

## Binary to Decimal Conversion.

Number conversion is an important task in any programming. Here is a simple code sample that will convert the given Binary number into its Decimal equivalent. This is much simpler and also gives them in subroutines and hence can be used with other programs. A subroutine for reversing a string is also provided with this code.

### The Source Code.

```
*-----*
* Report  ZC1BIN_TO_DECI                                     *
*-----*
* Description      : This following program will convert a binary
*                   number into a decimal equivalent.
* Program By       : Kathirvel Balakrishnan.
* Created on       : 20 December 2004.
* Transport Request : PDCK902348.
* Development Class : ZC1DEVCLASS.
* Transaction Code  :
*-----*

REPORT ZC1BIN_TO_DECI MESSAGE-ID zc1conmsg.

*&-----*
*&          Declaration Section for the Program              *
*&-----*

PARAMETERS: bin TYPE i .

DATA: flag TYPE i ,
      deci TYPE i ,
      rev_bin TYPE string.

*&-----*
*&          Start Of Selection Event Begins Here            *
*&-----*

START-OF-SELECTION.

  IF bin IS INITIAL.
    MESSAGE i000.
    EXIT.
  ENDF.

  PERFORM validate_data USING bin CHANGING flag.

  IF flag = 1.
    MESSAGE i001.
    EXIT.
  ENDF.

  WRITE: / ' Binary : ' , bin.

  PERFORM string_reverse USING bin CHANGING rev_bin.

  PERFORM binary_to_decimal USING rev_bin CHANGING deci .

  WRITE: / ' Decimal : ' , deci .
```

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```
*&-----*
*&      Form  validate_data
*&-----*
*      This subroutine whether entered data is binary or not.
*-----*
*      -->P_BIN  text
*      <--P_FLAG  text
*-----*
FORM validate_data USING      p_bin
                        CHANGING p_flag.

DATA: val TYPE string,
      tem TYPE c,
      I TYPE i.

val = p_bin.
I = strlen( val ).

DO I TIMES.
  tem = val.
  IF tem <> 1 .
    IF tem <> 0.
      p_flag = 1.
      EXIT.
    ENDIF.
  ENDIF.
  SHIFT val.
ENDDO.

ENDFORM.              " validate

*&-----*
*&      Form  string_reverse
*&-----*
*      This subroutine reverses a given string.
*-----*
*      -->P_BIN  text
*      <--P_REV_BIN  text
*-----*
FORM string_reverse USING      p_bin
                        CHANGING p_rev_bin.

DATA : t_bin TYPE string,
      temp1 TYPE c,
      I TYPE i.

t_bin = p_bin.
I = strlen( t_bin ).

DO I TIMES.
  temp1 = t_bin.
  CONCATENATE temp1 p_rev_bin INTO p_rev_bin.
  SHIFT t_bin.
ENDDO.

ENDFORM.              " string_reverse
```

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```
*&-----*
*&      Form  binary_to_decimal
*&-----*
*      This Subroutine converts a binary number into decimal equivalent
*-----*
*      -->P_REV_BIN  text
*      <--P_DECI   text
*-----*
FORM binary_to_decimal USING      p_rev_bin
                           CHANGING p_deci .

DATA : dig TYPE c,
      dig1 type i,
      t_bin TYPE string,
      l TYPE i,
      t_deci type i,
      c TYPE i.

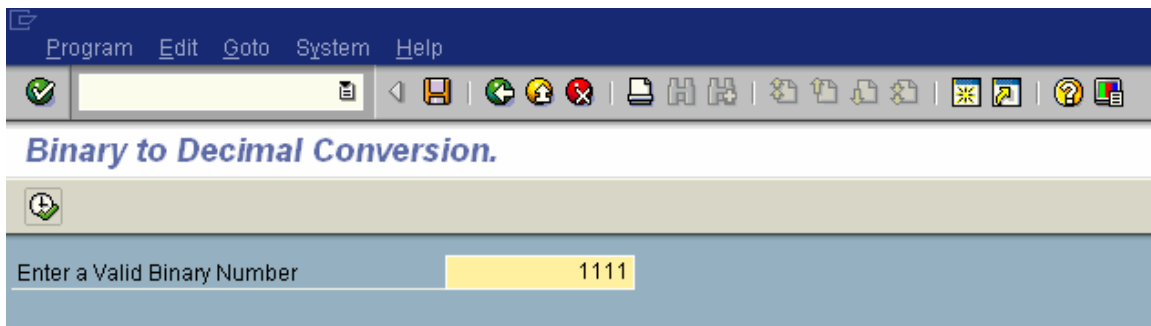
t_bin = p_rev_bin .
l = strlen( t_bin ).
c = 0.

DO l TIMES.
  dig = p_rev_bin.
  dig1 = dig.
  t_deci = 2 ** c .
  p_deci = p_deci + t_deci * dig1.
  SHIFT p_rev_bin.
  c = c + 1.
ENDDO.

ENDFORM.                    " binary_to_decimal
```

## Sample Screen Shots

### Input Screen

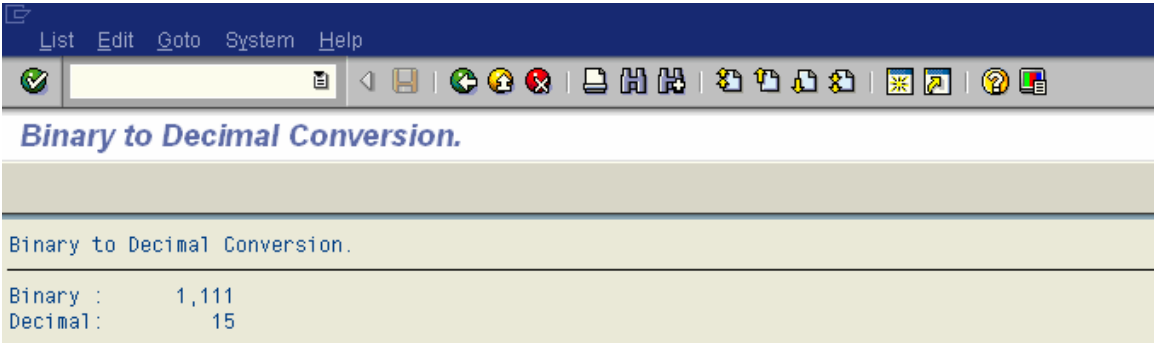


Program Edit Goto System Help

**Binary to Decimal Conversion.**

Enter a Valid Binary Number 1111

Output Screen



Messages

