You can use this Python file to generate the insert commands with data for the relation you want. In this program, we define four types for the data which are “INT”, ”string”, “INTstr”, “data”.

For example, by importing this Python file, you can use the command like this:

x = GenCommands(200,'student','UIN-KEY','INT','s8000','name','string','r20','BirthYear','INT','a[1985-1995]','Gender','string','a[F,M]','PHONE','INTstr','s9797396000','major','string','a[ECEN]','professor','INT','a[900-909]')

The first parameter of this command means the number of data you want to generate. The second parameter of this command is the name of the table which you want to insert data into. The following are the names of attributes, the types and the descriptions. These attribute related parameters are used as a group of “name”, “type” and “description.” You can add the attribute related parameters as many as you want, but each of the attribute parameter should be used as one element in a group.

For example, in the given command, 200 is the number of data we want to generate; ‘student’ is the name of the table we want to insert data into; ‘UIN-key’ is the name of one attribute; ‘INT’ is its corresponding type; ‘s8000’ is the corresponding description. For the following parameters, different group of parameters, which contain name, type, description in each, appear one by one.

For the name of the attribute, the attribute with a name which has a postfix “-KEY” will not be the same for different items generated. We realize this by checking whether each key value generated appeared or not before. If there exist one value which is the same with the current generated key value, the current key value will be generated again until a new one, which doesn’t exist, appears.

Now, we are giving the introduction of the description. For “INT” type, the description starts with ‘s’ means the corresponding elements are generated increasing by one as the data items generated. The number follows ‘s’ is the initial number. The description starts with ‘a’ means the corresponding attribute is generated randomly within the range given follows ‘a’. The description starts with ‘e’ and a number follows means the corresponding attribute is geminately randomly and the number is number of the decimal digits. The description starts with ‘r’ and a number follows means not only the corresponding attribute is geminately randomly but also the number, which is not larger than the given number, of the decimal digits is randomly chosen.

For “string” type, the description starts with ‘a’ means the attribute will be generated by randomly choosing the value given in the description. The description starts with ‘r’ and a numbers follow means not only the corresponding attribute is geminately randomly but also the length of the string, which is not larger than the given number, is randomly chosen. The description starts with ‘e’ and a number follows means the corresponding attribute is geminately randomly with a given length.

For “INTstr” type, it is very similar to “int” type, but finally the number will be converted into a string. Why we keep this type is because sometime the number we generate is larger than the maximum number which can be stored in database. Under this situation, we use string to store a number.

For “date” type, the description starts with ‘a’ and two years follows means the date means the attribute is generated within the range of years given; the description starts with ‘a’ and a year means the date means the attribute is generated within the exact year given.