



**Faculty of Engineering and Technology**  
**Electrical and Computer Engineering Department**  
***Linux Laboratory, ENCS313***  
**Python Project**

**Validation of the Python Project:**

To validate your project, we prepared few database samples. For each database, we synthesized some errors. These errors are listed next to each database as presented in the table below. Try to use your project to identify these errors (it will be good if you print the number of each error type on the screen) and fix the database (if possible) as described in Task#1. We provide below the table examples for each type of error.

database	nduplicates	ndatechange	ndropnames	ndropids	ndropdob	ndropmobiles	ndroppentry	ndropcmake	ndropcids	ndropcyyears
CarRentalOld_0	0	0	0	0	0	0	0	0	0	0
CarRentalOld_1	100	0	0	0	0	0	0	0	0	0
CarRentalOld_2	0	100	0	0	0	0	0	0	0	0
CarRentalOld_3	0	0	100	0	0	0	0	0	0	0
CarRentalOld_4	0	0	0	100	0	0	0	0	0	0
CarRentalOld_5	0	0	0	0	100	0	0	0	0	0
CarRentalOld_6	0	0	0	0	0	100	0	0	0	0
CarRentalOld_7	0	0	0	0	0	0	100	0	0	0
CarRentalOld_8	0	0	0	0	0	0	0	100	0	0
CarRentalOld_9	0	0	0	0	0	0	0	0	100	0

CarRentalOld_10	0	0	0	0	0	0	0	0	0	100
CarRentalOld_11	10	10	10	10	10	10	10	10	10	10
CarRentalOld_12	20	20	20	20	20	20	20	20	20	20
CarRentalOld_13	30	30	30	30	30	30	30	30	30	30

nduplicates: number of duplicate entries in the database

Oday Amer;166133997;18 January 1983;0569892211;Y46A49;Ford;2010;01 January 2012;14 February 2012;3256  
 ODAY Amer;166133997;18 January 1983;0569892211;Y46A49;Ford;2010;01 January 2012;14 February 2012;3256  
 Tariq Zeyad;142348490;22 January 2002;0514007615;I92V10;Mercedes;2010;06 September 2018;23 November 2018;9516  
 Tariq Zeyad;142348490;22 January 2002;0514007615;I92V10;Mercedes;2010;06 September 2018;23 November 2018;9516  
 Jamal Jaber;570696000;1 October 1992;0599150431;H73Q44;Mazda;2010;03 February 2014;18 April 2014;8769  
 Jamal jaber;570696000;1 October 1992;0599150431;H73Q44;Mazda;2010;03 February 2014;18 April 2014;8769  
 Salma Awwad;959748025;22 September 1977;0529671145;P69R89;BMW;2012;07 March 2017;08 May 2017;8432  
 Salma AWWAD;959748025;22 September 1977;0529671145;P69R89;BMW;2012;07 March 2017;08 May 2017;8432  
 Salma Zeyad;549015944;24 May 1976;0552097271;X84K99;Audi;2011;12 April 2019;21 April 2019;1116  
 SALMA ZEYAD;549015944;24 May 1976;0552097271;X84K99;Audi;2011;12 April 2019;21 April 2019;1116  
 Mohammad Oday;594156619;24 December 1980;0520007330;K98B84;Mitsubishi;2013;21 October 2019;12 November 2019;2112  
 mohammad oday;594156619;24 December 1980;0520007330;K98B84;Mitsubishi;2013;21 October 2019;12 November 2019;2112

ndatechange: number of entries with wrong date format in the database

Abdul\_Kreem Jaber;616124608;16-09-1980;0522829088;J22P75;Honda;2014;30 May 2014;16 August 2014;8775  
 Oday Mohammad;113842944;8 December 1996;0536019693;I34U51;Kia;2011;08 February 2020;12/03/2020;2310  
 Zeyad Abdul\_Kreem;881333995;23/01/1990;0585245823;W43E68;Hyundai;2014;24 December 2015;03 March 2016;5040  
 Nassar Nassar;654611291;23-09-1974;0528431949;O18L86;Ford;2014;17/11/2015;03 January 2016;2914

ndropnames: number of entries where names are dropped from the database

;873394725;24 May 1986;0586943234;R11C83;Honda;2010;08 December 2019;08 January 2020;3534  
 ;390830501;14 December 2002;0598288561;V42J70;Mercedes;2010;09 September 2012;21 November 2012;10804

ndropids: number of entries where person Ids are dropped from the database

Sana Mohammad;;19 December 1970;0532040890;G41I34;Kia;2011;17 June 2020;13 July 2020;2028  
Salma Alzeer;;22 February 1990;0579921549;J34M93;Honda;2011;16 November 2013;02 February 2014;7722

ndropdob: number of entries where DoB are dropped from the database

Abdul\_Kreem Abdullah;553295468;;0559635158;O44R90;Honda;2014;14 April 2019;24 May 2019;4440  
Razan Khalid;596892600;;0515781437;Z29N61;Mercedes;2013;09 March 2017;23 May 2017;12000

ndropmobiles: number of entries where mobile numbers are dropped from the database

Salem Mohammad;264568261;20 June 1988;;H49D36;BMW;2012;16 October 2018;04 January 2019;10400  
Mohammad Khalaf;643810795;12 April 1991;;G41F52;Mercedes;2015;17 May 2019;26 May 2019;1350

ndroppentry: number of entries where personal information cannot be completed (too many fields are dropped such as name, Id and mobile)

;;9 March 1971;;U66V38;Audi;2016;01 June 2020;08 July 2020;5106  
;;23 August 1987;;I81Z26;Volkswagen;2015;09 December 2017;01 February 2018;7128  
;;12 October 1979;;R91A11;Mazda;2014;23 November 2018;05 December 2018;1332

ndropcmake: number of entries where car make is dropped from the database

Tariq Awwad;391855758;21 May 1989;0564001450;U72V28;;2011;12 January 2013;28 January 2013;1264  
Saba Abedlrahman;827246177;13 January 1976;0532391563;I77P62;;2014;17 June 2018;18 July 2018;3069

ndropcids: number of entries where car Ids are dropped from the database (cannot be completed)

Zeyad Khalid;675287631;8 November 1990;0575923396;;Kia;2010;13 June 2017;25 July 2017;3150  
Razan Jaber;210060851;24 May 1976;0541113550;;BMW;2015;21 June 2016;08 July 2016;2074

ndropcyars: number of entries where car models (year) are dropped from the database

Salem Mohammad;410598407;23 January 2001;0558418555;W38Z63;Mercedes;;29 August 2019;28 September 2019;4140  
Salem Mohammad;410598407;23 January 2001;0558418555;Q23F14;Mercedes;;05 January 2016;03 February 2016;4582