

udemy-courses-analysis

September 22, 2023

1 Import Libraries

```
[1]: import numpy as np
import pandas as pd
import matplotlib.pyplot as plt
%matplotlib inline
import seaborn as sns
import warnings
warnings.filterwarnings('ignore')
```

```
[2]: udemy = pd.read_csv(r'D:\DatSets\Udemy_Data_Analysis\udemy.csv')
udemy.head()
```

```
[2]:
```

	course_id	course_title	is_paid	\
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True	
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True	
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True	
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True	
4	1120410	#5 Piano Hand Coordination: Piano Runs in 2 ...	True	

	price	num_subscribers	num_reviews	num_lectures	level	\
0	35	3137	18	68	All Levels	
1	75	1593	1	41	Intermediate Level	
2	75	482	1	47	Intermediate Level	
3	75	850	3	43	Intermediate Level	
4	75	940	3	32	Intermediate Level	

	content_duration	published_timestamp	subject
0	1.5 hours	2014-09-18T05:07:05Z	Musical Instruments
1	1 hour	2017-04-12T19:06:34Z	Musical Instruments
2	1.5 hours	2017-04-26T18:34:57Z	Musical Instruments
3	1 hour	2017-02-21T23:48:18Z	Musical Instruments
4	37 mins	2017-02-21T23:44:49Z	Musical Instruments

```
[3]: udemy.shape
```

```
[3]: (3682, 11)
```

```
[4]: udemy.columns
```

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

```
[5]: udemy.isnull().sum()
```

```
[5]: course_id          0  
     course_title      0  
     is_paid           0  
     price             0  
     num_subscribers   0  
     num_reviews       0  
     num_lectures      0  
     level             0  
     content_duration  0  
     published_timestamp 0  
     subject           0  
     dtype: int64
```

What are the Subjects for Udeemy Offering ?

```
[6]: list(udemy['subject'].unique())
```

```
[6]: ['Musical Instruments',  
     'Business Finance',  
     'Graphic Design',  
     'Web Development']
```

Witch Subjects has more number of Courses

```
[7]: udemy['subject'].value_counts()
```

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

Witch Course are Free of Cost ?

```
[8]: udemy[udemy.is_paid==False]
```

```
[8]:   course_id          course_title  is_paid \  
41    286070    5 lecciones que todo guitarrista debe tomar    False  
49    696630  7 Ways A Beginner Guitarist Can Sound Better, ...    False
```

57	955914	A beginner`s guide to fingerpicking and strumm...	False
67	270976	A how to guide in HTML	False
74	1214144	¡Triunfar en La Bolsa de Valores No Requiere d...	False
...
3620	552598	WordPress in under an hour - Create/manage you...	False
3638	1068590	Wordpress Website Mastery 2017	False
3652	752706	Write quicker HTML5 and CSS 3; productivity ha...	False
3674	1257976	Your First 10 Guitar Lessons - Learn how to pl...	False
3680	1225194	Zoho Books Gestion Financière d'Entreprise pas...	False

	price	num_subscribers	num_reviews	num_lectures	level \
41	Free	4452	263	14	Beginner Level
49	Free	4529	193	7	Beginner Level
57	Free	3481	29	20	Beginner Level
67	Free	7318	205	8	Beginner Level
74	Free	338	7	6	Beginner Level
...
3620	Free	6474	86	15	All Levels
3638	Free	5181	64	22	Beginner Level
3652	Free	13016	286	15	All Levels
3674	Free	924	4	18	Beginner Level
3680	Free	229	0	33	All Levels

	content_duration	published_timestamp	subject
41	1 hour	2014-08-23T05:08:14Z	Musical Instruments
49	36 mins	2015-12-21T18:50:50Z	Musical Instruments
57	2 hours	2016-09-13T21:51:59Z	Musical Instruments
67	35 mins	2014-08-10T20:19:10Z	Web Development
74	1 hour	2017-05-30T14:30:12Z	Business Finance
...
3620	1 hour	2015-07-15T00:21:56Z	Web Development
3638	2.5 hours	2017-01-18T17:01:40Z	Web Development
3652	1.5 hours	2016-03-03T17:45:31Z	Web Development
3674	1 hour	2017-06-29T00:29:36Z	Musical Instruments
3680	2 hours	2017-05-26T16:45:55Z	Business Finance

[310 rows x 11 columns]

Witch Course are Free of Cost ?

```
[9]: udemy[udemy.is_paid==True]
```

	course_id	course_title	is_paid \
0	288942	#1 Piano Hand Coordination: Play 10th Ballad i...	True
1	1170074	#10 Hand Coordination - Transfer Chord Ballad ...	True
2	1193886	#12 Hand Coordination: Let your Hands dance wi...	True
3	1116700	#4 Piano Hand Coordination: Fun Piano Runs in ...	True

4	1120410	#5	Piano Hand Coordination: Piano Runs in 2 ...	True
...
3676	498488		Your First Successful Forex Trades - With Case...	True
3677	328960		Your Own Site in 45 Min: The Complete Wordpres...	True
3678	552700		Your Second Course on Piano: Two Handed Playing	True
3679	631754		Zend Framework 2: Learn the PHP framework ZF2 ...	True
3681	964478		Zombie Apocalypse Photoshop Actions	True

	price	num_subscribers	num_reviews	num_lectures	level	\
0	35	3137	18	68	All Levels	
1	75	1593	1	41	Intermediate Level	
2	75	482	1	47	Intermediate Level	
3	75	850	3	43	Intermediate Level	
4	75	940	3	32	Intermediate Level	
...	
3676	200	1079	34	16	All Levels	
3677	120	1566	29	36	All Levels	
3678	70	1018	12	22	Beginner Level	
3679	40	723	130	37	All Levels	
3681	50	12	1	15	All Levels	

	content_duration	published_timestamp	subject
0	1.5 hours	2014-09-18T05:07:05Z	Musical Instruments
1	1 hour	2017-04-12T19:06:34Z	Musical Instruments
2	1.5 hours	2017-04-26T18:34:57Z	Musical Instruments
3	1 hour	2017-02-21T23:48:18Z	Musical Instruments
4	37 mins	2017-02-21T23:44:49Z	Musical Instruments
...
3676	2.5 hours	2015-05-26T20:48:48Z	Business Finance
3677	4 hours	2015-04-20T22:15:17Z	Web Development
3678	5 hours	2015-10-26T20:04:21Z	Musical Instruments
3679	6.5 hours	2015-11-11T18:55:45Z	Web Development
3681	1.5 hours	2016-09-26T22:19:48Z	Graphic Design

[3372 rows x 11 columns]

What are the top selling courses

```
[10]: udemy.sort_values('num_subscribers', ascending=False)
```

	course_id	course_title	is_paid	\
2230	41295	Learn HTML5 Programming From Scratch	False	
776	59014	Coding for Entrepreneurs Basic	False	
3385	625204	The Web Developer Bootcamp	True	
640	173548	Build Your First Website in 1 Week with HTML5 ...	False	
3316	764164	The Complete Web Developer Course 2.0	True	
...	

2290	1223240	Learn Pirates of the Caribbean by Ear on the P...	True
1267	1258666	Financial Statement Auditing Cycles	True
2070	1215926	Kickstarter success in 5 easy steps	True
1931	1247992	Introduction to Project Management for Finance...	True
3165	1087466	Stop Creditors from Harassing you and Avoid Ba...	True

	price	num_subscribers	num_reviews	num_lectures	level \
2230	Free	268923	8629	45	All Levels
776	Free	161029	279	27	Beginner Level
3385	200	121584	27445	342	All Levels
640	Free	120291	5924	30	Beginner Level
3316	200	114512	22412	304	All Levels
...
2290	20	0	0	6	All Levels
1267	50	0	0	9	Intermediate Level
2070	20	0	0	12	All Levels
1931	50	0	0	9	Beginner Level
3165	20	0	0	7	Beginner Level

	content_duration	published_timestamp	subject
2230	10.5 hours	2013-02-14T07:03:41Z	Web Development
776	3.5 hours	2013-06-09T15:51:55Z	Web Development
3385	43 hours	2015-11-02T21:13:27Z	Web Development
640	3 hours	2014-04-08T16:21:30Z	Web Development
3316	30.5 hours	2016-03-08T22:28:36Z	Web Development
...
2290	32 mins	2017-05-22T17:14:43Z	Musical Instruments
1267	2 hours	2017-06-29T23:20:10Z	Business Finance
2070	31 mins	2017-05-16T14:55:28Z	Business Finance
1931	2 hours	2017-07-03T21:40:32Z	Business Finance
3165	37 mins	2017-02-02T16:22:37Z	Business Finance

[3682 rows x 11 columns]

Witch are the least selling Courses?

```
[11]: udemy.sort_values('num_subscribers')
```

```
[11]:
```

	course_id	course_title	is_paid \
649	1233314	Building a Balanced Scorecard	True
3259	1232282	The Cash Flow Statement - An Introduction	True
3261	1275872	The Complete Adobe Spark Course	True
910	726314	Create Beautiful Image Maps for Your Website	True
3328	715476	The Cuckoo Strategy to get European Funding	True
...
3316	764164	The Complete Web Developer Course 2.0	True
640	173548	Build Your First Website in 1 Week with HTML5 ...	False

3385	625204	The Web Developer Bootcamp	True
776	59014	Coding for Entrepreneurs Basic	False
2230	41295	Learn HTML5 Programming From Scratch	False

	price	num_subscribers	num_reviews	num_lectures	level \
649	50	0	0	11	Intermediate Level
3259	50	0	0	10	Beginner Level
3261	150	0	0	29	All Levels
910	20	0	0	8	Intermediate Level
3328	160	0	0	6	All Levels
...
3316	200	114512	22412	304	All Levels
640	Free	120291	5924	30	Beginner Level
3385	200	121584	27445	342	All Levels
776	Free	161029	279	27	Beginner Level
2230	Free	268923	8629	45	All Levels

	content_duration	published_timestamp	subject
649	2 hours	2017-07-03T21:38:22Z	Business Finance
3259	1.5 hours	2017-06-28T16:05:51Z	Business Finance
3261	2 hours	2017-07-03T17:39:57Z	Graphic Design
910	37 mins	2016-01-18T17:56:36Z	Graphic Design
3328	1 hour	2016-01-06T02:38:23Z	Business Finance
...
3316	30.5 hours	2016-03-08T22:28:36Z	Web Development
640	3 hours	2014-04-08T16:21:30Z	Web Development
3385	43 hours	2015-11-02T21:13:27Z	Web Development
776	3.5 hours	2013-06-09T15:51:55Z	Web Development
2230	10.5 hours	2013-02-14T07:03:41Z	Web Development

[3682 rows x 11 columns]

1.0.1 Show all Courses of Graphic Design where the price is below 180 ?

```
[12]: udemy[(udemy.subject=='Graphic Design') & (udemy.price < '180')]
```

[12]:	course_id	course_title	is_paid \
47	1269190	7 Secrets To Designing In Black and White	True
63	413713	A Complete Guide to Successful Freelance Logo ...	True
169	983444	Adobe Illustrator Vectors For Hand Letterers	True
184	638040	Adobe Photoshop Essentials: Master Adobe Photo...	True
267	880202	Anatomy and Figure Drawing for Beginners	True
309	472592	App Design + Web Design + Photoshop = Combined...	True
443	885479	Become a Professional Logo Designer	True
448	406504	Become an InDesign Pro in 10 Skills	True
520	978462	Blender Modelling Series - Volume Two	True
699	757900	Canva : Book Cover Design	True

743	834114	Character Concept Design for Beginners	True
844	873296	Corel Draw X7 Eğitimi (Temelden İleri Seviyeye)	True
922	1092766	Create Mobile App Design from Scratch in Photo...	True
992	686430	Curso de Corel Draw: Como Hacer Todo para tu F...	True
1029	1160004	Design a logo for FREE in Inkscape	True
1055	327666	Digital Art for Beginners	True
1071	1161864	Diseño impreso - Preimpresión para offset en I...	True
1103	632136	Drawing in PowerPoint: Block diagram + Experim...	True
1104	231970	Drawing Perspective For Beginners	True
1444	490392	Getting Started with Illustrator CC	True
1568	727510	How To Become An Etsy Wholesale Seller	True
1616	996868	How to Design a Logo in Adobe Illustrator	True
1623	1047436	How to Draw and Sketch for Beginners	True
1697	654038	How To Sell Your Art Online With ETSY	True
1773	1012262	Icon & Logo Symbol Design in Adobe Illustrator	True
1782	913768	Illustrator CC 2016 Power Workshops (Deutsch)	True
1784	501140	Illustrator CC para novatos: ¿desde cero hasta...	True
1785	751230	Illustrator CC: Design and drawing from scratc...	True
1786	1246168	Illustrator para criação de peças gráficas, De...	True
1797	1266468	Indesign - Para quem quer trabalhar com Design...	True
1799	530436	InDesign: Diseño de proyectos paso a paso	True
2075	636548	Kindle eBook Cover Design and Book Illustratio...	True
2137	927186	Learn Blender 3D - The introduction course	True
2424	555952	Learn UI/UX and Mobile App Design in Photoshop...	True
2481	1027080	Logo Portfolio in 1 Hour in Wordpress	True
2491	771044	Make Money With Photoshop: Logos, Business Car...	True
2529	349586	Master Manga Studio 5: Bonus Drawing and Painting	True
2576	482924	Mastering Retouching and Restoration (15 proje...	True
2604	998580	Mobile App Design: From Beginner to Intermediate	True
2652	967486	illustrator from zero to hero	True
2704	950894	photoshop - CURSO DE PHOTOSHOP DO BÁSICO AO AV...	True
2706	1243016	Photoshop - Tratamento de pele profissional	True
2708	447210	Photoshop GIMP: Quick & Easy Image Hacks for...	True
2709	1274846	Photoshop Avançado - Pós Produção e fusão com 3D	True
2713	1147664	Photoshop CC Eğitim Seti (YENİ)	True
2731	405488	Photoshop para novatos: ¿desde cero hasta exp...	True
2732	922092	Photoshop para principiantes: ¿De cero a experto!	True
2737	1242692	Photoshop Workflow - Manipulação de imagem par...	True
2747	968268	Photoshop: Organización de eventos y decoració...	True
2748	269082	Photoshop: Real World Hands-on Freelance Mastery	True
3099	808542	Sketchbook Pro for Beginners	True
3261	1275872	The Complete Adobe Spark Course	True
3374	874012	The Ultimate Drawing Course - Beginner to Adva...	True
3474	1117796	Typographic Logo Design in Illustrator - Begin...	True
3479	575040	Typography From A to Z	True
3482	635716	Typography: Learn the Foundation and Designs	True
3483	948294	True	

3499	438420	Ultimate Guide on Freelancing Career in Photos...	True
3533	1067516	Vector Logo Design in Affinity Designer	True
3594	908664	Word Swag : Create Stunning Images with the Wo...	True

	price	num_subscribers	num_reviews	num_lectures	level \
47	100	1000	1	12	All Levels
63	145	2745	61	67	All Levels
169	100	23	2	9	Beginner Level
184	100	1373	5	63	Beginner Level
267	150	2252	240	111	Beginner Level
309	115	1087	6	24	Beginner Level
443	150	107	16	82	All Levels
448	105	1079	172	35	Beginner Level
520	100	1526	3	24	Beginner Level
699	100	3377	20	15	Beginner Level
743	175	1197	55	98	All Levels
844	105	28	6	103	All Levels
922	125	1359	7	24	Beginner Level
992	125	10	3	55	Beginner Level
1029	100	1148	26	42	All Levels
1055	150	3381	388	57	Beginner Level
1071	100	33	9	29	All Levels
1103	155	2911	29	37	Beginner Level
1104	150	736	50	44	All Levels
1444	100	92	10	57	Beginner Level
1568	100	1013	0	25	Beginner Level
1616	100	972	44	24	All Levels
1623	150	1360	175	79	Beginner Level
1697	100	1338	38	35	Beginner Level
1773	100	1043	27	30	All Levels
1782	150	96	10	50	Intermediate Level
1784	150	2476	466	96	All Levels
1785	150	2427	99	97	Beginner Level
1786	100	33	3	41	Beginner Level
1797	100	27	7	12	Intermediate Level
1799	150	300	40	77	Intermediate Level
2075	120	715	16	20	All Levels
2137	100	739	12	15	Beginner Level
2424	145	1367	61	31	All Levels
2481	100	734	9	36	All Levels
2491	100	32	4	21	All Levels
2529	165	2325	155	61	All Levels
2576	100	4927	15	22	All Levels
2604	140	896	21	108	All Levels
2652	150	155	40	158	All Levels
2704	100	1110	183	77	All Levels
2706	100	50	5	16	Intermediate Level

2708	135	1275	26	42	Beginner Level
2709	135	15	0	6	Expert Level
2713	100	27	5	202	All Levels
2731	150	3000	470	134	All Levels
2732	120	410	15	62	Beginner Level
2737	135	20	8	53	Expert Level
2747	120	125	5	56	Beginner Level
2748	105	5950	25	29	All Levels
3099	125	1657	46	41	All Levels
3261	150	0	0	29	All Levels
3374	150	26742	2379	62	Beginner Level
3474	150	1720	40	27	All Levels
3479	100	317	15	76	All Levels
3482	135	220	13	33	All Levels
3483	120	13	9	7	Beginner Level
3499	165	1479	49	82	All Levels
3533	150	1789	102	57	All Levels
3594	100	2416	19	14	All Levels

	content_duration	published_timestamp	subject
47	1.5 hours	2017-06-27T19:55:18Z	Graphic Design
63	8.5 hours	2015-02-19T03:39:50Z	Graphic Design
169	37 mins	2016-10-21T18:50:38Z	Graphic Design
184	2.5 hours	2015-11-18T17:47:26Z	Graphic Design
267	21 hours	2016-06-20T15:31:48Z	Graphic Design
309	2 hours	2015-04-27T21:32:04Z	Graphic Design
443	8 hours	2016-06-28T19:02:59Z	Graphic Design
448	5 hours	2015-08-21T22:22:39Z	Graphic Design
520	2 hours	2016-10-12T20:22:14Z	Graphic Design
699	2 hours	2016-02-26T01:08:20Z	Graphic Design
743	16.5 hours	2016-09-18T17:56:23Z	Graphic Design
844	12 hours	2016-06-09T21:43:59Z	Graphic Design
922	2.5 hours	2017-02-01T04:40:24Z	Graphic Design
992	2.5 hours	2016-04-27T04:22:31Z	Graphic Design
1029	2 hours	2017-05-01T18:32:43Z	Graphic Design
1055	15 hours	2016-02-14T23:43:10Z	Graphic Design
1071	1.5 hours	2017-05-31T18:37:31Z	Graphic Design
1103	2 hours	2015-11-11T23:41:48Z	Graphic Design
1104	7.5 hours	2016-03-20T21:38:48Z	Graphic Design
1444	5.5 hours	2015-05-01T21:29:51Z	Graphic Design
1568	2.5 hours	2016-03-29T22:34:30Z	Graphic Design
1616	1 hour	2016-11-14T15:26:17Z	Graphic Design
1623	9 hours	2017-01-25T22:07:38Z	Graphic Design
1697	3 hours	2015-11-11T01:26:13Z	Graphic Design
1773	2 hours	2016-11-23T22:57:18Z	Graphic Design
1782	4.5 hours	2016-07-25T17:16:46Z	Graphic Design
1784	11 hours	2015-12-29T20:10:55Z	Graphic Design

1785	11 hours	2016-12-15T15:18:47Z	Graphic Design
1786	1.5 hours	2017-06-13T04:15:20Z	Graphic Design
1797	2.5 hours	2017-06-27T02:48:29Z	Graphic Design
1799	4.5 hours	2015-09-04T15:37:36Z	Graphic Design
2075	1 hour	2015-11-06T17:27:45Z	Graphic Design
2137	1.5 hours	2016-08-19T00:52:30Z	Graphic Design
2424	3 hours	2015-08-06T20:22:52Z	Graphic Design
2481	1 hour	2016-12-06T22:13:44Z	Graphic Design
2491	5 hours	2016-08-14T22:05:04Z	Graphic Design
2529	8 hours	2015-02-06T07:44:43Z	Graphic Design
2576	2.5 hours	2015-04-26T12:27:22Z	Graphic Design
2604	10 hours	2017-02-20T17:42:07Z	Graphic Design
2652	30 hours	2016-12-19T14:30:40Z	Graphic Design
2704	10 hours	2017-02-06T17:22:18Z	Graphic Design
2706	1.5 hours	2017-06-06T14:22:28Z	Graphic Design
2708	3.5 hours	2015-05-27T19:07:13Z	Graphic Design
2709	1 hour	2017-07-03T01:15:29Z	Graphic Design
2713	16 hours	2017-03-30T22:26:26Z	Graphic Design
2731	12 hours	2015-01-30T17:41:47Z	Graphic Design
2732	7.5 hours	2016-08-22T19:07:23Z	Graphic Design
2737	12.5 hours	2017-06-28T03:28:04Z	Graphic Design
2747	8.5 hours	2016-10-18T20:08:18Z	Graphic Design
2748	2.5 hours	2014-09-25T09:14:15Z	Graphic Design
3099	4 hours	2016-04-01T00:18:17Z	Graphic Design
3261	2 hours	2017-07-03T17:39:57Z	Graphic Design
3374	11 hours	2017-01-23T00:20:05Z	Graphic Design
3474	1.5 hours	2017-02-23T21:40:39Z	Graphic Design
3479	6 hours	2015-08-07T22:16:26Z	Graphic Design
3482	2.5 hours	2015-11-11T00:52:59Z	Graphic Design
3483	1 hour	2016-09-06T02:48:13Z	Graphic Design
3499	6.5 hours	2015-04-30T19:41:43Z	Graphic Design
3533	3 hours	2017-02-07T18:09:03Z	Graphic Design
3594	1 hour	2016-08-09T17:56:53Z	Graphic Design

1.0.2 Show all Courses of Web Development where the price is below 180 ?

```
[13]: udemy[(udemy.subject=='Web Development')&(udemy.price<'180')]
```

```
[13]:
```

	course_id	course_title	is_paid	\
11	64605	1 Hour CSS	True	
14	72262	1 hour jQuery	True	
50	665042	8 Beautiful Ruby on Rails Apps in 30 Days & TD...	True	
95	886614	Accelerated ES6 JavaScript Training	True	
96	886300	Accelerated JavaScript Training	True	
...	
3606	610202	Wordpress Development : Create a Custom Wordpr...	True	
3613	384318	WordPress for Beginners - Build Your First Web...	True	

3619	977516	Wordpress for Non-Technical People	True
3670	560996	You can create Incredible Websites with HTML C...	True
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True

	price	num_subscribers	num_reviews	num_lectures	level \
11	100	18324	333	16	Beginner Level
14	100	5456	133	25	Beginner Level
50	100	5962	466	132	All Levels
95	110	5811	850	114	Intermediate Level
96	110	4720	1017	126	All Levels
...
3606	120	885	3	13	All Levels
3613	100	1701	125	88	Beginner Level
3619	150	2346	10	65	Beginner Level
3670	100	11892	50	28	All Levels
3677	120	1566	29	36	All Levels

	content_duration	published_timestamp	subject
11	1 hour	2013-07-09T20:27:14Z	Web Development
14	1 hour	2013-08-03T14:20:52Z	Web Development
50	16 hours	2016-03-08T07:36:40Z	Web Development
95	6 hours	2016-07-12T18:22:37Z	Web Development
96	7.5 hours	2016-07-12T18:23:35Z	Web Development
...
3606	1.5 hours	2015-09-13T18:32:52Z	Web Development
3613	7 hours	2015-06-23T20:16:55Z	Web Development
3619	4.5 hours	2016-11-15T21:51:28Z	Web Development
3670	2.5 hours	2015-09-12T01:35:41Z	Web Development
3677	4 hours	2015-04-20T22:15:17Z	Web Development

[185 rows x 11 columns]

1.0.3 List out All Courses related to Python ?

```
[14]: udemy[udemy.course_title.str.contains('Python')]
```

	course_id	course_title	is_paid \
216	599504	Advanced Scalable Python Web Development Using...	True
777	47963	Coding for Entrepreneurs: Learn Python, Django...	True
814	631128	Complete Python Web Course: Build 8 Python Web...	True
842	186096	Core: A Web App Reference Guide for Django, Py...	True
1400	394832	Fun and creative web engineering with Python a...	False
1932	1038538	Introduction to QGIS Python Programming	True
1969	902888	Investment Portfolio Analysis with Python	True
2294	391546	Learn Python and Django: Payment Processing	True
2295	1063722	Learn Python Django - A Hands-On Course	True
2341	546848	Learn to code in Python and learn Adobe Photos...	True

2906	368340	Professional Python Web Development Using Flask	True
2908	1035940	Professional RESTful API Design using Python F...	True
2929	270808	Projects in Django and Python	True
2952	1170894	Python Algo Stock Trading: Automate Your Trading!	True
2953	1070886	Python Algo Trading: FX Trading with Oanda	True
2954	1196544	Python Algo Trading: Sentiment Trading with News	True
2955	822444	Python and Django Full Stack Web Developer Boo...	True
2956	477702	Python for Beginners: Python Programming Langu...	True
2957	1035472	Python for Finance: Investment Fundamentals & ...	True
2958	529828	Python for Trading & Investing	True
2959	70640	Python Programming: Create an Digital Marketpl...	True
2960	523312	Python Web Programming	True
2962	1088656	Quantitative Trading Analysis with Python	True
3013	970600	REST APIs with Flask and Python	True
3154	815482	Stock Technical Analysis with Python	True
3272	938560	The Complete Ethical Hacking Course 2.0: Pytho...	True
3460	76052	Try Django 1.9 Build a Blog and Learn Python...	True
3573	16646	Web Programming with Python	True
3574	574082	Web Scraping with Python, Ruby & import. io	True

	price	num_subscribers	num_reviews	num_lectures	level \
216	120	1299	56	71	Intermediate Level
777	195	23412	799	251	All Levels
814	110	7489	941	173	All Levels
842	195	2497	98	154	All Levels
1400	Free	10917	319	25	All Levels
1932	85	197	26	28	Beginner Level
1969	50	209	13	37	All Levels
2294	70	17714	198	23	All Levels
2295	50	1339	21	18	Beginner Level
2341	50	1132	1	29	All Levels
2906	120	3420	489	102	Beginner Level
2908	120	578	25	36	Intermediate Level
2929	60	1764	53	28	All Levels
2952	95	1165	21	41	Beginner Level
2953	200	453	42	33	Intermediate Level
2954	200	294	19	42	All Levels
2955	200	11832	1883	191	All Levels
2956	150	6153	125	84	Beginner Level
2957	195	3811	278	103	All Levels
2958	95	638	25	36	All Levels
2959	195	4198	145	161	All Levels
2960	100	1020	46	60	Beginner Level
2962	50	256	17	49	All Levels
3013	110	5151	737	115	Intermediate Level
3154	50	409	35	46	All Levels
3272	195	7827	268	66	All Levels

3460	50	7407	172	147	All Levels
3573	50	35267	217	53	All Levels
3574	75	973	50	46	All Levels

	content_duration	published_timestamp	subject
216	14 hours	2016-08-11T22:09:24Z	Web Development
777	45 hours	2013-04-08T00:46:14Z	Web Development
814	16 hours	2015-11-08T20:57:35Z	Web Development
842	26 hours	2014-05-29T00:58:43Z	Web Development
1400	2 hours	2015-06-09T19:51:50Z	Web Development
1932	3.5 hours	2016-12-22T00:11:22Z	Web Development
1969	7 hours	2016-07-13T21:40:32Z	Business Finance
2294	3.5 hours	2015-02-09T15:37:56Z	Web Development
2295	2 hours	2017-01-18T21:53:34Z	Web Development
2341	2 hours	2015-07-08T00:15:12Z	Graphic Design
2906	14.5 hours	2015-03-04T00:10:36Z	Web Development
2908	4.5 hours	2017-01-11T21:15:25Z	Web Development
2929	6.5 hours	2014-10-21T07:58:07Z	Web Development
2952	2.5 hours	2017-05-28T23:41:03Z	Business Finance
2953	3 hours	2017-03-14T00:39:45Z	Business Finance
2954	7 hours	2017-04-28T16:41:44Z	Business Finance
2955	31.5 hours	2017-02-24T18:40:55Z	Web Development
2956	5 hours	2015-06-14T18:18:57Z	Web Development
2957	6.5 hours	2017-03-30T22:17:09Z	Business Finance
2958	5 hours	2015-06-17T22:23:31Z	Business Finance
2959	26 hours	2013-10-20T19:53:28Z	Web Development
2960	6 hours	2015-07-01T21:46:36Z	Web Development
2962	5.5 hours	2017-01-27T17:11:28Z	Business Finance
3013	12.5 hours	2016-11-06T19:00:38Z	Web Development
3154	8 hours	2016-04-12T00:40:03Z	Business Finance
3272	11 hours	2016-09-26T15:08:29Z	Web Development
3460	20 hours	2014-03-04T07:12:21Z	Web Development
3573	4 hours	2012-04-25T00:01:43Z	Web Development
3574	4.5 hours	2015-08-09T22:16:41Z	Web Development

1.0.4 What are the courses that are published in Year 2015?

```
[15]: udemy[udemy.published_timestamp.str.contains('2015')]
```

```
[15]:
```

	course_id	course_title	is_paid	\
10	591880	1 - Concepts of Statistics For Beginners Step ...	True	
16	302450	10 Numbers Every Business Owner Should Know	True	
19	384928	101 Blues riffs - learn how the harmonica supe...	True	
23	550842	16 Guitar Chords to Jam With - (Beginner - Int...	True	
26	486240	2 Easy Steps To Investment And Avoiding Traps	True	
...	
3675	551170	Your First Course on Piano	True	

3676	498488	Your First Successful Forex Trades - With Case...	True
3677	328960	Your Own Site in 45 Min: The Complete Wordpres...	True
3678	552700	Your Second Course on Piano: Two Handed Playing	True
3679	631754	Zend Framework 2: Learn the PHP framework ZF2 ...	True

	price	num_subscribers	num_reviews	num_lectures	level \
10	200	273	4	15	Beginner Level
16	20	13	1	9	All Levels
19	200	1350	65	55	Intermediate Level
23	20	1224	19	20	Beginner Level
26	20	828	1	20	All Levels
...
3675	70	2002	34	33	Beginner Level
3676	200	1079	34	16	All Levels
3677	120	1566	29	36	All Levels
3678	70	1018	12	22	Beginner Level
3679	40	723	130	37	All Levels

	content_duration	published_timestamp	subject
10	31 mins	2015-08-30T22:48:34Z	Business Finance
16	1 hour	2015-03-08T19:11:24Z	Business Finance
19	6.5 hours	2015-01-04T21:14:31Z	Musical Instruments
23	1 hour	2015-07-10T19:53:56Z	Musical Instruments
26	1 hour	2015-04-27T23:18:59Z	Business Finance
...
3675	4 hours	2015-07-16T17:07:49Z	Musical Instruments
3676	2.5 hours	2015-05-26T20:48:48Z	Business Finance
3677	4 hours	2015-04-20T22:15:17Z	Web Development
3678	5 hours	2015-10-26T20:04:21Z	Musical Instruments
3679	6.5 hours	2015-11-11T18:55:45Z	Web Development

[1014 rows x 11 columns]

1.0.5 What are Max No Of Subscribers For Each Level ?

```
[16]: udemy.head(1)
```

```
[16]:   course_id   course_title  is_paid \
0    288942  #1 Piano Hand Coordination: Play 10th Ballad i...    True

   price  num_subscribers  num_reviews  num_lectures   level \
0    35             3137           18             68  All Levels

   content_duration  published_timestamp   subject
0      1.5 hours    2014-09-18T05:07:05Z  Musical Instruments
```

```
[17]: udemy.groupby('level')['num_subscribers'].max()
      udemy.groupby('level').max()
```

```
[17]:
```

	course_id \
level	
All Levels	1277924
Beginner Level	1282064
Expert Level	1275790
Intermediate Level	1276182

	course_title \
level	
All Levels	
Beginner Level	Adobe Illustrator
Expert Level	[Value Investing] Where White People Keep Thei...
Intermediate Level	

	is_paid	price	num_subscribers	num_reviews	num_lectures \
level					
All Levels	True	Free	268923	27445	544
Beginner Level	True	Free	161029	5924	779
Expert Level	True	95	5172	249	157
Intermediate Level	True	Free	29167	3326	320

	content_duration	published_timestamp	subject
level			
All Levels	9.5 hours	2017-07-06T21:16:13Z	Web Development
Beginner Level	9.5 hours	2017-07-06T21:46:30Z	Web Development
Expert Level	9 hours	2017-07-04T18:08:01Z	Web Development
Intermediate Level	9.5 hours	2017-07-05T04:41:54Z	Web Development