

Create CAP project.

Tips:

Using CLI commands

1. Create New Folder for your CAP Project.
2. Open the CAP Projects root folder in the terminal
3. Run command `cds init --add mta`

(or)

Add data model to an existing CAP Project

Code to be added in db/data-model.cds

Goto db folder and create cds file -> order-data-model.cds

```
namespace my.salesorder;

entity SalesOrders {
    key ID      : String(10);
    description : String(50) not null;
    salesOrg    : String(4);
    customerNo  : String(10);
    customer    : Association to Customers          //unmanaged association
                on customer.customerNo = customerNo;
    items       : Composition of many SalesOrderItems //managed composition (to many)
                on items.salesOrder = $self;
}

entity SalesOrderItems {
    key salesOrder : Association to one SalesOrders; //managed association (to one)
    key item       : Integer;
    material       : String(18);
    quantity       : Decimal(10, 2);                //Precision , scale
}

entity Customers {
    key customerNo : String(10);
    customerName   : String(50);
    addresses      : Composition of one Addresses; //managed composition (to one)
}

entity Addresses {
    key ID      : Integer;
    city       : String(50);
    country    : String(10);
    contact    : ContactType;
}

type ContactType {
    phonenumber : String(10);
    email       : String(50);
}
```

Code to be added in srv/order-service.cds

using my.salesorder as my from '../db/order-data-model';

```
service SalesOrderService @(path:'/SalesOrderService')
{
    entity SalesOrders      as projection on my.SalesOrders;
    entity SalesOrderItems as projection on my.SalesOrderItems;
    entity Customers as projection on my.Customers;
    entity Addresses as projection on my.Addresses;
}
```

Build and run your application as described in previous exercise

.

```
.
*****
Code to be added in srv/order-service-test.http
for testing association and composition
*****
Get http://localhost:4004/SalesOrderService/$metadata

###
Get http://localhost:4004/SalesOrderService/SalesOrders

###
Get http://localhost:4004/SalesOrderService/SalesOrderItems

###
POST http://localhost:4004/SalesOrderService/SalesOrders HTTP/1.1
Content-Type: application/json

{
  "ID": "1",
  "description": "Order 1",
  "customerNo": "C1",
  "salesOrg": "US01"
}

###
Get http://localhost:4004/SalesOrderService/SalesOrders(ID='1')

###
PATCH http://localhost:4004/SalesOrderService/SalesOrders(ID='1') HTTP/1.1
Content-Type: application/json

{
  "description": "Test Description",
  "customerNo": "C1"
}

###
POST http://localhost:4004/SalesOrderService/SalesOrderItems HTTP/1.1
Content-Type: application/json

{
  "salesOrder_ID": "1",
  "item": 10,
  "material": "Pen",
  "quantity": 100
}

###
##Expand Entity to view child component
Get http://localhost:4004/SalesOrderService/SalesOrders?$expand=items,customer HTTP/1.1

###
##Deep Insert for entity with Compositions
##Deep Insert-Example 1

POST http://localhost:4004/SalesOrderService/SalesOrders HTTP/1.1
Content-Type: application/json

{
  "ID": "2",
  "description": "Order 2",
  "customerNo": "C1",
  "salesOrg": "IN01",
  "items": [
    {
      "item": 10,
      "material": "Laptop",
      "quantity": 100
    },
  ],
}
```

```
{
  "item": 20,
  "material": "Printer",
  "quantity": 50
},
{
  "item": 30,
  "material": "Mobile",
  "quantity": 20
}
]
```

###

##Deep Insert-Example 2

POST http://localhost:4004/SalesOrderService/Customers

Content-Type: application/json

```
{
  "customerNo": "C1",
  "customerName": "Peter",
  "addresses": {
    "ID": 100,
    "city": "Chennai",
    "country": "IN",
    "contact_phonenumber": "123-456-78",
    "contact_email": "Peter@gmail.com"
  }
}
```

###

Get http://localhost:4004/SalesOrderService/Customers?\$expand=addresses

###

Get http://localhost:4004/SalesOrderService/Addresses

###

##Notice SalesOrder and associated items will be deleted.

DELETE http://localhost:4004/SalesOrderService/SalesOrders(ID='1')

###

##Notice Customer and associated address will be deleted.

DELETE http://localhost:4004/SalesOrderService/Customers(customerNo='C1')
