

Exercise 10D –Create ABAP Class

SAP Partner Workshop



10 min

Description

In this exercise, you'll learn how:

- Create a ABAP class.

Prerequisites

- You have completed the steps mentioned until Exercise 10C.

Target group

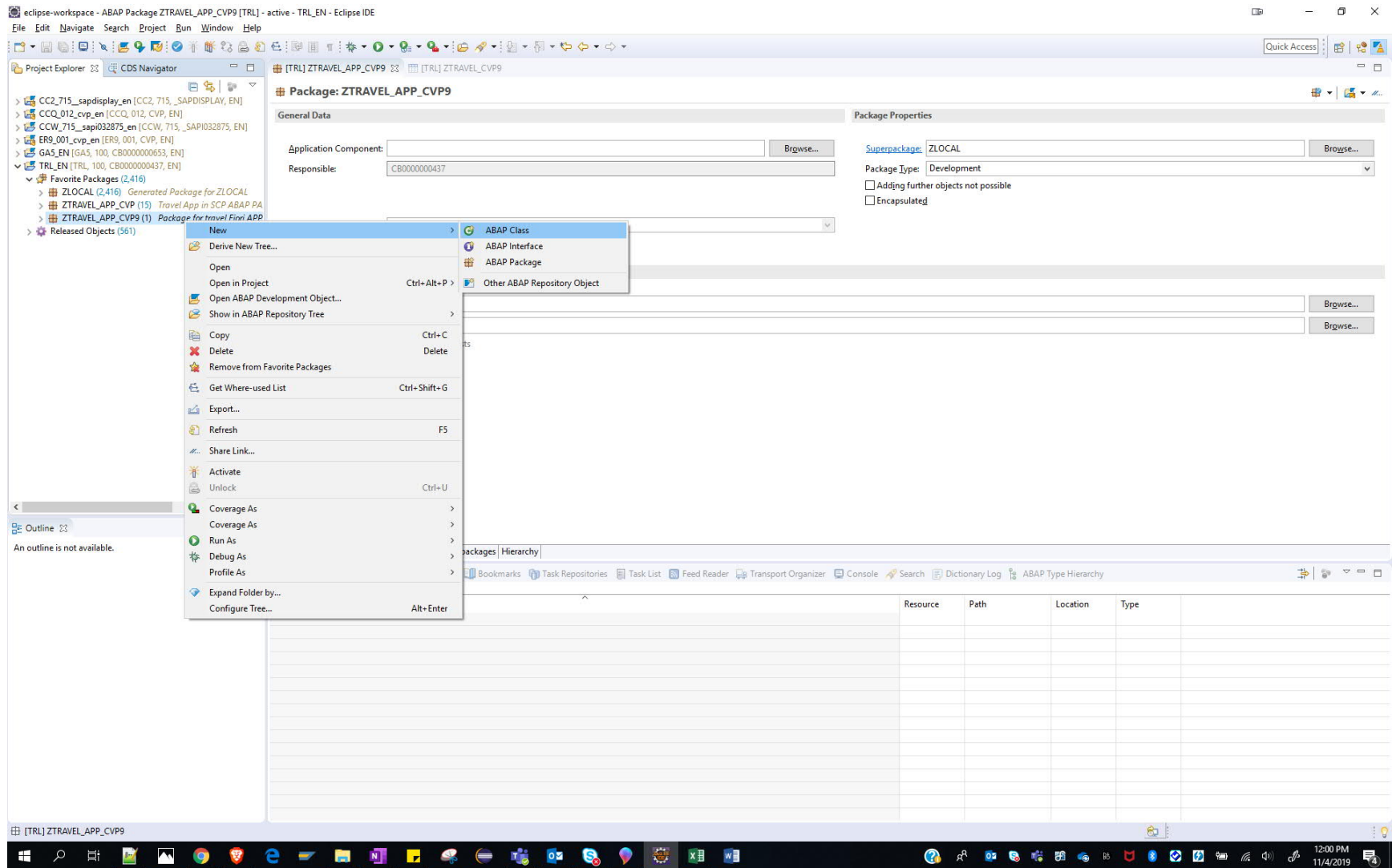
- Developers
People interested in learning about development in ABAP env in SAP Cloud Platform with focus on
- RAP model.

Goal

The goal of this exercise is to create an ABAP class which is used to generate data.

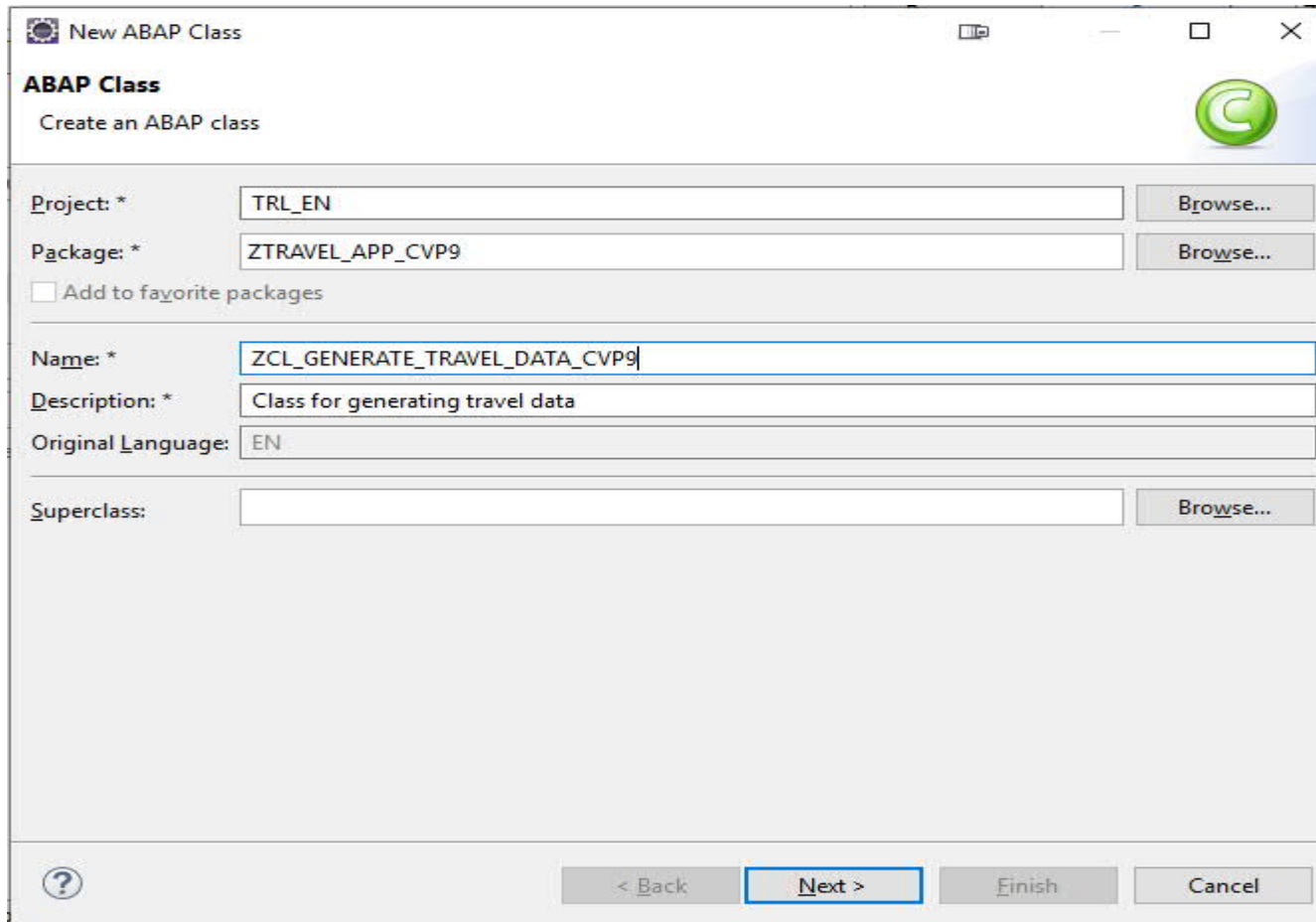
Data generated will be used in the following exercises.

Select the Package ZTRAVEL_APP_XXX, right click → New → ABAP class,



Enter the name and description as

- Name: ZCL_GENERATE_TRAVEL_DATA_XXX
- Description: Class for generating travel data



New ABAP Class

ABAP Class
Create an ABAP class

Project: *

Package: *

☐ Add to favorite packages

Name: *

Description: *

Original Language:

Superclass:

Click on Finish.

Add the following code in the Editor.

```
CLASS zcl_generate_travel_data_xxx DEFINITION
PUBLIC
FINAL
CREATE PUBLIC .

PUBLIC SECTION.

    INTERFACES if_oo_adt_classrun.

PROTECTED SECTION.

PRIVATE SECTION.

ENDCLASS.
```

CLASS ZCL_GENERATE_TRAVEL_DATA_XXX IMPLEMENTATION.

METHOD if_oo_adt_classrun~main.

DATA:itab TYPE TABLE OF ztravel_xxx.

* read current timestamp

GET TIME STAMP FIELD DATA(zv_tsl).

* fill internal travel table (itab)

itab = VALUE #(

```
( travel_id = '00000001' agency_id = '070001' customer_id = '000077' begin_date = '20190624' end_date = '20190628'
  booking_fee = '60.00' total_price = '1780.00' currency_code = 'USD'
  description = 'Trip to Thailand PowerWeek in Bangkok ' overall_status = 'A' created_by = 'CVP' created_at =
'20190612133945.5960060' last_changed_by = 'CVP' last_changed_at = '20190702105400.3647680' )
( travel_id = '00000002' agency_id = '070005' customer_id = '000005' begin_date = '20190613' end_date = '20190716'
  booking_fee = '55.00' total_price = '1150.00' currency_code = 'USD'
  description = 'Trip to TechED in Bangalore' overall_status = 'A' created_by = 'CVP' created_at =
'20190613111129.2391370' last_changed_by = 'CVP' last_changed_at = '20190711140753.1472620' )
( travel_id = '00000003' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
  booking_fee = '61.00' total_price = '1800.00' currency_code = 'USD'
  description = 'Trip to Sapphire in Orlando' overall_status = 'X' created_by = 'CVP' created_at =
'20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
( travel_id = '00000004' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
  booking_fee = '120.00' total_price = '2800.00' currency_code = 'USD'
  description = 'Trip to DSAG Berlin' overall_status = 'X' created_by = 'CVP' created_at = '20190613105654.4296640'
  last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
```

```
( travel_id = '00000005' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
booking_fee = '155.00' total_price = '3500.00' currency_code = 'USD'

description = 'Trip to ASUG Orlando' overall_status = 'A' created_by = 'CVP' created_at =
'20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
).
```

* delete existing entries in the database table

```
DELETE FROM ztravel_xxx.
```

* insert the new table entries

```
INSERT ztravel_xxx FROM TABLE @itab.
```

* check the result

```
SELECT * FROM ztravel_xxx INTO TABLE @itab.
```

```
out->write( sy-dbcnt ).
```

```
out->write( 'Travel data inserted successfully!').
```

```
ENDMETHOD.
```

ENDCLASS.

Please make sure to replace XXX with the name which was chosen by you during the creation of DB table. This replacement is necessary in most of the following exercises.

Example:

```
CLASS zcl_generate_travel_data_cvp9 DEFINITION
PUBLIC
FINAL
CREATE PUBLIC .

PUBLIC SECTION.
    INTERFACES if_oo_adt_classrun.
PROTECTED SECTION.
PRIVATE SECTION.
ENDCLASS.
```

```
CLASS ZCL_GENERATE_TRAVEL_DATA_CVP9 IMPLEMENTATION.
```

```
    METHOD if_oo_adt_classrun-main.
        DATA: itab TYPE TABLE OF ztravel_xxx.
```

```
*    read current timestamp
    GET TIME STAMP FIELD DATA(zv_tsl).
```

```
*    fill internal travel table (itab)
    itab = VALUE #(
        ( travel_id = '00000001' agency_id = '070001' customer_id = '000077' begin_date = '20190624' end_date = '20190628'
          booking_fee = '60.00' total_price = '1780.00' currency_code = 'USD'
```

```

description = 'Trip to Thailand PowerWeek in Bangkok ' overall_status = 'A' created_by = 'CVP' created_at =
'20190612133945.5960060' last_changed_by = 'CVP' last_changed_at = '20190702105400.3647680' )
( travel_id = '00000002' agency_id = '070005' customer_id = '000005' begin_date = '20190613' end_date = '20190716'
booking_fee = '55.00' total_price = '1150.00' currency_code = 'USD'
description = 'Trip to TechED in Bangalore' overall_status = 'A' created_by = 'CVP' created_at =
'20190613111129.2391370' last_changed_by = 'CVP' last_changed_at = '20190711140753.1472620' )
( travel_id = '00000003' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
booking_fee = '61.00' total_price = '1800.00' currency_code = 'USD'
description = 'Trip to Sapphire in Orlando' overall_status = 'X' created_by = 'CVP' created_at =
'20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
( travel_id = '00000004' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
booking_fee = '120.00' total_price = '2800.00' currency_code = 'USD'
description = 'Trip to DSAG Berlin' overall_status = 'X' created_by = 'CVP' created_at = '20190613105654.4296640'
last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
( travel_id = '00000005' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714'
booking_fee = '155.00' total_price = '3500.00' currency_code = 'USD'
description = 'Trip to ASUG Orlando' overall_status = 'A' created_by = 'CVP' created_at = '20190613105654.4296640'
last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
).

```

```

* delete existing entries in the database table
DELETE FROM ztravel_cvp9.

```

```

* insert the new table entries
INSERT ztravel_cvp9 FROM TABLE @i tab.

```

```

* check the result
SELECT * FROM ztravel_cvp9 INTO TABLE @i tab.
out->write( sy-dbcnt ).
out->write( 'Congratulations. Travel data inserted successfully! Enjoy your Trip ' ).

```

```

ENDMETHOD.
ENDCLASS.

```


Use Ctrl-S for Save and Ctrl-F3 for activation.

Use F9 to run the class.

```
1 CLASS zcl_generate_travel_data_cvp9 DEFINITION
2 PUBLIC
3 FINAL
4 CREATE PUBLIC .
5
6 PUBLIC SECTION.
7 INTERFACES if_oo_adt_classrun.
8 PROTECTED SECTION.
9 PRIVATE SECTION.
10 ENDClass.
11
12
13 CLASS ZCL_GENERATE_TRAVEL_DATA_CVP9 IMPLEMENTATION.
14
15 METHOD if_oo_adt_classrun-main.
16 DATA: itab TYPE TABLE OF ztravel_xxx.
17
18 * read current timestamp
19 GET TIME STAMP FIELD DATA(zv_tsl).
20
21 * fill internal travel table (itab)
22 itab = VALUE #(
23 ( travel_id = '00000001' agency_id = '070001' customer_id = '000077' begin_date = '20190624' end_date = '20190628' booking_fee = '60.00' total_price = '1780.00' currency_code = 'USD'
24 description = 'Trip to Thailand Powerweek in Bangkok ' overall_status = 'A' created_by = 'CVP' created_at = '20190612133945.5960060' last_changed_by = 'CVP' last_changed_at = '20190702105400.3647680' )
25 ( travel_id = '00000002' agency_id = '070005' customer_id = '000005' begin_date = '20190613' end_date = '20190716' booking_fee = '55.00' total_price = '1150.00' currency_code = 'USD'
26 description = 'Trip to TechED in Bangalore' overall_status = 'A' created_by = 'CVP' created_at = '20190613111129.2391370' last_changed_by = 'CVP' last_changed_at = '20190711140753.1472620' )
27 ( travel_id = '00000003' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714' booking_fee = '61.00' total_price = '1800.00' currency_code = 'USD'
28 description = 'Trip to Sapphire in Orlando' overall_status = 'X' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
29 ( travel_id = '00000004' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714' booking_fee = '120.00' total_price = '2800.00' currency_code = 'USD'
30 description = 'Trip to DSAG Berlin' overall_status = 'X' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
31 ( travel_id = '00000005' agency_id = '070010' customer_id = '000011' begin_date = '20190610' end_date = '20190714' booking_fee = '155.00' total_price = '3500.00' currency_code = 'USD'
32 description = 'Trip to ASUG Orlando' overall_status = 'A' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
33 ).
34
35 * delete existing entries in the database table
36 DELETE FROM ztravel_cvp9.
37
38 * insert the new table entries
39 INSERT ztravel_cvp9 FROM TABLE @itab.
40
41 ..
```

Global Class | Class-relevant Local Types | Local Types | Test Classes | Macros

Problems | Properties | Templates | Bookmarks | Task Repositories | Task List | Feed Reader | Transport Organizer | Console | Search | Dictionary Log | ABAP Type Hierarchy

ABAP Console

```
Field
5
Congratulations. Travel data inserted successfully! Enjoy your Trip
```

Let's verify the data that was successfully inserted in the table.

Expand "Dictionary" under the package ZTRAVEL_APP_XXX.

Right on the table name → Open With → Data Preview.

The screenshot shows the Eclipse IDE interface with the following components:

- Project Explorer:** Displays a project structure with packages like `CC2_715_sapdisplay_en`, `CCQ_012_cvp_en`, `CCW_715_sapi032875_en`, `ER9_001_cvp_en`, `GAS_EN`, and `TRL_EN`. The `TRL_EN` package is expanded, showing `Database Tables (1)`.
- Database Tables:** A list of database tables is shown, including `ZTRAVEL_CVP9`. The `ZTRAVEL_CVP9` table is selected, and a context menu is open.
- Context Menu:** The menu is open for the `ZTRAVEL_CVP9` table. The `Open With` option is selected, and the `Data Preview` option is highlighted.
- Editor:** The editor shows the SQL definition of the `ZTRAVEL_CVP9` table. The table structure is as follows:

```
1 CLASS zcl_generate_travel_data_cvp9 DEFINITION
2 PUBLIC
3 FINAL
4 CREATE PUBLIC .
5
6 PUBLIC SECTION.
7   INTERFACES if_oo_adt_classrun.
8 PROTECTED SECTION.
9 PRIVATE SECTION.
10 ENDCLASS.
11
12
13 CLASS zcl_generate_travel_data_cvp9 IMPLEMENTATION.
14
15 METHOD if_oo_adt_classrun-main.
16   customer_id = '000077' begin_date = '20190624' end_date = '20190628' booking_fee = '60.00' total_price = '1780.00' currency_code = 'USD'
17   in_bangkok = overall_status = 'A' created_by = 'CVP' created_at = '20190612133945.5960060' last_changed_by = 'CVP' last_changed_at = '20190702185400.3647680' )
18   '005' begin_date = '20190613' end_date = '20190716' booking_fee = '55.00' total_price = '1150.00' currency_code = 'USD'
19   'A' created_by = 'CVP' created_at = '20190613111129.2391370' last_changed_by = 'CVP' last_changed_at = '20190711140753.1472620' )
20   '011' begin_date = '20190610' end_date = '20190714' booking_fee = '61.00' total_price = '1800.00' currency_code = 'USD'
21   'A' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
22   '010' customer_id = '000011' begin_date = '20190610' end_date = '20190714' booking_fee = '120.00' total_price = '2800.00' currency_code = 'USD'
23   'X' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
24   '010' customer_id = '000011' begin_date = '20190610' end_date = '20190714' booking_fee = '155.00' total_price = '3500.00' currency_code = 'USD'
25   'A' created_by = 'CVP' created_at = '20190613105654.4296640' last_changed_by = 'CVP' last_changed_at = '20190613111041.2251330' )
26 ENDMETHOD.
27 ENDCLASS.
```

You should see the data inserted.

[TRL] ZTRAVEL_APP_CVP9 [TRL] ZTRAVEL_CVP9 [TRL] ZCL_GENERATE_TRAVEL_DATA_CVP9 [TRL] ZTRAVEL_CVP9											
Raw Data Show Log											
Filter pattern 5 rows retrieved - 33 ms SQL Console Number of Entries Select Column											
CLIENT	TRAVEL_ID	AGENCY_ID	CUSTOMER_ID	BEGIN_DATE	END_DATE	BOOKING_FEE	TOTAL_PRICE	CURRENCY_CODE	DESCRIPTION	OVERALL_STATUS	
100	00000001	070001	000077	2019-06-24	2019-06-28	60.00	1780.00	USD	Trip to Thailand Po...	A	
100	00000002	070005	000005	2019-06-13	2019-07-16	55.00	1150.00	USD	Trip to TechED in Ba...	A	
100	00000003	070010	000011	2019-06-10	2019-07-14	61.00	1800.00	USD	Trip to Sapphire in ...	X	
100	00000004	070010	000011	2019-06-10	2019-07-14	120.00	2800.00	USD	Trip to DSAG Berlin	X	
100	00000005	070010	000011	2019-06-10	2019-07-14	155.00	3500.00	USD	Trip to ASUG Orlando	A	

Congratulations, you have inserted the Data. Now let's proceed with the creation of CDS in the next exercise.

