DATA NUM1 TYPE I VALUE 10.

DATA NUM2 TYPE I VALUE 20.

DATA RES TYPE I.

PERFORM ADDNUM USING NUM1 NUM2 CHANGING RES.

FORM ADDNUM USING VALUE(N1) VALUE(N2) CHANGING R.

R = N1 + N2.

ENDFORM.

**By Reference: (changed value is sent to the calling function)**

**Using and Changing can be used interchangeably and with each other also. Same output.**

PERFORM S1 USING F1. OR PERFORM S1 CHANGING F1 [ F1 is actual parameter]

FORM S1 USING P1.[P1 is formal parameter]

----

ENDFORM.

OR

PERFORM S1 CHANGING F1. OR PERFORM S1 USING F1

FORM S1 CHANGING P1.

ENDFORM.

**By Value: (changed value is not sent back to calling function)**

**PERFORM S1 USING F1.**

**FORM S1 USING VALUE(P1).**

**ENDFORM.**

**Here when u use them interchangeably it behaves differently.**

**USING with USING VALUE() – behaves as pass by value. i.e changed value is not sent back.**

**USING with CHANGING VALUE()—behaves as pass by reference.**

**CHANGING with CHANGING VALUE()—behaves as pass by reference.**

**CHANGING with USING VALUE()—behaves as pass by value.**

**Passing an Internal Table without Header Line and automatically creating a header line in Subroutine**

* PERFORM S1 TABLES itab.
  + FORM S1 TABLES PT STRUCTURE FS. \*FS is previously defined structure(not in SE11 but in same program)…. ENDFORM
  + **FORM S1 TABLES PT STRUCTURE ZStructname…ENDFORM.**
  + **FORM S1 TABLES PT LIKE ITDEPT……. ENDFORM.**
* **GENERAL SYNTAX:**

**FORM <Formname> TABLES<subroutine tablename>**

**STRUCTURE <structname> /LIKE internal tablename.**

**The following does not work.**

* + FORM S1 TABLES PT. "does not work bcz PT does not have structure
  + FORM S1 TABLES ITDEPT. "does not work bcz ITDEPT does not have

Structure.

* + FORM S1 TABLES PT STRUCTURE ITDEPT. “ITDEPT is not structure.
* **Passing Internal table without a header line and Header line is not automatically created in subroutine.**

**PERFORM S1 USING ITDEPT.**

**PERFORM S1 CHANGING ITDEPT.**

* + ***form s1 using PT like itdept. “Pass by reference***
  + ***form s1 using value(PT) LIKE itdept. “Pass by value***
  + ***form s1 changing PT like itdept.***
  + ***form s1 changing value(PT) LIKE itdept.***

**GENERAL SYNTAX:**

**FORM <Formname> USING/CHANGING [VALUE]<subroutine tablename> LIKE internal tablename.**

* **Passing body of an Internal table that has a header line*.***

PERFORM S1 TABLES itab.

* + FORM S1 TABLES PT STRUCTURE FS. \*FS is previously defined structure(not in SE11 but in same program)…. ENDFORM
  + FORM S1 TABLES PT STRUCTURE ZStructname…ENDFORM.
  + FORM s1 TABLES pt STRUCTURE itdept.
  + FORM S1 TABLES PT LIKE ITDEPT[].

**GENERAL SYNTAX:**

**FORM <Formname> TABLES<subroutine tablename>**

**STRUCTURE <structname> /STRUCTURE internal tablename/LIKE internal tablename[].**

**Following does not work.**

* FORM S1 TABLES PT. "does not work
* FORM S1 TABLES PT LIKE ITDEPT. "does not work bcz no body