How to create a type group in SAP ABAP

A type group is a repository object in the ABAP Dictionary. It lets you define data types in the Dictionary instead of inside an ABAP program. This guide shows you how to create a type group in SAP ABAP, define types in it, and verify it. It then shows you how to use those types in an ABAP report.

Prerequisites

Before you start, review the naming rules for type groups:

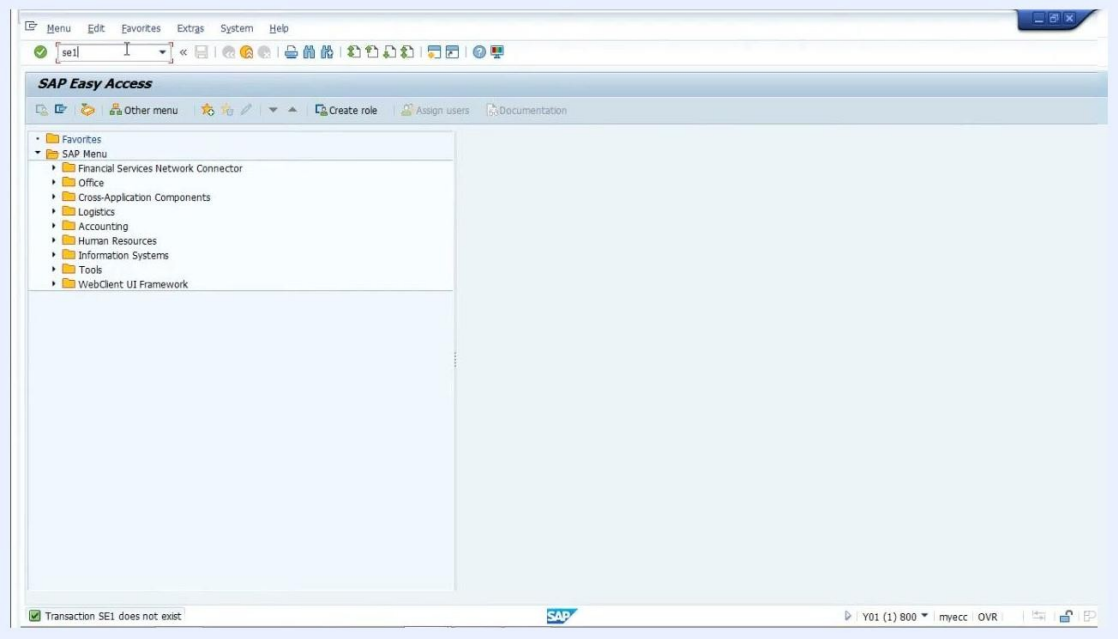
- The name of a type group can have a maximum of 5 characters.
- Every data type you define in a type group must begin with the type group name, followed by an underscore (_). For example, in a type group named ZTYPE, a data type is named ZTYPE_AGE.

This guide uses a type group named Ztyp1. It defines two types, ZTYP1_NAME and ZTYP1_AGE.

Step 1: Open the ABAP Dictionary with transaction SE11

1. On the **SAP Easy Access** screen, enter the transaction code SE11 in the command field.
2. Press **Enter** to open the ABAP Dictionary.

If you enter an incorrect transaction code, such as SE1, a message appears at the bottom of the screen: "Transaction SE1 does not exist." Re-enter the code correctly to continue.



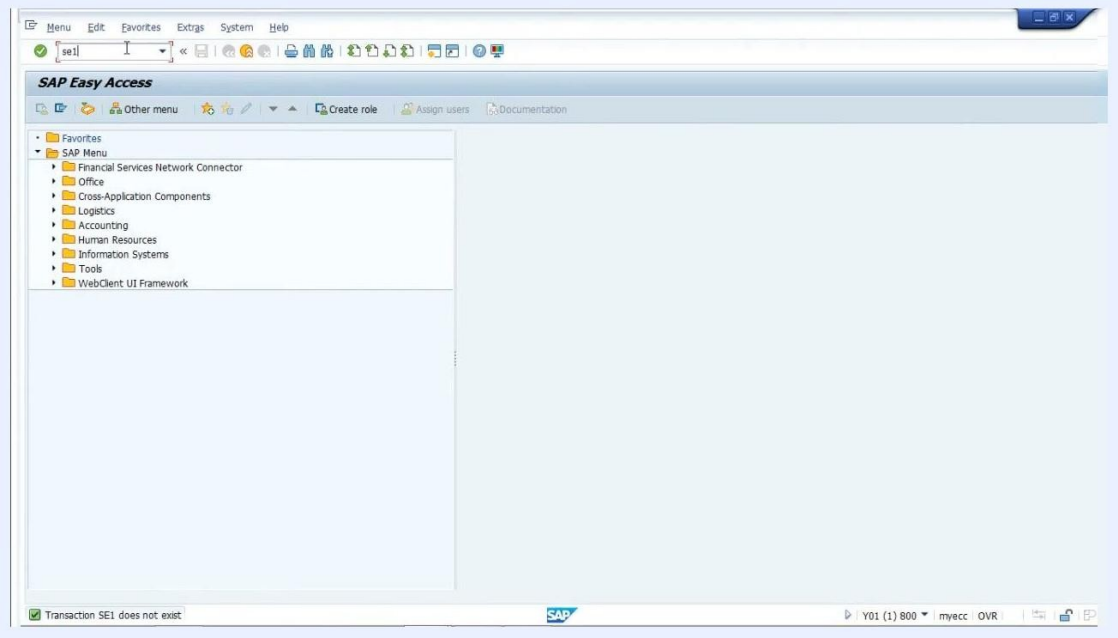
The SAP Easy Access screen with an incorrect transaction code entered in the command field and a warning message at the bottom saying the transaction does not exist.

Step 2: Select Type Group and enter a name

To create a type group in SAP ABAP, start from the initial screen of the ABAP Dictionary.

1. On the **ABAP Dictionary: Initial Screen**, select the **Type Group** radio button.
2. Enter the type group name in the input field. For this example, enter Ztyp1.

3. Click **Create**.

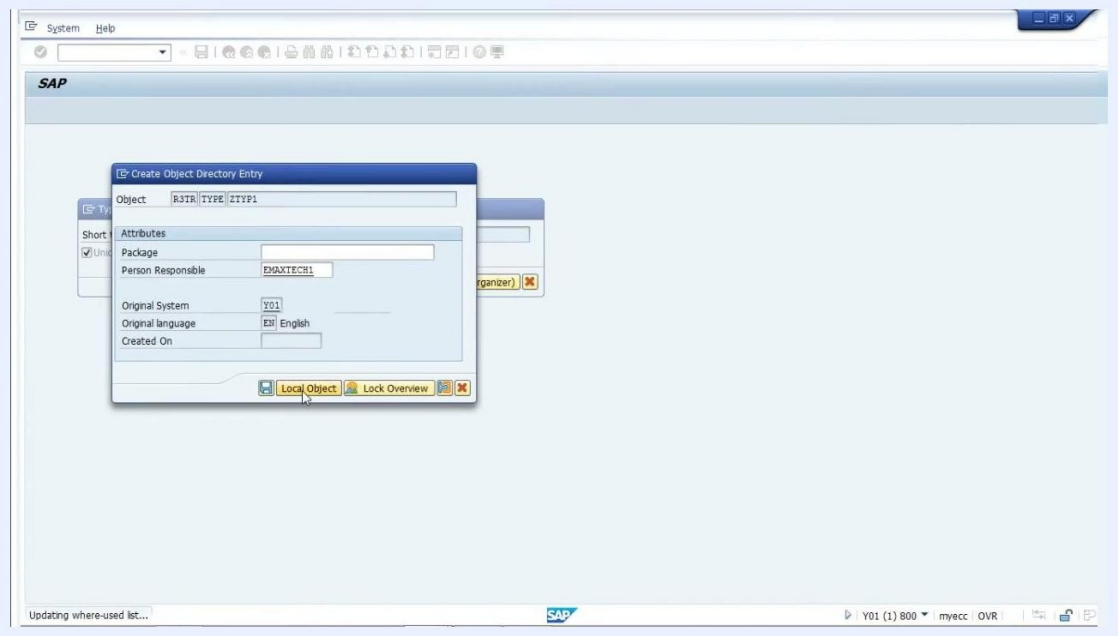


The ABAP Dictionary: Initial Screen with the Type Group option selected and the name Ztyp1 entered in the input field.

Step 3: Enter a description and save as a local object

1. In the **Create Type Group** dialog, enter a short description. For this example, enter "Type group".

2. When the **Create Object Directory Entry** dialog appears, click **Local Object** to save the type group locally.



The Create Object Directory Entry dialog with the Local Object button highlighted while type group ZTYP1 is being created.

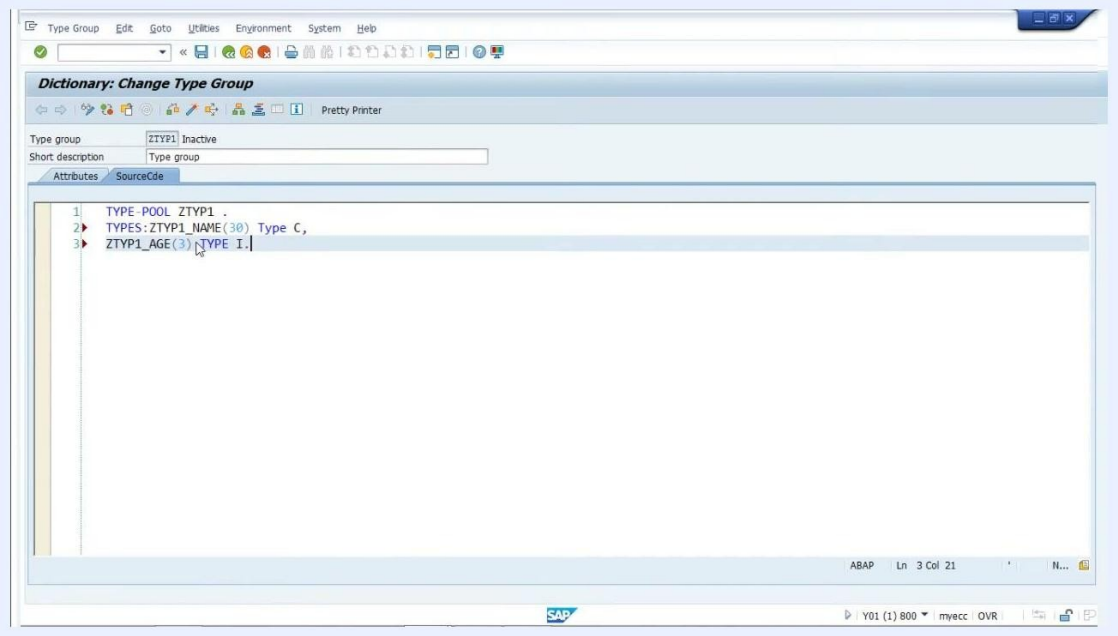
Step 4: Define the types in the type group editor

The **Dictionary: Change Type Group** editor opens with a template that contains TYPE-POOL ZTYP1 .. Define your custom types under the **SourceCde** tab.

```
TYPE-POOL ZTYP1 .
TYPES: ZTYP1_NAME(30) TYPE C,
       ZTYP1_AGE(3) TYPE I.
```

- ZTYP1_NAME is a character type of length 30.
- ZTYP1_AGE is an integer type of length 3.

Both type names start with the type group name followed by an underscore, as the naming rules require.



The Dictionary: Change Type Group editor with TYPE-POOL ZTYP1 and the two type definitions entered.

Step 5: Save, check, and activate the type group

After you enter the type definitions, complete these actions in order:

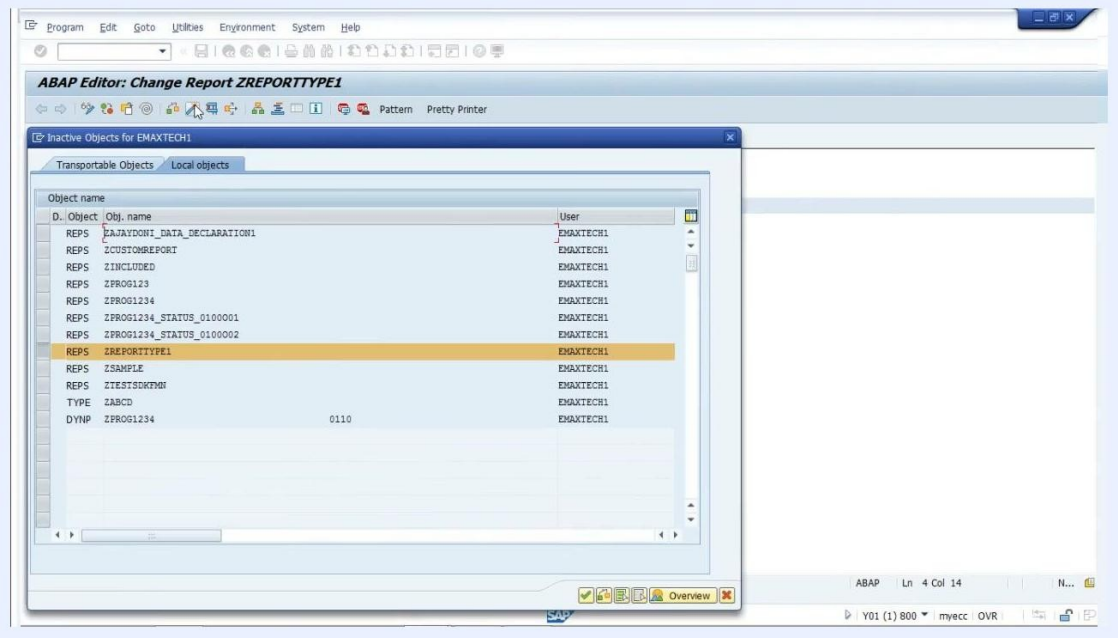
1. Click **Save** to store your changes.
2. Click **Check** (the checkmark icon) to validate the type group for syntax errors.
3. Click **Activate** (the yellow circle icon) to make the type group available for use in ABAP programs.

Step 6: Verify the type group definitions

1. Open the **Dictionary: Display Type Group** screen.
2. Confirm that these definitions exist:

    - TYPES: ZTYP1_NAME(30) TYPE C,
    - ZTYP1_AGE(3) TYPE I.

3. Make sure the type group is active.



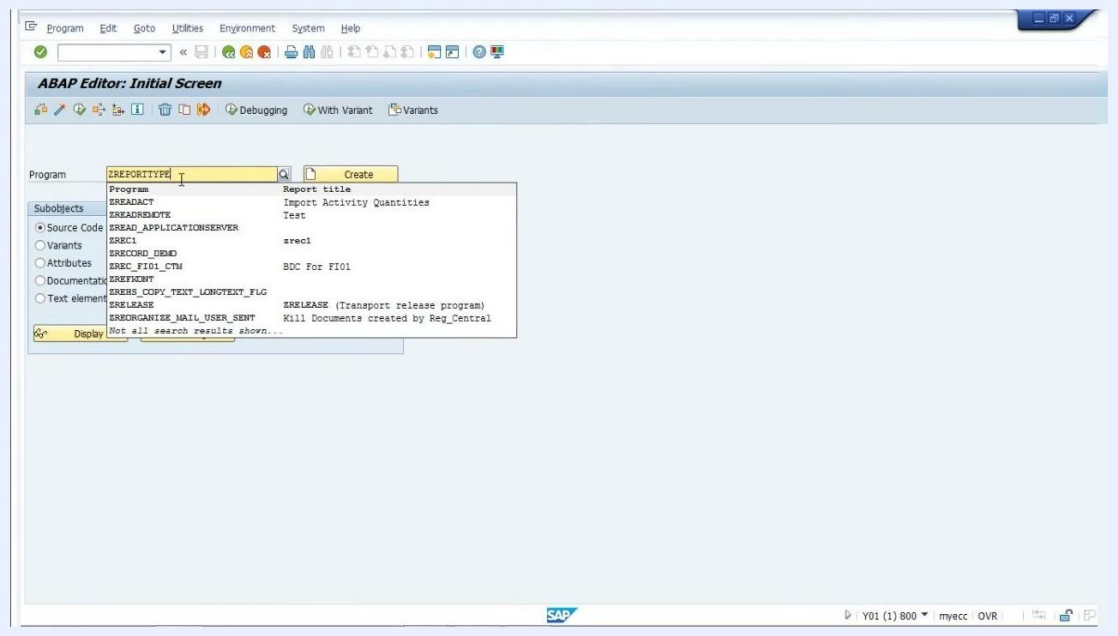
The Dictionary: Display Type Group screen showing the ZTYP1_NAME and ZTYP1_AGE definitions.

Step 7: Start a new ABAP report to use the type group

Now use the type group in a report.

1. Go to the **ABAP Editor: Initial Screen**.
2. Enter a program name in the **Program** field. For this example, enter ZREPORTTYPE1.
3. Click **Create** to start a new report.

A dropdown list may appear showing similar program names and their descriptions.

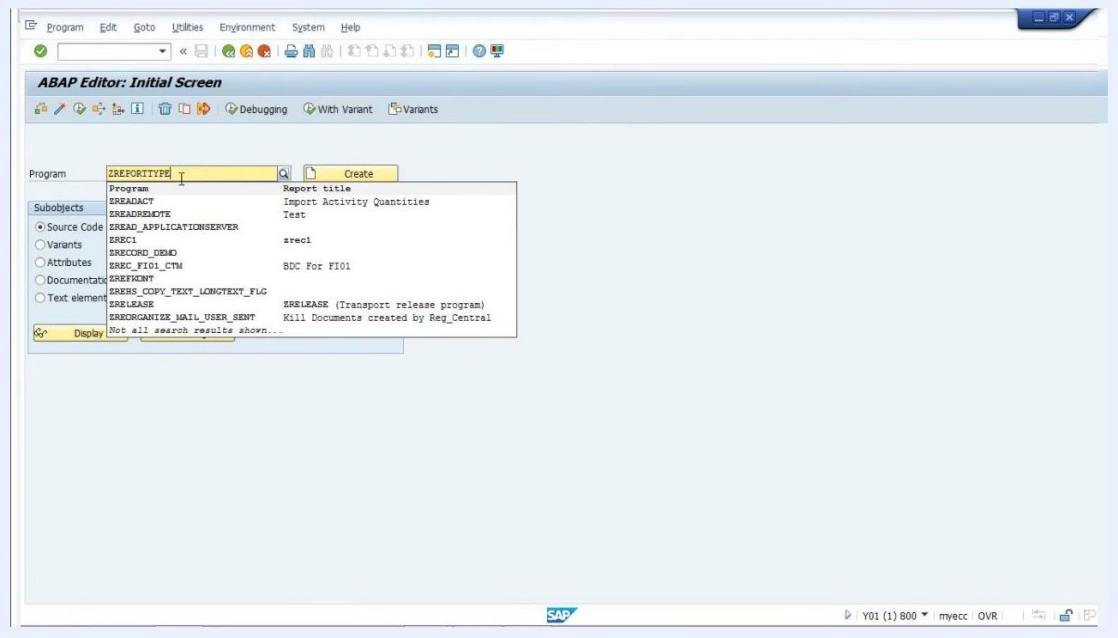


The ABAP Editor: Initial Screen with ZREPORTTYPE1 entered in the Program field, the Create button highlighted, and a dropdown listing existing programs.

Step 8: Set the program attributes

1. In the **ABAP: Program Attributes** dialog, enter these values:
    - **Title:** Report for Type group
    - **Original language:** EN English
    - **Type:** Executable program (select it from the dropdown list)
2. Leave the **Status**, **Application**, and **Authorization Group** fields at their defaults, or fill them in as required.
3. Make sure **Unicode Checks Active** is selected.

4. Click **Save** to confirm the attributes.



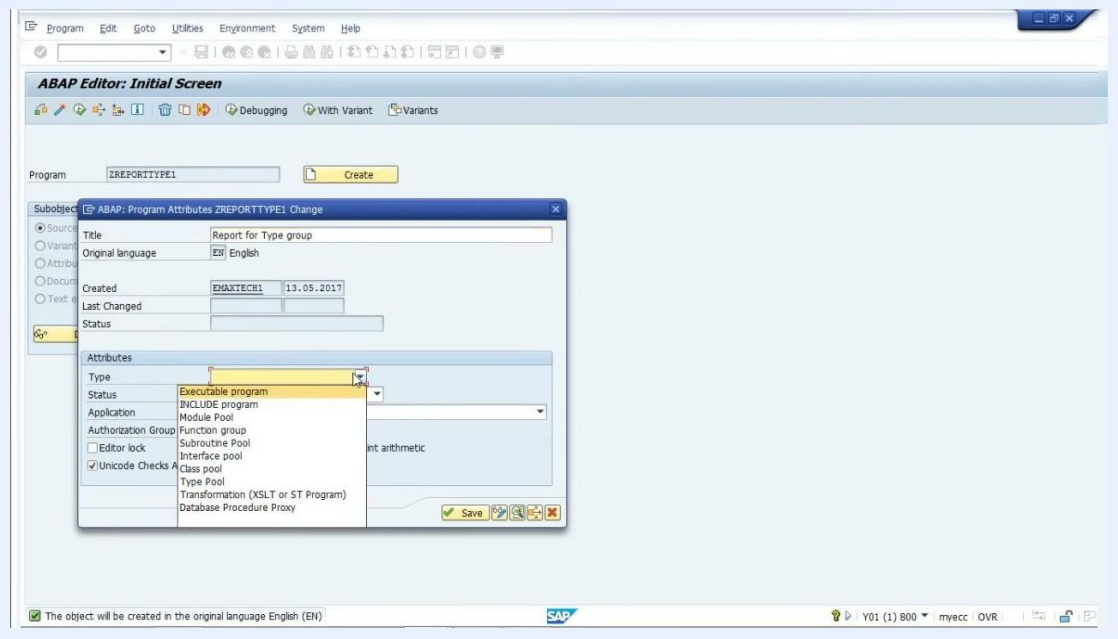
The ABAP: Program Attributes dialog showing the Title, the Type set to Executable program, and the other attribute fields.

Step 9: Reference the type group in the report

In the ABAP Editor, begin your report with these lines:

```
REPORT ZREPORTTYPE1.
TYPE-POOLS ZTYP1.
```

The TYPE-POOLS statement makes the type definitions from your type group available in the report. The program status stays **Inactive** until you activate it.



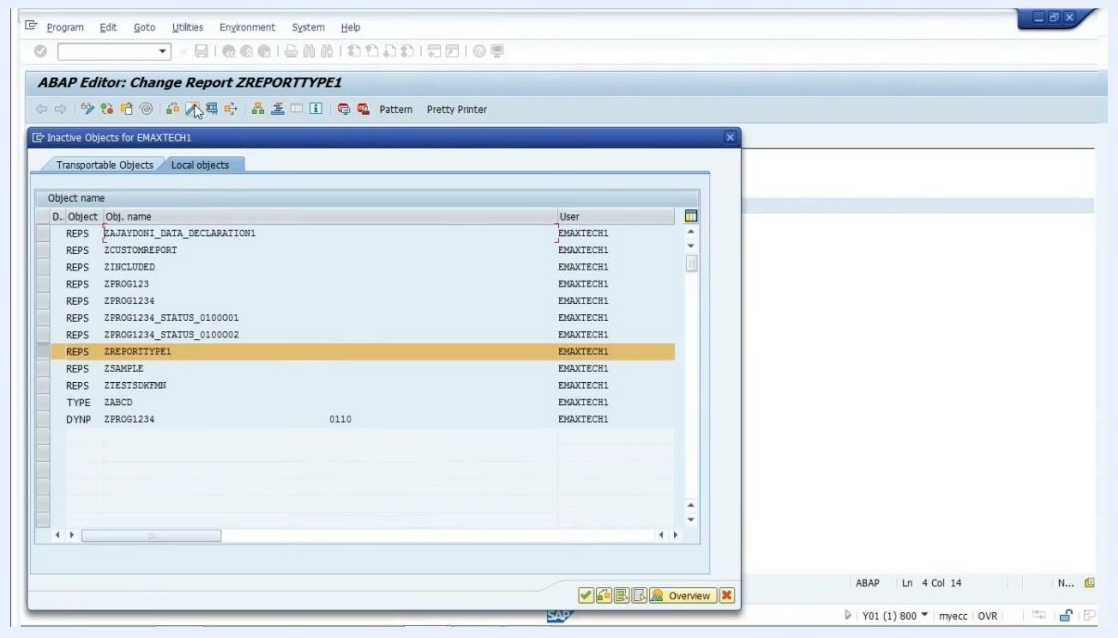
The ABAP Editor showing REPORT ZREPORTTYPE1. and TYPE-POOLS ZTYP1. at the top of the code.

Step 10: Declare data with the type group types

Declare both fields in a single DATA statement. Separate the fields with a comma and end the statement with a period.

```
DATA: NAME TYPE ZTYP1_NAME,
      AGE TYPE ZTYP1_AGE.
```

This declares both variables with the types from your type group.



The ABAP Editor showing the DATA statement that declares NAME and AGE with the type group types, with a syntax error highlighted below it.

Resolve syntax errors in the declaration

If you start a new line with `AGE TYPE ...` outside the `DATA:` statement, the ABAP Editor shows a syntax error:

```
Statement "AGE" is not defined. Check your spelling.
```

To fix it, declare all fields within the same `DATA:` statement and separate them with commas.

Summary

To create a type group in SAP ABAP and use it in a report:

- Enter transaction code `SE11` to open the ABAP Dictionary.
- Select **Type Group**, enter a name of up to 5 characters (for example, `Ztyp1`), and click **Create**.
- Enter a short description and save the type group as a **Local Object**.
- Define your types so that each name starts with the type group name and an underscore.
- Save, check, and activate the type group.
- Verify the definitions in **Dictionary: Display Type Group**.

- In a report, add `TYPE-POOLS ZTYP1.` and declare your variables in a single `DATA:` statement.