

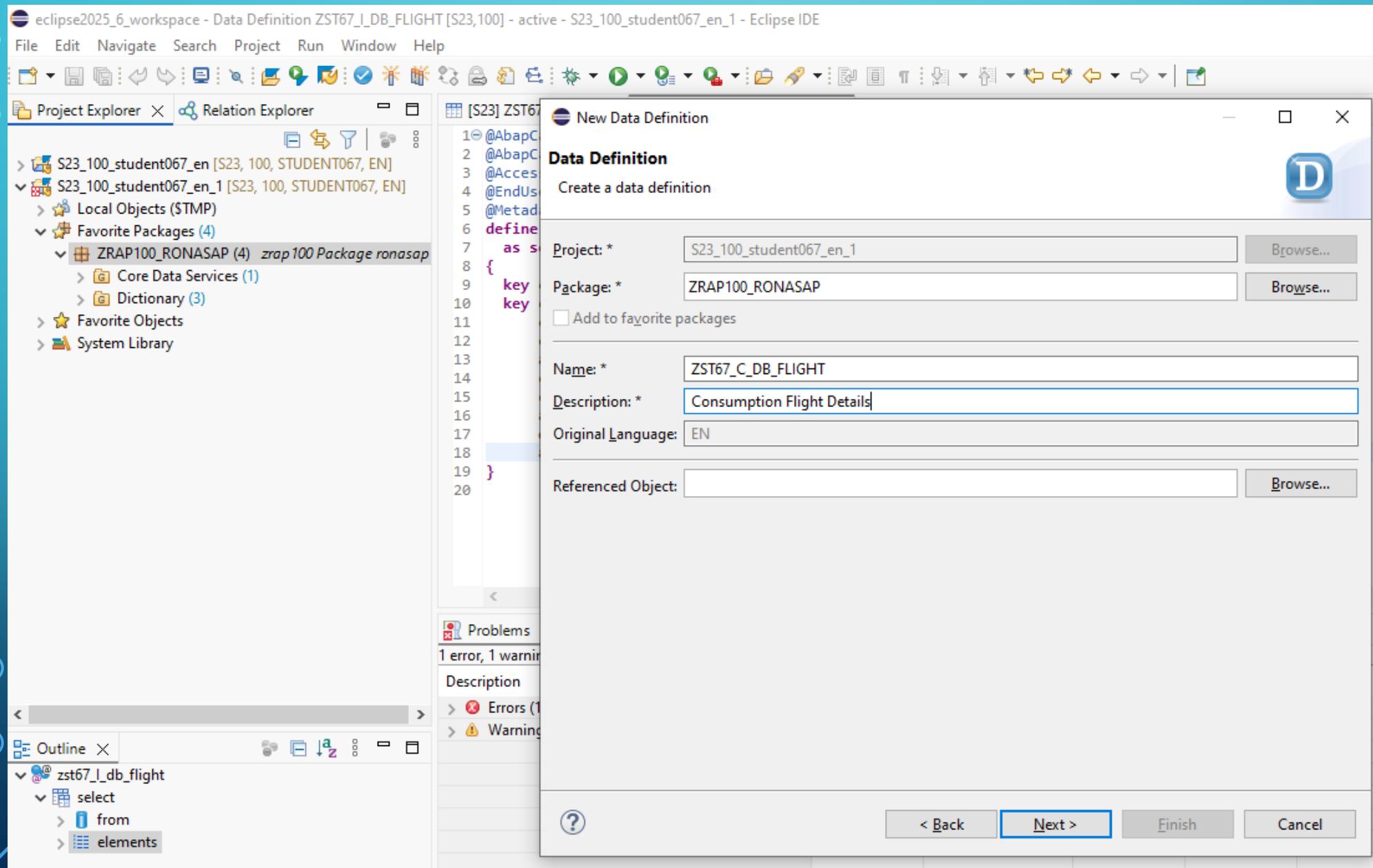
ABAP RAP-

RESTFUL APPLICATION PROGRAMMING

PART 2

SUMMARY & COMPILATION OF MY LEARNING WITH A NUMBER OF ONLINE
COURSES & TUTORIALS INCLUDING DEVELOPED BY ME SAMPLES

DEFINE A NEXT CDS – CONSUMPTION VIEW



Project Explorer X Relation Explorer

S23_100_student067_en [S23, 100, STUDENT067, EN]
S23_100_student067_en_1 [S23, 100, STUDENT067, EN]
Local Objects (\$TMP)
Favorite Packages (4)
ZRAP100_RONASAP (4) zrap100 Package ronasap
Core Data Services (1)
Dictionary (3)
Favorite Objects
System Library

[S23] ZST67

New Data Definition

Templates

Select one of the available templates.

Use the selected template

| Name | Description |
|---|---|
| View (creation) | |
| defineViewEntity | Define View Entity |
| defineRootViewEntity | Define Root View Entity |
| defineViewEntityWithToParentAssociation | Define View Entity with To-Parent Association |
| defineView | Define View (obsolete as of AS ABAP 7.57) |
| Projection View (creation) | |
| View Extend (creation) | |
| Table Function (creation) | |

```
@AbapCatalog.viewEnhancementCategory: [#NONE]
@AccessControl.authorizationCheck: #NOT_REQUIRED
@EndUserText.label: '${ddl_source_description}'
@Metadata.ignorePropagatedAnnotations: true
@ObjectModel.usageType: {
    serviceQuality: #X,
    sizeCategory: #S,
    dataClass: #MIXED
}
define view entity ${ddl_source_name} as select from ${data_source_name}
{
    ${data_source_elements}${cursor}
```

Problems

1 error, 1 warning

Description

> Errors (1)
> Warnings (1)

Outline X

zst67_I_db_flight
select
from
elements

?

< Back Next > Finish Cancel

THE BELOW SYNTAX APPEARS :

The screenshot shows the Eclipse IDE interface for ABAP development. The title bar indicates the workspace is named "eclipse2025_6_workspace - Data Definition ZST67_C_DB_FLIGHT [S23,100] - inactive, locked - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar contains various icons for file operations like Open, Save, and Print, as well as project management and build tools.

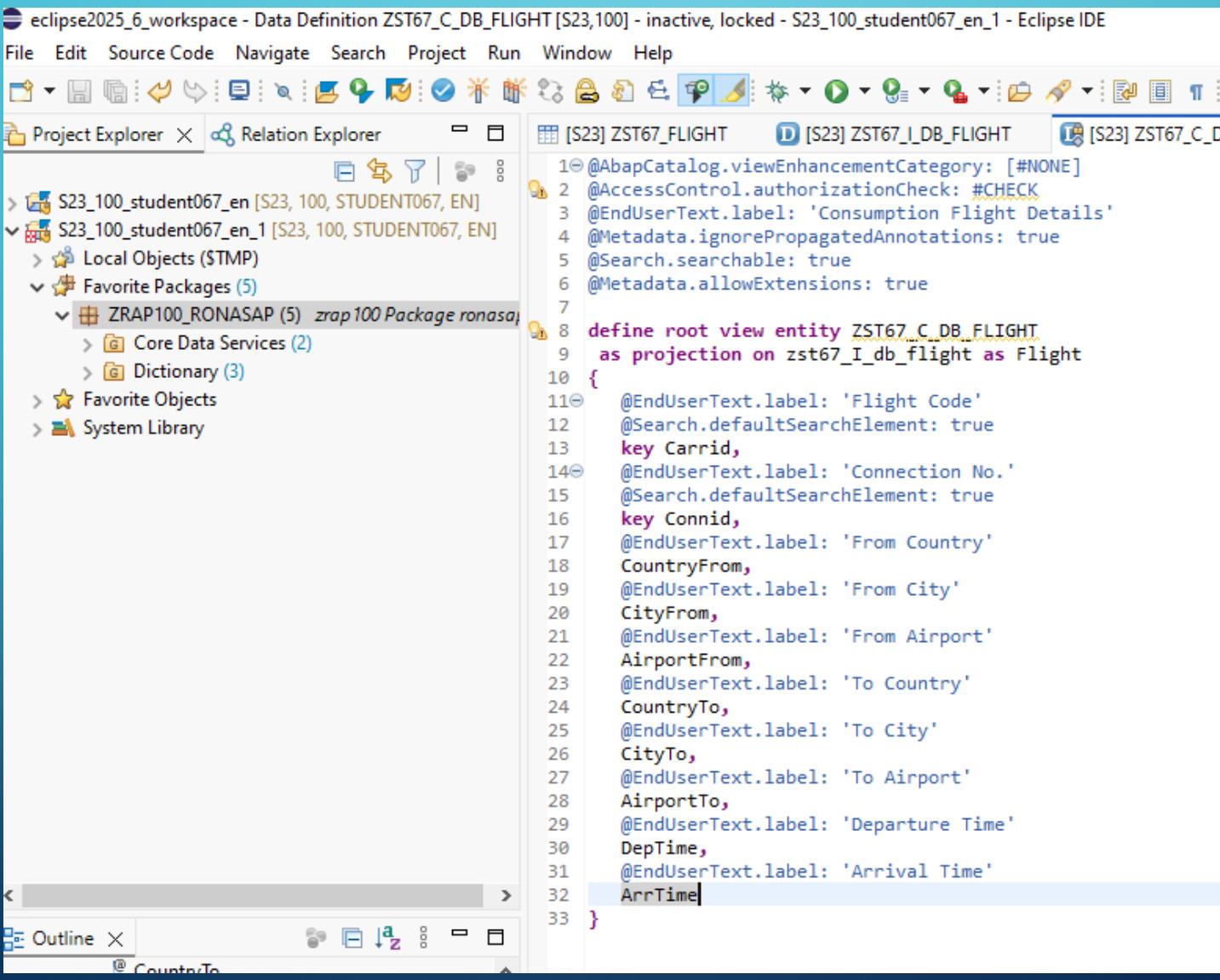
The Project Explorer view on the left shows two projects: "S23_100_student067_en [S23, 100, STUDENT067, EN]" and "S23_100_student067_en_1 [S23, 100, STUDENT067, EN]". The second project is expanded, showing "Local Objects (\$TMP)", "Favorite Packages (5)", and "Favorite Objects". Under "Favorite Packages", "ZRAP100_RONASAP (5) zrap100 Package ronasap" is selected, revealing its contents: "Core Data Services (2)" and "Dictionary (3)".

The central code editor displays ABAP code:

```
1 @AbapCatalog.viewEnhancementCategory: [#NONE]
2 @AccessControl.authorizationCheck: #NOT_REQUIRED
3 @EndUserText.label: 'Consumption Flight Details'
4 @Metadata.ignorePropagatedAnnotations: true
5 @ObjectModel.usageType: {
6     serviceQuality: #X,
7     sizeCategory: #S,
8     dataClass: #MIXED
9 }
10 define view entity ZST67_C_DB_FLIGHT as select from data_source_name
11 {
12
13 }
```

The code editor has three tabs at the top: "[S23] ZST67_FLIGHT", "[S23] ZST67_I_DB_FLIGHT", and "*[S23] ZST67_C_DB_FLIGHT". The third tab is active, showing the current code. A red error marker is visible on line 13.

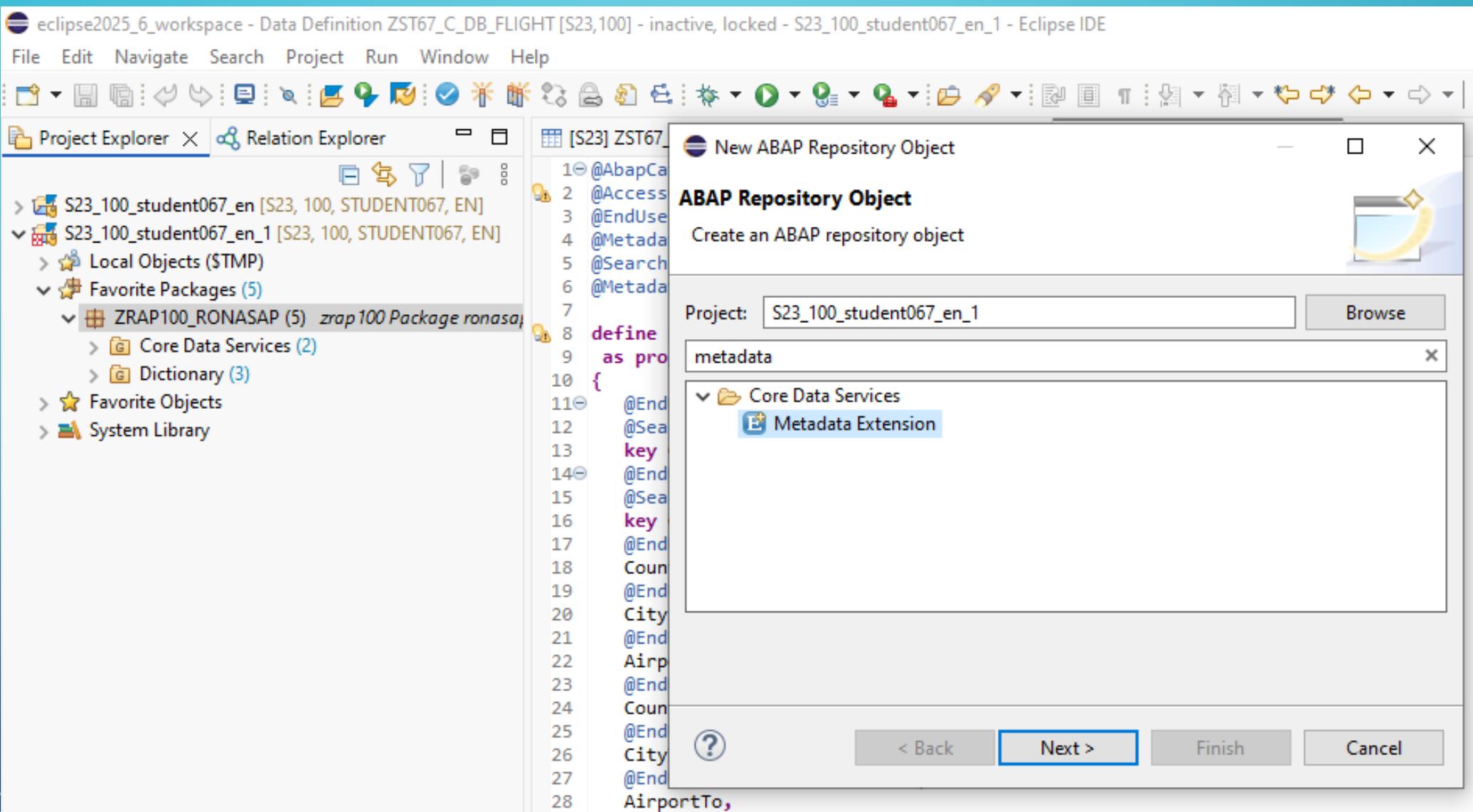
THIS IS THE CONSUMPTION VIEW WHICH IS A PROJECTION ON THE INTERFACE VIEW. HERE WE ADDING ANNOTATIONS SUCH AS SEARCHABLE AND ENDUSER TEXT FOR EACH OF THE FIELDS. IN ADDITION SET ALLOW META DATA EXTENSION AS TRUE AS IN NEXT WE ARE GOING TO DEFINE A META DATA EXTENSION FOR OUR FIORI UI.



The screenshot shows the Eclipse IDE interface with the title bar "eclipse2025_6_workspace - Data Definition ZST67_C_DB_FLIGHT [S23,100] - inactive, locked - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations like Open, Save, and Find. The Project Explorer view shows two projects: "S23_100_student067_en [S23, 100, STUDENT067, EN]" and "S23_100_student067_en_1 [S23, 100, STUDENT067, EN]". The "S23_100_student067_en_1" project contains "Local Objects (\$TMP)", "Favorite Packages (5)" (including "ZRAP100_RONASAP (5) zrap100 Package ronasa"), "Core Data Services (2)", "Dictionary (3)", "Favorite Objects", and "System Library". The "Relation Explorer" view is also visible. The main editor area displays the following ABAP code:

```
1@AbapCatalog.viewEnhancementCategory: [#NONE]
2@AccessControl.authorizationCheck: #CHECK
3@EndUserText.label: 'Consumption Flight Details'
4@Metadata.ignorePropagatedAnnotations: true
5@Search.searchable: true
6@Metadata.allowExtensions: true
7
8define root view entity ZST67_C_DB_FLIGHT
9as projection on zst67_I_db_flight as Flight
10{
11@EndUserText.label: 'Flight Code'
12@Search.defaultSearchElement: true
13key Carrid,
14@EndUserText.label: 'Connection No.'
15@Search.defaultSearchElement: true
16key Connid,
17@EndUserText.label: 'From Country'
CountryFrom,
18@EndUserText.label: 'From City'
CityFrom,
19@EndUserText.label: 'From Airport'
AirportFrom,
20@EndUserText.label: 'To Country'
CountryTo,
21@EndUserText.label: 'To City'
CityTo,
22@EndUserText.label: 'To Airport'
AirportTo,
23@EndUserText.label: 'Departure Time'
DepTime,
24@EndUserText.label: 'Arrival Time'
ArrTime|
```

DEFINE A METADATA EXTENSION :



File Edit Navigate Search Project Run Window Help



Project Explorer X Relation Explorer

- S23_100_student067_en [S23, 100, STUDENT067, EN]
- S23_100_student067_en_1 [S23, 100, STUDENT067, EN]
- > Local Objects (\$TMP)
- > Favorite Packages (5)
 - ✓ ZRAP100_RONASAP (5) zrap100 Package ronasap
 - > Core Data Services (2)
 - > Dictionary (3)
- > Favorite Objects
- > System Library

[S23] ZST67_FLIGHT [S23] ZST67_I_DB_FLIGHT [S23] ZST67_C_DB_FLIGHT X

New Metadata Extension

Metadata Extension

Create a metadata extension



Project: * S23_100_student067_en_1

Package: * ZRAP100_RONASAP

Add to favorite packages

Name: * ZST67_C_DB_FLIGHT

Description: * MData Extension for Flight Details

Original Language: EN

Extended Entity:

Outline X

- @ CountryTo
- @ CityTo
- @ AirportTo
- @ DepTime
- @ ArrTime



< Back

Next >

Finish

Cancel

Project Explorer X Relation Explorer

S23_100_student067_en [S23, 100, STUDENT067, EN]
S23_100_student067_en_1 [S23, 100, STUDENT067, EN]
Local Objects (\$TMP)
Favorite Packages (5)
ZRAP100_RONASAP (5) zrap100 Package ronasap
Core Data Services (2)
Dictionary (3)
Favorite Objects
System Library

[S23] ZST67_FLIGHT [S23] ZST67_I_DB_FLIGHT [S23] ZST67_C_DB_FLIGHT X

New Metadata Extension

Templates

Select one of the available templates.

Use the selected template

| Name | Description |
|------------------------------|---------------------------------|
| annotateEntity | Annotate Entity |
| annotateEntityWithParameters | Annotate Entity with Parameters |
| annotateView | Annotate View |
| annotateViewWithParameters | Annotate View with Parameters |

```
@Metadata.layer: ${layer}
annotate view ${view_name}
with
{
    ${element_name};
    ${cursor}
}
```

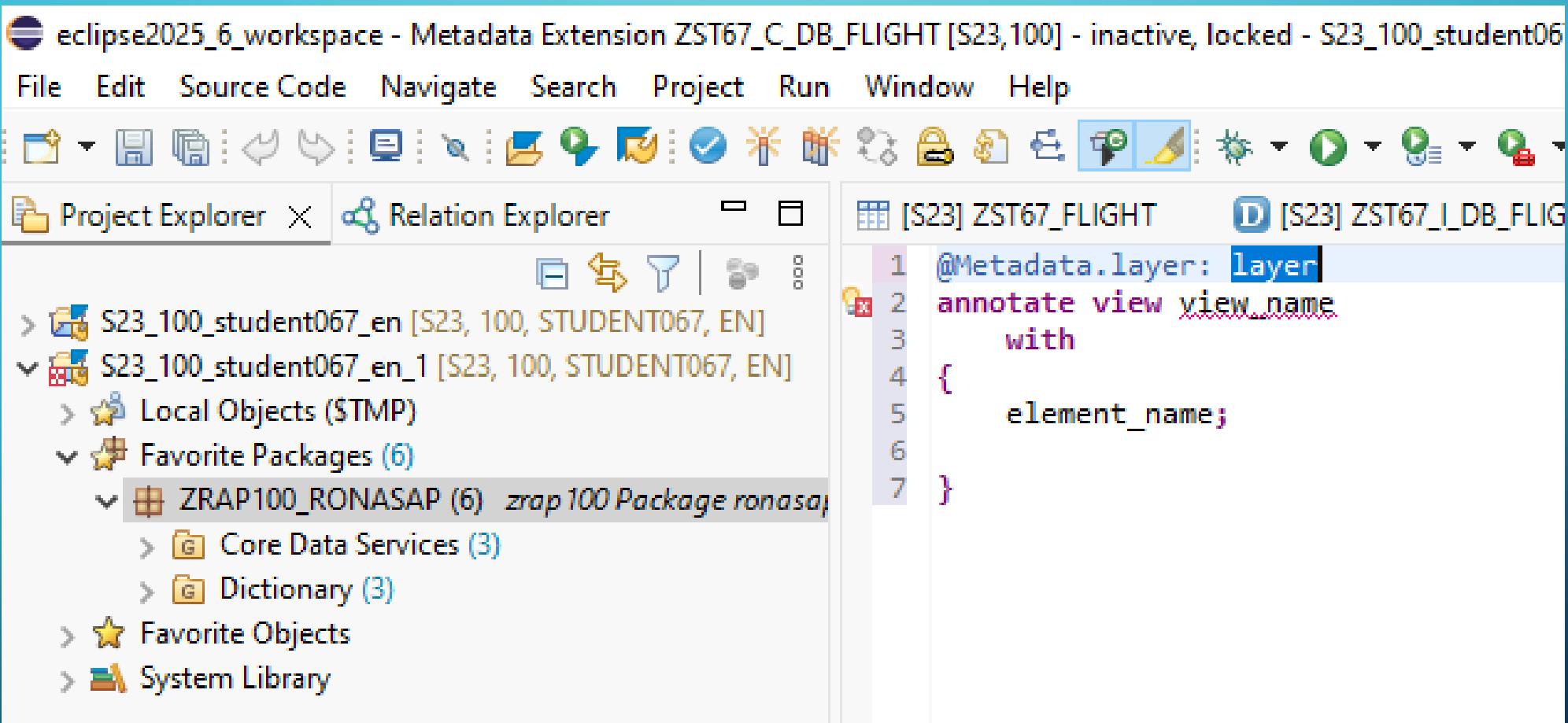
Outline X

CountryTo
CityTo
AirportTo
DepTime
ArrTime

?

< Back Next > Finish Cancel

BELLOW SYNTAX APPEARS:



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

- Project Explorer:** Shows several projects:
 - S23_100_student067_en [S23, 100, STUDENT067, EN]
 - S23_100_student067_en_1 [S23, 100, STUDENT067, EN] (selected)
 - Local Objects (STMP)
 - Favorite Packages (6)
 - ZRAP100_RONASAP (6) (selected)
 - Core Data Services (3)
 - Dictionary (3)
 - Favorite Objects
 - System Library
- Editor:** Displays the following syntax:

```
1 @Metadata.layer: layer  
2 annotate view view_name  
3   with  
4     element_name;  
5  
6  
7 }
```

ADD BELOW ANNOTATIONS- IN OUR FIORI UI, WE WANT SEARCH. LIST AD DETAILS PAGE WITH CREATE, EDIT, DELETE OPERATIONS. HERE MOSTLY WE PROVIDE THE POSITIONS TO EACH OF THE FIELDS IN THE LIST AND DETAILS SCREEN.

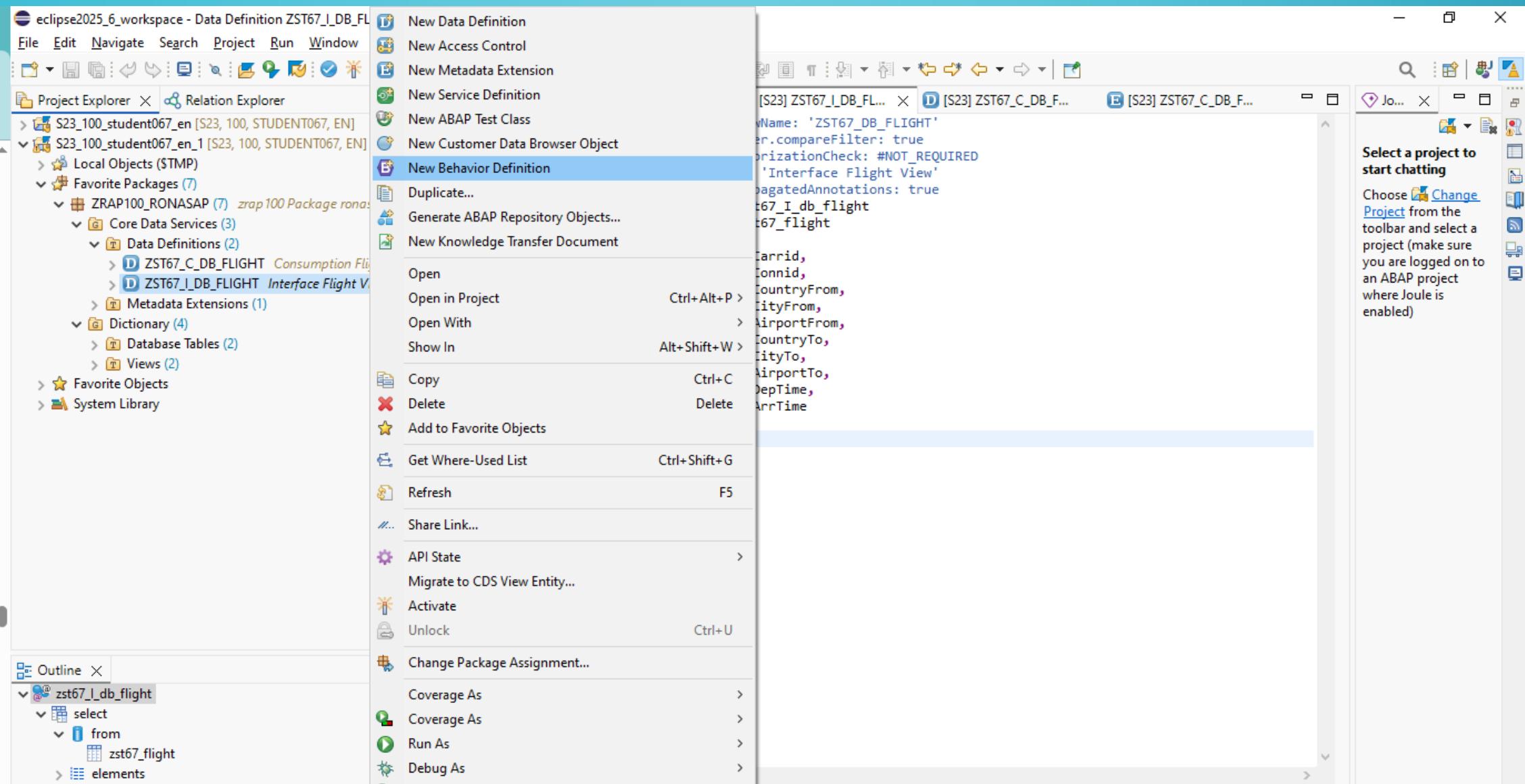
eclipse2025_6_workspace - Metadata Extension ZST67_C_DB_FLIGHT [S23,100] - active - S23_100_student067_en_1 - Eclipse IDE

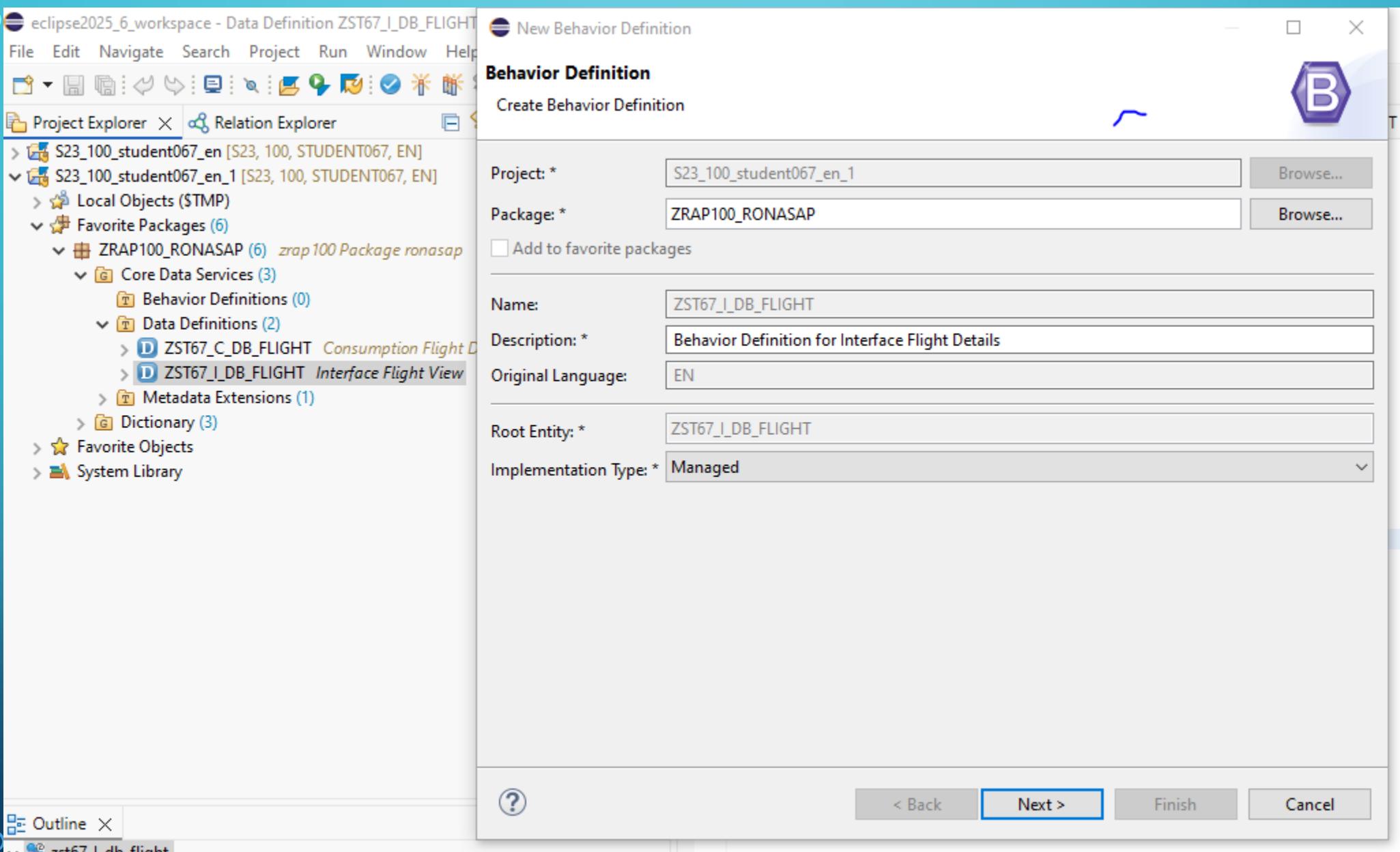
File Edit Source Code Navigate Search Project Run Window Help

[S23] ZST67_FLIGHT * [S23] ZST67_I_DB_FLIGHT [S23] ZST67_C_DB_FLIGHT [S23] ZST67_C_DB_FLIGHT

```
1 @Metadata.layer: #CORE
2 @UI: { headerInfo: {typeName: 'Flight', typeNamePlural: 'Flights',
3 title: { type: #STANDARD ,label: 'Flight',value: 'Carrid' }}}
4 annotate view ZST67_C_DB_FLIGHT with
5 {
6     @UI.facet: [ { id: 'Flight',purpose: #STANDARD,type: #IDENTIFICATION_REFERENCE,label: 'Flight' ,position:10} ]
7     @UI:{ lineItem: [ { position:10 } ] , identification: [ { position: 10, label: 'Flight Code' } ] }
8     Carrid;
9     @UI:{ lineItem: [ { position:20 } ] , identification: [ { position: 20}],selectionField: [ { position:20 } ] }
10 Connid;
11 @UI:{ lineItem: [ { position: 30 } ] , identification:[ { position :30 } ] }
12 CountryFrom;
13 @UI:{ lineItem: [ { position: 40 } ] , identification:[ { position :40 } ] }
14 CityFrom;
15 @UI:{ lineItem: [ { position: 50 } ] , identification:[ { position :50 } ] }
16 AirportFrom;
17 @UI:{ lineItem: [ { position: 60 } ] , identification:[ { position :60 } ] }
18 CountryTo;
19 @UI:{ lineItem: [ { position: 70 } ] , identification:[ { position :70 } ] }
20 CityTo;
21 @UI:{ lineItem: [ { position: 80 } ] , identification:[ { position :80 } ] }
22 AirportTo;
23 @UI:{ lineItem: [ { position: 90 } ] , identification:[ { position :90 } ] }
24 DepTime;
25 @UI:{ lineItem: [ { position: 100 } ] , identification:[ { position :100 } ] }
26 ArrTime;
27 }
```

DEFINE BEHAVIOR DEFINITION TO OUR INTERFACE VIEW





THE BELOW SYNTAX APPEARS:

The screenshot shows the Eclipse IDE interface with the title "eclipse2025_6_workspace - Behavior Definition ZST67_I_DB_FLIGHT [S23,100] - inactive - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations. The left side features the Project Explorer and Relation Explorer. The Project Explorer shows two projects: "S23_100_student067_en [S23, 100, STUDENT067, EN]" and "S23_100_student067_en_1 [S23, 100, STUDENT067, EN]". The "S23_100_student067_en_1" project contains a "Local Objects (\$TMP)" folder and a "Favorite Packages (7)" folder, which includes "ZRAP100_RONASAP (7)" (zrap100 Package ronasap), "Core Data Services (4)", "Behavior Definitions (1)" (containing "ZST67_I_DB_FLIGHT" with a tooltip "Behavior Definition for Interface Flight Details"), "Data Definitions (2)" (containing "ZST67_C_DB_FLIGHT" with a tooltip "Consumption Flight Details" and "ZST67_I_DB_FLIGHT" with a tooltip "Interface Flight View"), "Metadata Extensions (1)", "Dictionary (3)", "Favorite Objects", and "System Library". The right side shows the code editor with the following syntax:

```
1 managed implementation in class zbp_st67.i.db.flight unique;
2 //strict ( 2 ); //Uncomment this line in order to enable strict mode 2. The strict mode has
3
4 define behavior for zst67.I_db_flight //alias <alias_name>
5 persistent table zst67.flight
6 lock master
7 authorization master ( instance )
8 //etag master <field_name>
9 {
10   create;
11   update;
12   delete;
13 }
```

NOW WE HAVE TO ADD FEW THINGS TO IT- THE CREATE, UPDATE AND DELETE BEHAVIORS ARE SUPPORTED AND WE NEED TO PROVIDE THE MAPPING OF THE FIELDS BETWEEN THE DB TABLE AND THE INTERFACE VIEW FIELDS AS WE HAVE DEFINED ALIAS NAMES IN THE INTERFACE VIEW.

eclipse2025_6_workspace - Behavior Definition ZST67_I_DB_FLIGHT [S23,100] - inactive, locked - S23_100_student067_en_1 - Eclipse IDE

File Edit Source Code Navigate Search Project Run Window Help

Project Explorer X Relation Explorer

S23_100_student067_en [S23, 100, STUDENT067, EN]
S23_100_student067_en_1 [S23, 100, STUDENT067, EN]

Local Objects (\$TMP)
Favorite Packages (7)

ZRAP100_RONASAP (7) zrap100 Package ronasap

Core Data Services (4)

Behavior Definitions (1)

ZST67_I_DB_FLIGHT Behavior Definition for Interface Flight Details

Data Definitions (2)

D ZST67_C_DB_FLIGHT Consumption Flight Details

D ZST67_I_DB_FLIGHT Interface Flight View

Metadata Extensions (1)

Dictionary (3)

Database Tables (2)

ZRAP100_ATRAV000 Travel data

ZST67_FLIGHT Flight Details

Views (1)

Favorite Objects
System Library

D [S23] ZST67_I... D [S23] ZST67... E [S23] ZST67... E [S23] ZST67_I... X [S23] ZST67...

```
1 managed implementation in class zbp_st67_i_db_flight unique;
2 //strict ( 2 ); //Uncomment this line in order to enable strict mode 2. The strict
3
4 define behavior for zst67_I_db_flight //alias <alias_name>
5 persistent table zst67_flight
6 lock master
7 authorization master ( instance )
8 //etag master <field_name>
9 {
10     create;
11     update;
12     delete;
13     mapping for zst67_flight // Need mapping betweenDB field & view fields
14     { Carrid = carrid;
15 Connid = connid;
16 CountryFrom = countryfr;
17 CityTo = cityto;
18 Airportto = airpto;
19 DepTime = deptime;
20 ArrTime = arrtime;
21
22 }
23 }
```

ONE MORE THING IS- THE SYSTEM SUGGESTED A CLASS NAME WHICH IS NOT YET CREATED BUT IF WE ARE ADDING OTHER ACTIONS, VALIDATIONS OR DETERMINATIONS THEN WE CAN CREATE THIS CLASS AND IMPLEMENT THOSE BUT AS WE ARE DEALING WITH ONLY CRUD OPERATIONS THEN ITS NOT MANDATORY TO CREATE THE CLASS. WE JUST LEAVE IT AS IT IS AT THE MOMENT.

The screenshot shows the Eclipse IDE interface with the title "eclipse2025_6_workspace - Behavior Definition ZST67_I_DB_FLIGHT [S23,100] - inactive, locked - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations like Open, Save, Find, and Run. The Project Explorer view on the left shows two projects: "S23_100_student067_en" and "S23_100_student067_en_1". The "S23_100_student067_en_1" project contains a "Local Objects (\$TMP)" folder and a "Favorite Packages (7)" folder, which includes "ZRAP100_RONASAP" (containing "Core Data Services (4)", "Behavior Definitions (1)", "Data Definitions (2)", and "Dictionary (3)"), "ZST67_C_DB_FLIGHT", "ZST67_I_DB_FLIGHT", and "ZST67_F..." (highlighted). The "Database Tables (2)" under Dictionary contains "ZRAP100_ATRAV000" and "ZST67_FLIGHT". The "Views (1)" folder also contains "ZST67_FLIGHT". The right-hand side of the interface shows several tabs for different behavior definitions, with the "ZST67_I_DB_FLIGHT" tab currently active. The code editor displays the following Behavior Definition:

```
1 managed implementation in class zbp_st67_i_db_flight unique;
2 //strict ( 2 ); //Uncomment this line in order to enable strict mode 2. The strict mode
3
4 define behavior for zst67_I_db_flight //alias <alias_name>
5 persistent table zst67_flight
6 lock master
7 authorization master ( instance )
8 //etag master <field_name>
9 {
10   create;
11   update;
12   delete;
13 mapping for zst67_flight // Need mapping betweenDB field & view fields
14 { Carrid = carrid;
15 Connid = connid;
16 CountryFrom = countryfr;
17 CityTo = cityto;
18 Airportto = airpto;
19 DepTime = deptime;
20 ArrTime = arrtime;
21
22 }
23 }
```

CREATE A BEHAVIOR DEFINITION FOR THE CONSUMPTION VIEW AS WELL:

The screenshot shows the SAP ABAP Eclipse IDE interface. On the left, the Project Explorer view displays several projects and objects, including 'S23_100_student067_en' and 'S23_100_student067_en_1'. The 'Behavior Definitions' node under 'Core Data Services' contains two entries: 'ZST67_I_DB_FLIGHT' (selected) and 'ZST67_C_DB_FLIGHT'. A context menu is open over 'ZST67_I_DB_FLIGHT', with the option 'New Behavior Definition' highlighted.

The right side of the interface shows the code editor with the following ABAP code:

```
zst67_I_db_flight unique;
comment this line in order to enable strict mode 2. The strict mode
//alias <alias_name>
67_flight

( instance )
_name>

flight // Need mapping betweenDB field & view fields

yfr;
```

The code editor title bar indicates the current file is 'ZST67_I_DB_FLIGHT'.

eclipse2025_6_workspace - Behavior Definition ZST67_C_DB_FLIGHT

File Edit Navigate Search Project Run Window Help

Project Explorer X Relation Explorer

S23_100_student067_en [S23, 100, STUDENT067, EN]
S23_100_student067_en_1 [S23, 100, STUDENT067, EN]

> Local Objects (\$TMP)
> Favorite Packages (7)

> ZRAP100_RONASAP (7) zrap100 Package ronasap

> Core Data Services (4)

> Behavior Definitions (1)
> ZST67_L_DB_FLIGHT Behavior Definition for Consumption Flight Details

> Data Definitions (2)
> ZST67_C_DB_FLIGHT Consumption Flight Details
> ZST67_L_DB_FLIGHT Interface Flight View

> Metadata Extensions (1)

> Dictionary (3)
> Database Tables (2)
> ZRAP100_ATRAV000 Travel data
> ZST67_FLIGHT Flight Details

> Views (1)

> Favorite Objects
> System Library

Outline X

zst67_l_db_flight

New Behavior Definition

Behavior Definition

Create Behavior Definition

Project: * S23_100_student067_en_1

Package: * ZRAP100_RONASAP

Add to favorite packages

Name: ZST67_C_DB_FLIGHT

Description: * Behavior Definition for Consumption Flight Details

Original Language: EN

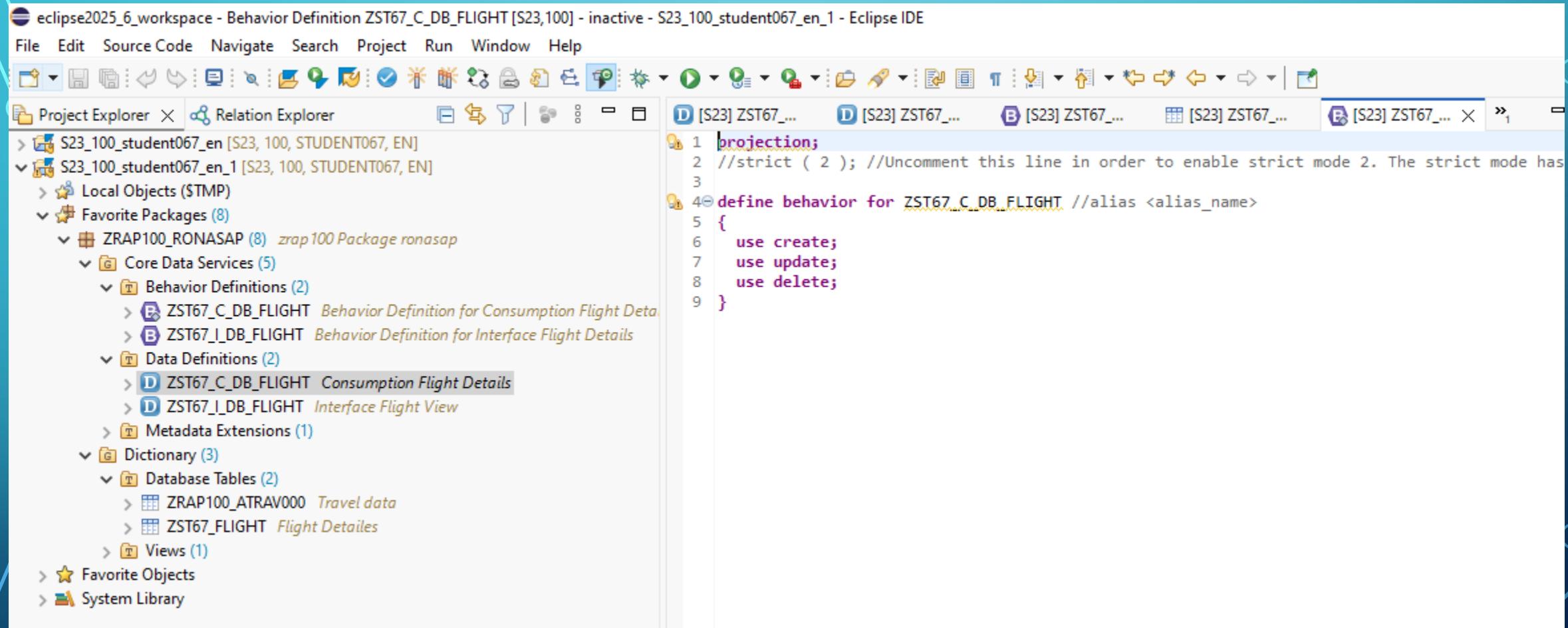
Root Entity: * ZST67_C_DB_FLIGHT

Implementation Type: * Projection

?

< Back Finish Cancel

THE BELOW SYNTAX APPEARS:



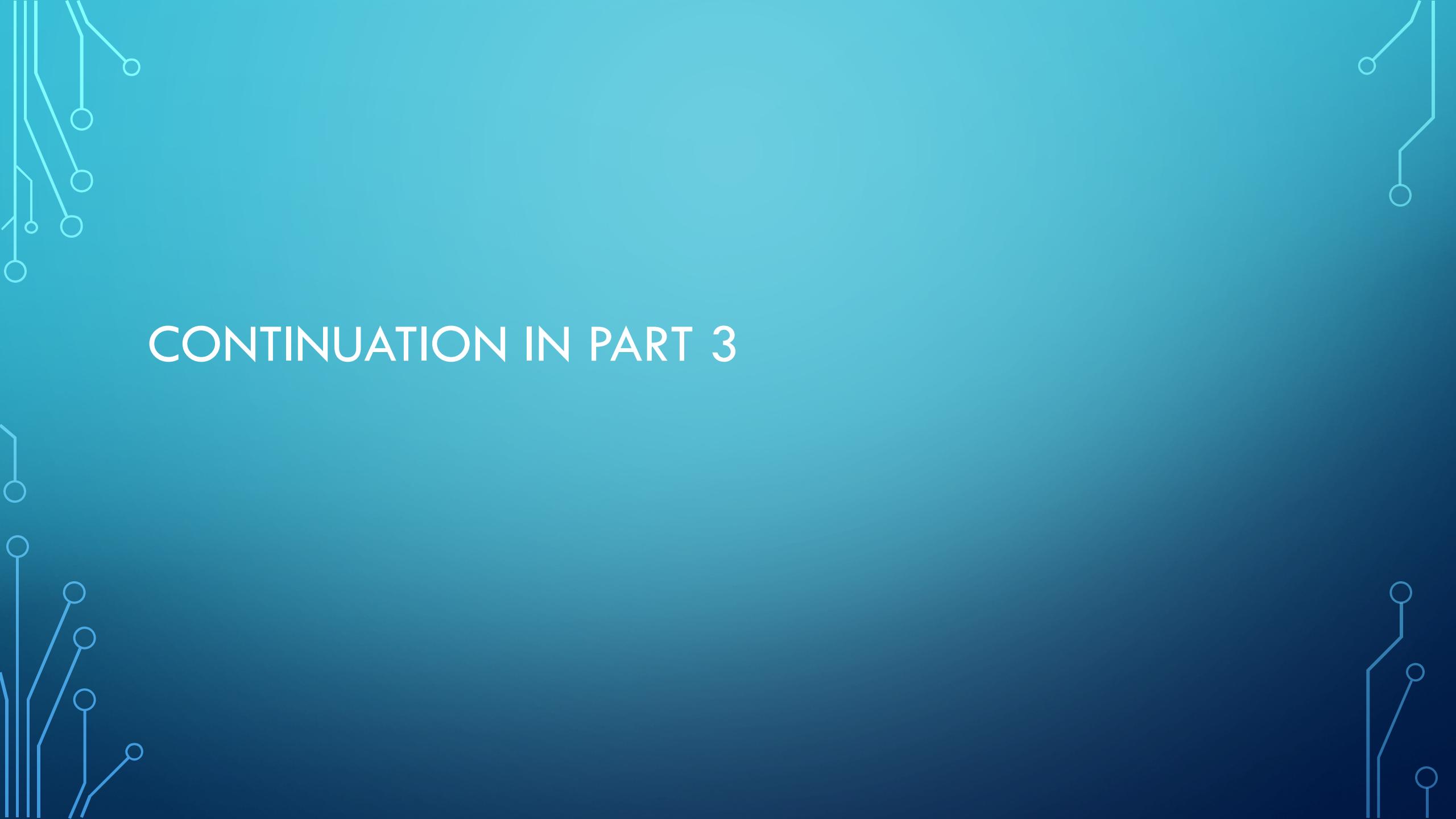
The screenshot shows the Eclipse IDE interface with the title "eclipse2025_6_workspace - Behavior Definition ZST67_C_DB_FLIGHT [S23,100] - inactive - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations. The Project Explorer view shows a package named "S23_100_student067_en_1" containing "Local Objects (\$TMP)" and "Favorite Packages (8)", which include "ZRAP100_RONASAP (8)" (containing "Core Data Services (5)" with "Behavior Definitions (2)" and "Data Definitions (2)", and "Dictionary (3)" with "Database Tables (2)" and "Views (1)"), and "Metadata Extensions (1)". The right-hand editor area displays the following code:

```
1 projection;
2 //strict ( 2 ); //Uncomment this line in order to enable strict mode 2. The strict mode has
3
4 define behavior for ZST67_C_DB_FLIGHT //alias <alias_name>
5 {
6     use create;
7     use update;
8     use delete;
9 }
```

PROVIDE THE ALIAS NAME AND USE ETAG.

The screenshot shows the Eclipse IDE interface with the title bar "eclipse2025_6_workspace - Behavior Definition ZST67_C_DB_FLIGHT [S23,100] - inactive, locked - S23_100_student067_en_1 - Eclipse IDE". The menu bar includes File, Edit, Source Code, Navigate, Search, Project, Run, Window, and Help. The toolbar has various icons for file operations like Open, Save, Print, and search. The Project Explorer view on the left shows a tree structure with nodes like "S23_100_student067_en [S23, 100, STUDENT067, EN]" and "S23_100_student067_en_1 [S23, 100, STUDENT067, EN]". The "Favorite Packages" node contains "ZRAP100_RONASAP (8)" which further contains "Core Data Services (5)", "Behavior Definitions (2)", "Data Definitions (2)", "Dictionary (3)", and "Views (1)". The "Behavior Definitions (2)" node contains "ZST67_C_DB_FLIGHT" and "ZST67_I_DB_FLIGHT". The "Data Definitions (2)" node contains "ZST67_C_DB_FLIGHT" and "ZST67_I_DB_FLIGHT". The "Dictionary (3)" node contains "Database Tables (2)", which include "ZRAP100_ATRAV000" and "ZST67_FLIGHT". The code editor on the right displays the following behavior definition:

```
1 projection;
2 //strict ( 2 ); //Uncomment this line in order to enable strict mode
3
4 define behavior for ZST67_C_DB_FLIGHT alias Flight
5 use etag
6 {
7   use create;
8   use update;
9   use delete;
10 }
```

The background features a subtle, abstract pattern of branching lines in light blue and white. These lines resemble tree branches or circuit board pathways, creating a sense of organic complexity. They are more prominent in the upper left and lower right corners, while the center of the slide is relatively clear.

CONTINUATION IN PART 3