musical Instruments
2	1193886	#12 Hand Coordination: Let your Hands dance w...	True	75	482	1	47	Intermediate Level	1.5 hours	2017-04-26T18:34:57Z	Musical Instruments
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1 hour	2017-02-21T23:48:18Z	Musical Instruments
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37 mins	2017-02-21T23:44:48Z	Musical Instruments
5	1122832	#6 Piano Hand Coordination: Play Open 10 Balla...	True	65	2015	3	21	Intermediate Level	44 mins	2017-03-08T17:53:36Z	Musical Instruments
6	1121384	#7 Piano Hand Coordination: Play Piano Runs in...	True	65	2015	2	25	Intermediate Level	1 hour	2017-03-08T18:09:32Z	Musical Instruments
7	7168028	*An Integrated Approach to the Fundamentals o...	True	200	134	14	123	All Levels	5.5 hours	2016-03-15T17:23:07Z	Business Finance
8	206592	*Beginners Guide To Creating Amazing Images ...	True	25	72	5	17	Beginner Level	1 hour	2014-04-19T19:50:31Z	Graphic Design
9	738910	[Value Investing] Where White People Keep Thei...	True	200	2715	70	20	Expert Level	4 hours	2016-05-25T21:04:12Z	Business Finance

```
In [50]: data.columns
```

```
Out[50]: Index(['course_id', 'course_title', 'is_paid', 'price', 'num_subscribers',
              'num_reviews', 'num_lectures', 'level', 'content_duration',
              'published_timestamp', 'subject'],
              dtype='object')
```

Q1: What are the different subjects for which udemy is offering courses?

```
In [51]: data.subject.unique()
```

```
Out[51]: array(['Musical Instruments', 'Business Finance', 'Graphic Design',
              'Web Development'], dtype=object)
```

Q2: Which subject has max number of courses?

```
In [52]: data.subject.value_counts()
```

```
Out[52]: Web Development      1280
         Business Finance     1199
         Musical Instruments    680
         Graphic Design        683
         Name: subject, dtype: int64
```

Q3: Show all the courses which are free of cost.

```
In [53]: data[is_paid'].value_counts()
# Total free courses are 218
```

```
Out[53]: True      3372
         False    319
         Name: is_paid, dtype: int64
```

```
In [54]: # data of free courses
data[is_paid == False]
```

```
Out[54]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
41	286070	5 Lecciones que todo pianista debe tomar	False	Free	4452	263	14	Beginner Level	1 hour	2014-08-23T05:06:14Z	Musical Instruments
49	696630	7 Ways A Beginner Guitarist Can Sound Better ...	False	Free	4529	193	7	Beginner Level	36 mins	2015-04-20T22:35:17Z	Web Development
57	955014	A beginner's guide to fingerpicking and strum...	False	Free	3481	29	2	Beginner Level	25 mins	2016-09-10T21:51:58Z	Musical Instruments
67	270976	A how to guide in HTML	False	Free	7318	205	8	Beginner Level	35 mins	2014-08-10T20:19:10Z	Web Development
74	1214144	Añutruer en La Bolsa de Valores No Requiere ...	False	Free	338	7	6	Beginner Level	1 hour	2017-05-07T14:30:12Z	Business Finance
...
3620	552598	WordPress in under an hour - CreateManage you...	False	Free	6474	86	15	All Levels	1 hour	2015-07-15T00:21:56Z	Web Development
3628	1506595	WordPress Website Mastery 2017	False	Free	5181	64	22	Beginner Level	23 hours	2017-03-18T17:01:46Z	Web Development
3629	752706	Win guide for HTM5 and CSS3, productivity ha...	False	Free	1201	286	15	All Levels	1.5 hours	2016-03-03T17:46:31Z	Web Development
3634	1259786	Your First 30 Color Lessons - Learn how to pl...	False	Free	924	4	18	Beginner Level	1 hour	2017-06-09T00:26:36Z	Musical Instruments
3670	1225384	Zoho Books Gestion Financiera e Empresarial pa...	False	Free	229	0	33	All Levels	2 hours	2017-09-26T18:45:55Z	Business Finance

310 rows × 11 columns

Q4: Show all the courses which are paid.

```
In [55]: data[is_paid'].value_counts()
# Total 3512 courses are paid
```

```
Out[55]: True      3372
         False    319
         Name: is_paid, dtype: int64
```

```
In [56]: data[data[is_paid] == True]
# showing complete details in which course is paid
```

```
Out[56]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
0	289842	#1 Piano Hand Coordination: Play 10th Ballad...	True	35	3137	18	68	All Levels	1.5 hours	2014-09-18T05:07:05Z	Musical Instruments
1	1170074	#10 Hand Coordination - Transfer Chord Ballad...	True	75	1593	1	41	Intermediate Level	1 hour	2017-04-12T19:06:34Z	Musical Instruments
2	1193886	#12 Hand Coordination: Let your Hands dance w...	True	75	482	1	47	Intermediate Level	1.5 hours	2017-04-26T18:34:57Z	Musical Instruments
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	75	850	3	43	Intermediate Level	1 hour	2017-02-21T23:48:18Z	Musical Instruments
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	75	940	3	32	Intermediate Level	37 mins	2017-02-21T23:44:48Z	Musical Instruments
...
3676	496488	Your First Successful Forex Trades - With Case...	True	200	1079	34	16	All Levels	2.5 hours	2015-05-26T18:40:48Z	Business Finance
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True	120	1566	29	36	All Levels	4 hours	2015-04-20T22:35:17Z	Web Development
3678	552700	Your Second Course on Piano: Two Handed Playing	True	70	1018	12	22	Beginner Level	5 hours	2015-10-26T20:04:21Z	Musical Instruments
3679	631754	Zend Framework 2: Learn the PHP Framework 2F2 ...	True	40	723	130	37	All Levels	6.5 hours	2015-11-11T18:55:45Z	Web Development
3681	964478	Zombie Apocalypse Photoshop Actions	True	50	12	1	15	All Levels	1.5 hours	2016-09-26T22:19:48Z	Graphic Design

3372 rows × 11 columns

Q5: Which are Top selling Courses?

```
In [57]: data.columns
```

```
Out[57]: Index(['course_id', 'course_title', 'is_paid', 'price', 'num_subscribers',
              'num_reviews', 'num_lectures', 'level', 'content_duration',
              'published_timestamp', 'subject'],
              dtype='object')
```

```
In [58]: df = data.sort_values(by='num_subscribers', ascending = False)
df
```

```
Out[58]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	All Levels	10.5 hours	2013-02-14T07:03:41Z	Web Development
776	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	Beginner Level	3.5 hours	2017-06-08T15:51:56Z	Business Finance
6385	625204	The Web Developer Bootcamp	True	200	121584	27445	342	All Levels	43 hours	2017-07-07T317:13:27Z	Web Development
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	Free	120291	5924	30	Beginner Level	3 hours	2014-04-08T16:21:30Z	Web Development
3116	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	All Levels	30.5 hours	2016-03-08T22:28:36Z	Web Development
...
1280	123240	Learn Pirates of the Caribbean by Ear on the P...	True	20	0	0	6	All Levels	32 mins	2017-05-22T17:14:43Z	Musical Instruments
2267	1258666	Financial Statement Auditing Cycles	True	50	0	0	9	Intermediate Level	2 hours	2017-06-29T23:20:10Z	Business Finance
2700	1215926	Kickstarter success in 5 easy steps	True	50	0	0	12	All Levels	31 mins	2017-05-16T14:55:28Z	Business Finance
1931	1247992	Introduction to Project Management for Finance...	True	50	0	0	9	Beginner Level	2 hours	2017-07-03T21:40:32Z	Business Finance
3165	1087466	Stop Creditors from Harassing you and Avoid Ra...	True	20	0	0	7	Beginner Level	37 mins	2017-02-02T16:22:16Z	Business Finance

3682 rows × 11 columns

Q6: Which are Least Selling Courses?

```
In [59]: data.sort_values(by = 'num_subscribers')
```

```
Out[59]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
649	1233314	Building a Statement of Income	True	50	0	0	11	Intermediate Level	2 hours	2017-07-03T21:38:22Z	Business Finance
3258	1232832	The Cash Flow Balances - An Introduction	True	50	0	0	10	Beginner Level	1.5 hours	2017-06-08T15:51:56Z	Business Finance
9361	1275872	The Complete Adobe Spark Course	True	150	0	0	29	All Levels	2 hours	2017-07-07T317:13:27Z	Graphic Design
610	726314	Create Beautiful Image Maps for Your Website	True	20	0	0	8	Intermediate Level	37 mins	2016-01-18T21:56:36Z	Graphic Design
3328	715476	The Cuckoo Strategy to Get European Funding	True	160	0	0	6	All Levels	1 hour	2016-01-06T02:28:36Z	Business Finance
...
6316	764164	The Complete Web Developer Course 2.0	True	200	114512	22412	304	All Levels	30.5 hours	2016-03-08T22:28:36Z	Web Development
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	Free	120291	5924	30	Beginner Level	3 hours	2014-04-08T16:21:30Z	Web Development
3785	625204	The Web Developer Bootcamp	True	200	121584	27445	342	All Levels	43 hours	2015-11-03T21:13:27Z	Web Development
736	59014	Coding for Entrepreneurs Basic	False	Free	161029	279	27	Beginner Level	3.5 hours	2017-06-08T15:51:56Z	Business Finance
2230	41295	Learn HTML5 Programming From Scratch	False	Free	268923	8629	45	All Levels	10.5 hours	2013-02-14T07:03:41Z	Web Development

3682 rows × 11 columns

Q7: Show all Courses of Graphic Design where price is below 100.

```
In [60]: data.columns
```

```
Out[60]: Index(['course_id', 'course_title', 'is_paid', 'price', 'num_subscribers',
              'num_reviews', 'num_lectures', 'level', 'content_duration',
              'published_timestamp', 'subject'],
              dtype='object')
```

```
In [61]: df = data[data.subject == 'Graphic Design']
df(df.price == '100')
```

```
# no graphic design course with price < 100, so, we put price == 100
# data[data.subject == 'Graphic Design'] & data.price == '100'] -> shortcut
```

```
Out[61]:
```

	course_id	course_title	is_paid	price	num_subscribers	num_reviews	num_lectures	level	content_duration	published_timestamp	subject
47	1498940	7 Secrets To Designing In Black and White	True	100	1000	1	12	All Levels	1.5 hours	2017-06-07T19:55:18Z	Graphic Design
169	983444	Adobe Illustrator Vector For Hand Letters	True	100	23	2	6	Beginner Level	37 mins	2016-10-21T18:50:38Z	Graphic Design
184	639040	Adobe Photoshop Essentials: Master Adobe Photo...	True	100	1373	5	63	Beginner Level	2.5 hours	2015-11-18T17:17:42Z	Graphic Design
190	978462	Blender Modeling Series - Volume Two	True	100	1526	3	24	Beginner Level	2 hours	2016-10-12T20:22:14Z	Graphic Design
1099	759000	Canva: Book Cover Course	True	100	3377	20	15	Beginner Level	2 hours	2016-02-26T01:08:20Z	Graphic Design
1029	1160004	Design a logo for FREE in Adobe Illustrator	True	100	1148	26	42	All Levels	2 hours	2015-05-01T18:32:43Z	Graphic Design
171	1161864	Disco! Impreso - Preempresarios para el arte en...	True	100	33	9	29	All Levels	1.5 hours	2017-05-31T17:37:31Z	Graphic Design
1444	490392	Getting Started with Illustrator CC	True	100	92	10	57	Beginner Level	5.5 hours	2015-05-01T21:29:51Z	Graphic Design
1668	727510	How to Become An Etsy Wholesale Seller	True	100	1013	4	25	Beginner Level	2.5 hours	2016-03-09T22:34:30Z	Graphic Design
1516	996868	How to Design a Logo in Adobe Illustrator	True	100	972	44	24	All Levels	1 hour	2016-11-14T15:26:17Z	Graphic Design
1677	654038	How To Sell Your Art Online With ETSY	True	100	1338	38	35	Beginner Level	3 hours	2016-11-11T01:26:13Z	Graphic Design
1773	1012682	Icon & Logo Symbol Design in Adobe Illustrator	True	100	1043	27	30	All Levels	2 hours	2016-11-17T02:57:18Z	Graphic Design
1786	1246168	Ilustrar para crias&Ao de peças grçficas...	True	100	33	3	41	Beginner Level	1.5 hours	2017-06-13T04:15:20Z	Graphic Design
1767	1266468	Ilustrar - Para quem quer trabalhar com Design...	True	100	27	7	12	Intermediate Level	2.5 hours	2017-06-27T02:48:29Z	Graphic Design
2137	927186	Learn Blender 3D - The Introduction course	True	100	739	12	15	Beginner Level	1.5 hours	2016-08-19T00:52:30Z	Graphic Design
2481	1027060	Learn Python in 1 Hour in Wordpress	True	100	734	9	36	All Levels	1 hour	2016-1	