

TRANSFORM ACADEMY

CHECK PRODUCTION

C.T.A.

TRANSFORM CHECK PRODUCTION

Check production is a unique type of form that must meet strict bank specifications, so that when a check is processed, it is not rejected during clearing. In the U.S. alone, the Federal Reserve recorded that 3.14 billion checks were exchanged in 2023. So to simplify check processing and clearance, checks and vouchers use a **M**agnetic **I**nk **C**haracter **R**ecognition encoding (MICR line). The MICR line comprises of encoded numbers and symbols, which allow the banks clearing centres to read the required information to accept and route a transaction to the appropriate destination.

Strict adherence to ANSI standard specifications in the creation of check documents is a major factor in the success or failure of the transaction to the financial institution as well as to the customer. Several American National Standards published by the Accredited Standards Committee (ASC X9), an ANSI-accredited standards development organisation, establish the specifications, location, and paper for MICR documents.

This paper serves as a manual for creating checks using Transform that meet the industry requirements. With special emphasis to the location of the MICR line, it addresses important facets of cheque design and layout specifications. It highlights how crucial it is to use the right paper and security features in order to prevent fraud. Additionally, resources are included for word-to-number conversion, which is essential for correctly printing the legal amount on the check.



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WORKING WITH MICR

MICR documents can be generated in one pass through the printer, including the form, variable data, logo, MICR code line, variable MICR data and signatures, using the special font known as E-13B to produce the MICR line.

The most common MICR documents are bank checks, payment forms and deposit slips. MICR document design and layout standards are specified by your bankers association. The responsibility now lies with you to ensure that the standards for document design, quality and security are met. Please contact the relevant standards association for more information. You should consult your printer distributor regarding all other matters such as the recommended printer, toner and the security paper.

Once your design is complete you will need to send printed output to the bank for approval, to ensure you have met the layout specification, including the precise position and spacing of the MICR line.

MICR FONTS

To produce the MICR code line in Transform, you will need to install a MICR E13B special font, which is used on bank checks and drafts in the United States, Canada, Puerto Rico, Panama, the UK, and other countries to print E13B characters for magnetic recognition and optical character recognition systems.

This MICR font contains 10 specially designed numeric characters 0 through 9, and four special symbols: transit, amount, On-Ups, and dash.

To produce the E-13B MICR code line in Transform you will need to install a MICR True Type font in the Transform Designer/s and Runtime Servers Windows Fonts library.

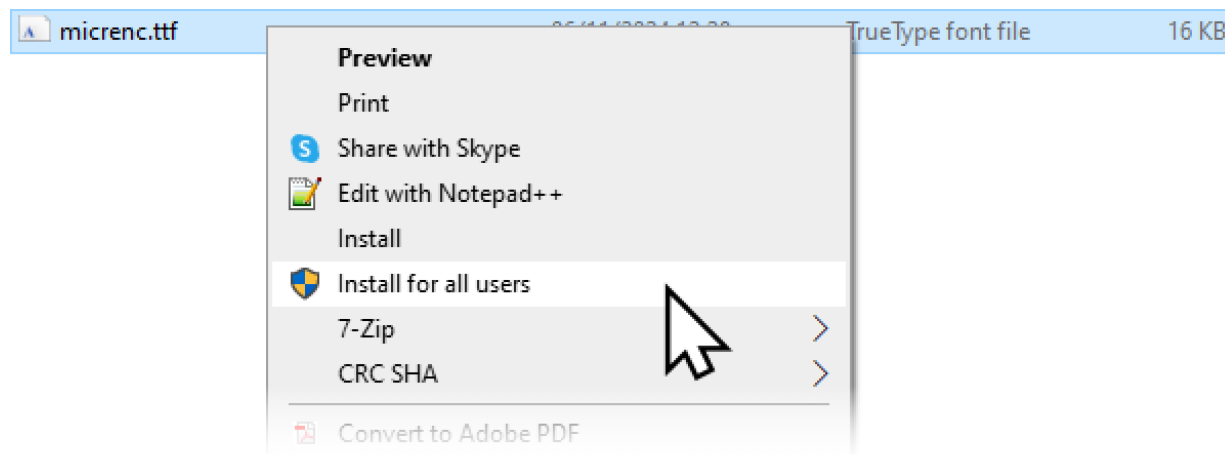
If the customer does not already have a MICR font available then you can direct them to the following sites, note that they may need to purchase a license to use the font.

IDAautomation - <https://www.idautomation.com/micr-fonts/e13b/>

MICR Encoding Font - <https://www.1001fonts.com/micr-encoding-font.html>

When installing the True Type font it is important to ensure that it is installed for all users on the Transform Designer(s) and Runtime Server(s).

1. Download or copy the True Type Font to a local Windows folder.
2. From File Explorer right-click the TTF file and select **Install for all users**.



THE MICR CHARACTER SET

The table below depicts the character map for each MICR character.

Alphabetic

0	1	2	3	4	5	6	7	8	9	A	B	C	D
0	1	2	3	4	5	6	7	8	9	A	B	C	D

Alphabetic MICR Characters

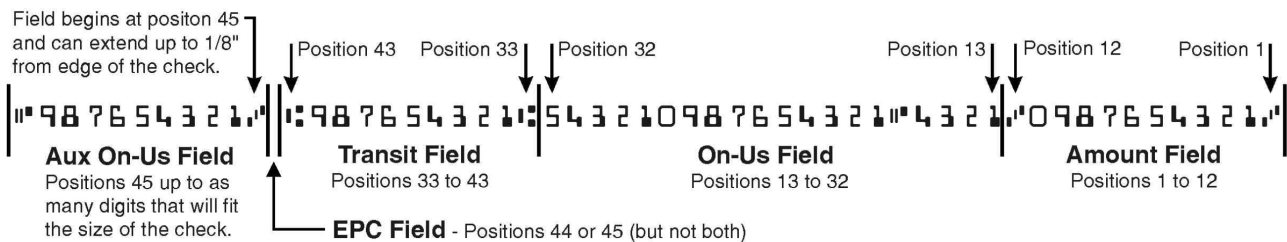
The four alphabetic symbols provide additional information to the MICR document reader/sorter:

Symbol	Description
A	Bank/State/Branch Symbol - Indicates to the sorter the right hand boundary of a field. Where the Auxiliary Domestic field is not present, the Bank/State/Branch field MUST be closed with the Domestic Symbol shown below.
B	Amount Symbol - Indicates to the sorter the boundaries of the Amount Field, it will be inscribed by the equipment at the bank.
C	Domestic Symbol - Instructs the sorter where to commence reading of the account number in the Domestic field, the Check serial number in the Auxiliary Domestic field, or other information contained in the Extra Auxiliary field. This symbol is also used as the closing symbol for the Bank/State/Branch field, Auxiliary Domestic field and the Extra Auxiliary Domestic field.

Symbol	Description
D	Dash Symbol - Recognised by the sorter as a divider or hyphen.

MICR LINE

These characters and their relationship in the MICR line are described below.



AMOUNT FIELD

The amount field occupies positions 1-12 on the MICR line. The amount field is not normally printed by the check supplier. This field is used for processing the check and is coded after the check is drawn in the post-encoding process at the bank of first deposit. From right to left, position 1 is the Amount symbol, positions 2 and 3 are cents, positions 4-11 are dollars (leading zeros filled from the left) and position 12 is the amount symbol. The amount field is designated as a fixed field that cannot be changed by the bank.

ON-US FIELD

The On-Us field occupies positions 13-32 on the MICR line. Occupying nineteen spaces, each 1/8" (0.125") wide and to the right of the transit field. This is not a fixed field and is normally used by the bank for account number information, bank identification, check numbering or other special codes. An On-Us symbol must appear to the right of the last account number digit. The four characters to the right of the On-Us character (positions 13-16) are for special bank use.

TRANSIT FIELD

The transit field is sometimes referred to as the routing field and occupies positions 33-43 on the MICR line. The routing field is reserved for the combined transit and routing codes used to direct the check as it passes through the system. This code is also referred to as the bank code. Because the numbers in this field are specially assigned, the transit field is designated as a fixed field that cannot be changed by the bank. Position 33 is the transit symbol, position 34 is the check digit, position 35-38 is the bank number, position 39-42 is the routing number, and position 43 is the transit symbol.

EPC (EXTERNAL PROCESSING FIELD)

The field immediately to the right of the auxiliary On-Us field is a one-digit field called the EPC (External Processing Code) field. The field is either, but not both, positions 44 or 45 of the

MICR line. This field is strictly controlled by the ASC (Accredited Standards Committee) X9B. It is used for specific purposes. The EPC field cannot be used without written authorization from the ASC X9B.

AUXILIARY ON-US FIELD

The auxiliary On-Us field occupies positions 45 and on up to any number of digits that fit the size of the check (digits may not extend further than 1/8" from the edge of the check) on the MICR line. The limits on the number of digits in this field are dictated by the length of the check and programming requirements of check-printing software packages.

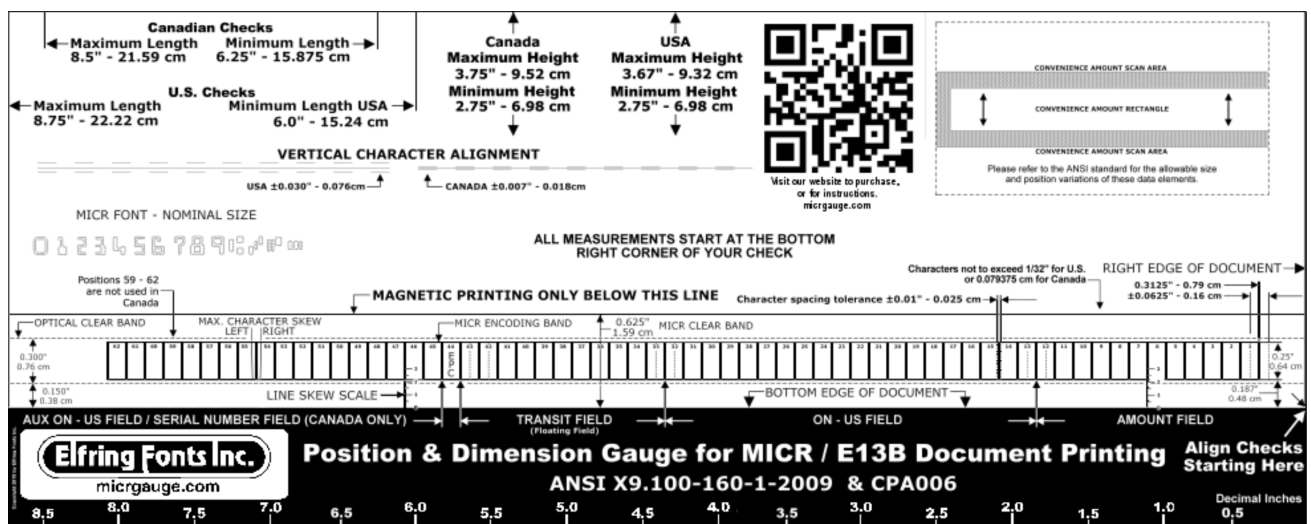
The auxiliary On-Us field is not present on small format checks (e.g., 6" personal style checks) as it would extend past the end of the check. On larger format business checks, this field is allowed to the left of the transit number field. The auxiliary On-Us field usually contains the check serial number, and it may also contain accounting control information specific to that account. The characters in this field are usually the MICR consecutive numbering of the checks. The characters here must always be immediately preceded by and followed by an On-Us symbol.

POSITION OF MICR LINE

The position and spacing of the MICR line on the Check design is critical to the check being accepted or rejected by the Banks clearing process. To ensure the position and spacing is correct before you send samples to the Bank for verification you can use a MICR gauge.

MICR GAUGE

Using a MICR gauge enables you to verify your design is accurate before submitting to the Bank for approval.



- ▶ Quickly and easily verify that everything on your check is accurately printed and in the proper positions.

- ▶ Ensure that your layout meets the U.S. Check 21 Act and the Canadian CPA006 law that places very strict requirements on check layout and MICR line placement.
- ▶ Verify that aren't placing the items on your check in the wrong positions
- ▶ Make sure that any of your data items do not infringe on the neighbouring fields
- ▶ Verify your MICR encoding line is correctly positioned, meets character spacing requirements, and is not skewed.

It is important to print a number of checks to test on all the proposed devices you expect to print checks, using the MICR gauge to verify it meets the banks requirements.

If the customer does not already have a MICR gauge they can purchase one from the following site.

<https://www.micrgauge.com/index.htm>

CHECK STOCK DESIGN

Standards and Technical guidelines for MICR encoded documents are determined and approved by the Accredited Standards Committee (X9) and the American National Standards Institute (ANSI). Some key points for the Check design are as followed:

CHECK SIZE

Personal checks should be at minimum 6" by 2 $\frac{3}{4}$ " to maximum 8 $\frac{3}{4}$ " by 3 $\frac{2}{3}$ ".

Business checks should be at minimum 7 $\frac{3}{4}$ " by 2 $\frac{3}{4}$ " to maximum 8 $\frac{3}{4}$ " by 3 $\frac{2}{3}$ ".

PAPER

Weight: Minimum 24 lb. and a Maximum of 44 lb.

GRAIN DIRECTION

Paper grain should run across the document horizontally, in the same direction it will pass through a reader/sorter. Laser short grain should be used for portrait orientation and long grain for landscape orientation.

DUPLEXING

Printing with MICR Toner or Ink on both sides of a check is not recommended. This may cause rejecting issues for the client as well as the Financial Institution. Printing on the back of a check should always be completed with non MICR ink. The ANSI x9.100-111 which specifies areas for endorsement and image specifications for background areas.

SECURITY FEATURES

Here are a number of security features that could be added to the base check stock to increase security to avoid fraud.

- ▶ Artificial Water marks - White on white printing, generally on the back of the check, reveals words or patterns when held at an angle
- ▶ Laid Lines - Unevenly spaced background lines that make cut and paste alteration difficult.
- ▶ Void Pantograph - Background printing of the word VOID or COPY which appears when an item is photocopied.
- ▶ Chemical Void - If an ink eradicator is applied to the document, the word VOID appears.
- ▶ Numbered Stock - Sequential numbering printed in dye that penetrates to the reverse side of the check. Used to identify authenticity.

IMAGE SPECIFICATIONS

As a general guide, the background pattern or scene should have a reflectance of 60% (70% or greater preferred) (i.e., it should be as light as possible). This recommendation extends to the entire background of the document, not just the MICR clear band and the convenience amount rectangle as specified in ANSI Standard X9.7. If the pattern is lighter and the data is

dark, it should be possible for check processors (both people and machinery) to separate the data from the background.

CHECK LAYOUT

The design and layout of the Check may differ between banks and countries, the following details the standard layout for a **Bank of America** business Check.

The diagram illustrates the standard layout of a Bank of America business check. It includes the following elements and dimensions:

- 1**: Customer Name, Customer Address, City, State, Zip Code (Upper-left corner)
- 2**: Pay to the order of (Payee name)
- 3**: Pay (Amount in words)
- 4**: Bank of America logo and ACH R/T xxxxxxxx
- 5**: Memo (Left side, below payee name)
- 6**: Box for numerical amount (1234567890)
- 7**: State (XX-XX / XXX (State))
- 8**: Box for numerical amount (\$ 1234567890)
- 9**: Box for numerical amount (\$ 1234567890)
- 10**: Authorized Signature (Right side)

Dimensions and fields at the bottom:

- 8 3/4" Maximum**: Total width of the check.
- 7 3/4" Minimum**: Minimum width of the check.
- 5 3/4"**: Width of the Routing Transit No. Field*.
- 4 1/4"**: Width of the (On-Us Field) Account No.*.
- 1 3/4"**: Width of the Amount Field.
- 3 2/3" Max.**: Total height of the check.
- 2 3/4" Min.**: Minimum height of the check.
- 5/8"**: Height of the MICR line.
- 3/16"**: Height of the MICR line.
- 1/4"**: Height of the MICR line.

1. ACCOUNT TITLE & ADDRESS

The upper-left corner of a check typically shows the account name and address information.

2. PAYEE

In this section, you specify who will receive funds from your checking account.

The name of the person or organization to pay, also known as the payee. Only the payee is allowed to deposit the check, cash it, or endorse it to someone else.

3. LEGAL AMOUNT OF CHECK IN WORDS

The amount of your check using words (as opposed to using numerals). For example, if you write a check for **\$10.50**, this would read **Ten and 50/100**.

If there is space either before or after the amount, you can wrap it with multiple asterisk characters ***** Ten and 50/100 ***** to prevent anyone from altering the value of your check.

The amount in words takes precedence over the amount entered as a number in box 9. This is due to the fact that modifying the amount in words is harder to alter than numbers. To convert the number to words you can use a JavaScript within a Transform Branch that can be called as a branch shortcut. **Appendix A** describes the Number to Words script and how to implement it.

4. DRAWEE INSTITUTE

Your bank's name appears on every check you print. However, this section doesn't contain important info, such as the routing number. A phone number and address may be included, or you might just see the bank's logo.

If you received a check from somebody, this section tells you where they bank and where the money will come from.

5. 5/8" CLEAR MICR BAND

MICR Line that contains the following information.

Auxiliary On-Us field - Serial or Check number.

Bank ABA Routing Transit No field - This tells banks where to find the funds for the check.

Account number field - This is the identifier that lets the recipient know where the money for the check will come from.

6. CHECK OR SERIAL NUMBER

The Check or serial number appears in two places and is a reference for the accounts system and not the bank.

7. FRACTIONAL ROUTING TRANSIT NUMBER

In addition to the MICR line along the bottom of the check, the bank's ABA routing number is generally also printed in its fractional format on the upper right corner of a check. Just like the MICR line, this number represents the bank, its location, and the Federal Reserve branch that services the bank. ABA routing numbers are more than a century old, and the fractional format helped bankers identify important information before the advent of MICR.

American Bankers Association. "ABA Routing Number."

8. DATE

Enter the date in this space. If you want to delay the transaction, you can print a future date and notify the bank. However, you can't simply post-date checks and expect the bank to delay the transaction. Banks generally have no obligation to adhere to the date written on the check unless you explicitly notify them. Take care to use the Date Formatter to ensure the correct date is presented.

9. CONVENIENCE AMOUNT OF CHECK IN NUMERICS

The amount of your check in numerical format. For security, you want to make it as difficult as possible for someone to alter the number you write in this box. Print the numbers as far to the left as possible, clearly enter a decimal and any numbers after the decimal. Include ".00" for round amounts. This box is sometimes called the "courtesy box" because it appears on the check as a courtesy or convenience. The number in this

box is not used to determine the legal amount of your check. Instead, the official amount comes from the **3. Legal amount of check in words**.

In theory, both amounts should match, but sometimes they don't. In those cases, the **written words** take precedence over the numbers in the amount box.

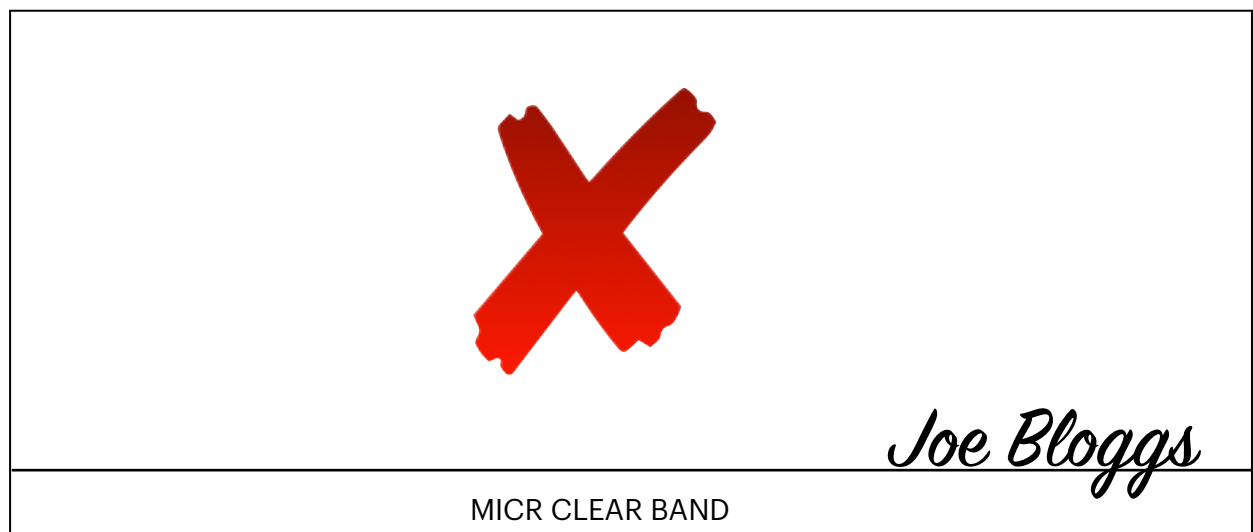
10. SIGNATURE(S)

You can use images for the signature(s) taking care not to encroach into neighbouring fields. It is mandatory that no other printing besides the MICR line appear in the **Clear Band Area**. It is important, when designing checks that digitized images do not intrude into the clear band area. This will cause the check to be rejected.

CORRECT POSITION



WRONG



PRINTER

When it comes to choosing a check printer you should consider the following.

CHECK STOCK

Whether you'll use pre-printed checks that include the MICR Line, or if they use blank checks, as this will determine if you need printer that supports magnetic toner or ink.

PRINT VOLUME

How many checks you'll print per day, week, or month. Pay particular attention to the required print window, if checks are batched and printed at the end of the month, the printer speed (pages per minute) is essential to meet any production windows.

ACCESSIBILITY

How many people will have access to the printer, check stock, and sensitive data. You might want to consider a printer with a lockable paper tray for the check stock.

PRINTER TYPE

Inkjet or laser printer.

PRINTER SIZE

Will the printer fit in your office space or will it need to be in a secure print room.

MICR INK

If you are using blank check stock then you will require use MICR ink or toner to print the MICR line.

For MICR printers from Home office to Enterprise visit

<https://shop.troygroup.com/pages/printers-troy-group>

They use industry leading printer hardware adapted for check printing.

APPENDIX A



NUMBER TO WORDS

The legal amount, which is used by the bank as the amount to pay,

It is important to take care when printing the amount in words that you comply to the following format.

1,234.05 = One thousand two hundred thirty-four and 05/100

USE HYPHENS

Note the hyphen (otherwise known as a "minus sign") in "**thirty-four**" above. Technically, numbers between 21 and 99 should be hyphenated if they end in a number other than "0."

AND REPLACES THE DECIMAL POINT

Do not use the word "**and**" after "**hundred**" or "**thousand**" if full dollar amounts follow it. The word "and" is only used before the number of cents (in place of the decimal point). In other words, you can use it after the hundreds or thousands, but only if the number of cents follows immediately after. Informally, you may hear people say, "two hundred and five dollars," but that isn't the correct way to write the number. You may also hear people informally say, "point" in place of the decimal point ("twenty-three point seventy-five"), but that's also technically incorrect.

200.50 = Two hundred **and** 50/100

USE NUMBERS FOR CENTS

Only the full dollar amount should be presented to words, for cents, they need to be presented as a fraction of 100.

1,234.**56** = One thousand two hundred thirty-four and **56/100**

1,234.**06** = One thousand two hundred thirty-four and **06/100**

1,234.**00** = One thousand two hundred thirty-four and **00/100**

NUMBER TO WORDS SCRIPT

If the check source variable data does not include a field that contains the check amount in words to map onto your check form, then you can copy the following **JavaScript** into a Script object in your Transform branch.

```
/**
 * JScript to convert number to words for use on Check which can be used in
 * Transform using the Script object with 2 child objects
 * Number object labelled Input
 * Unicode Text object labelled Output
 */

// Array containing words for tens from twenty to ninety
aTens = ["twenty", "thirty", "forty", "fifty", "sixty", "seventy", "eighty", "ninety"];

// Array containing words for numbers from zero to nineteen
aOnes = ["Zero", "one", "two", "three", "four", "five", "six", "seven", "eight", "nine", "ten",
"eleven", "twelve", "thirteen", "fourteen", "fifteen", "sixteen", "seventeen", "eighteen", "nineteen"];

/**
 * Converts a number (0-999) into its English words representation in hundreds.
 * @param {number} num - The number to convert (should be less than 1000).
 * @returns {string} - The English words representation of the number.
 */
function ConvertToHundreds(num)
{
    var cNum, nNum;
    var cWords = "";

    // Ensure the number is within the range of 0-999
    num %= 1000;

    /** Handle hundreds place */

    if (num > 99) {
        /* Hundreds. */
        cNum = String(num);
        nNum = Number(cNum.charAt(0)); // Get the first digit for hundreds
        cWords += aOnes[nNum] + " hundred"; // Append the word for hundreds
        num %= 100; // Reduce num to the last two digits
    }
    if (num > 0)
        cWords += " "; // Add space if there are tens or ones
    }

    /** Handle tens place */

    if (num > 19) {
        /* Tens. */
        cNum = String(num);
        nNum = Number(cNum.charAt(0)); // Get the first digit for tens
        cWords += aTens[nNum - 2]; // Append the word for tens
        num %= 10; // Reduce num to the last digit
        if (num > 0)
            cWords += "-"; // Add hyphen if there are ones
    }

    /** Handle ones and teens */

    if (num > 0) {
        /* Ones and teens. */
        nNum = Math.floor(num); // Get the last digit
        cWords += aOnes[nNum]; // Append the word for ones or teens
    }

    return cWords; // Return the complete words representation
}

/**
 * Capitalizes the first letter of a given string.
 * @param {string} string - The string to capitalize.
 * @returns {string} - The string with the first letter capitalized.
 */
function capFirstLetter(string) {
    return string.charAt(0).toUpperCase() + string.slice(1); // Capitalize first letter and return
}

/**
 * Converts a number into its English words representation, including thousands and decimals.
 */
```

```

* @param {number} num - The number to convert (can be large).
* @returns {string} - The complete English words representation of the number.
**/
function ConvertToWords(num)
{
    var aUnits = [ "thousand", "million", "billion", "trillion", "quadrillion" ]; // Units for large numbers
    var cWords = "and "; // Start with "and" for decimal representation
    var nLeft = Math.floor(num); // Get the integer part of the number

    // Loop through each group of thousands
    for (var i = 0; nLeft > 0; i++) {
        if (nLeft % 1000 > 0) {
            // If the current group is not zero
            if (i != 0)
                cWords = ConvertToHundreds(nLeft) + " " + aUnits[i - 1] + " " + cWords; // Append unit
            else
                cWords = ConvertToHundreds(nLeft) + " " + cWords; // Append without unit for the first group
            nLeft = Math.floor(nLeft / 1000); // Move to the next group of thousands
        }
    }

    /*** Handle the decimal part of the number ***/
    num = Math.round(num * 100) % 100; // Get the last two digits for cents

    if (num > 0)
        cWords += ("00" + num).slice(-2) + "/100"; // Append cents if present padding number to 2
    // digits with leading 0
    else
        cWords += "00/100"; // Append zero cents if not present

    return cWords; // Return the complete words representation
}

// Pass the Input number on the branch and call the function to write to the Output object on the branch

var input = Objects("Input").value; // Get the input value from the input object

// Convert the Input number to words, capitalize the first letter, and set the Output text value
Objects("Output").Text = capFirstLetter(ConvertToWords(input));

```

SCRIPT EXPLANATION

Let's break down the provided JavaScript code in detail, focusing on how it converts numerical inputs into English words, specifically for large numbers that can be as large as quadrillions.

1. ARRAYS FOR ENGLISH WORDS

The code utilizes two important arrays:

aTens: This array holds the English words for the tens place of numbers, specifically for values from 20 to 90. For example, it might contain "twenty", "thirty", "forty", etc.

aOnes: This array contains the English words for the numbers 0 through 19. It includes words like "zero", "one", "two", ..., "nineteen".

These arrays serve as reference points to convert numerical values into their corresponding word representations.

2. FUNCTION CONVERTTOHUNDREDS(NUM)

This function is designed to convert a number between 0 and 999 into its English word representation. Here's how it works:

Hundreds: The function first determines how many hundreds are in the number (if any). If the number is 100 or more, it appends the word "hundred" after the hundreds place.

Tens and Ones: It then checks:

If the number lies between 20 and 99, it uses the `aTens` array to find the appropriate word for the tens place and checks the ones place using the `aOnes` array.

If the number is less than 20, it directly uses the `aOnes` array.

String Formatting: The function ensures that the words are concatenated correctly, including necessary spaces and hyphens (for numbers like 21, which would be "twenty-one").

3. FUNCTION CAPFIRSTLETTER(STRING)

This utility function is straightforward:

It takes a string as input and capitalizes the first letter.

This is useful for formatting the final output properly, ensuring that the first word of the resulting string starts with an uppercase letter, which is a common requirement in formal writing.

4. FUNCTION CONVERTTOWORDS(NUM)

This function handles the conversion of larger numbers into words, processing values that can reach quadrillions. Here's a step-by-step breakdown:

Looping through the number: The function uses a loop to repeatedly divide the number by 1000. This allows it to extract each segment of the number (thousands, millions, billions, etc.) one at a time.

Remainder Conversion: For each iteration, it calculates the remainder (the part of the number that corresponds to the current thousand segment) and converts that remainder into words using the `ConvertToHundreds` function.

Appending Scale Units: As it processes each segment, it appends the appropriate scale unit (like "thousand", "million", "billion", etc.) based on the current iteration count.

Handling Fractions: Finally, the function also checks if there is a fractional part (like cents in a dollar) and converts that into words, ensuring the output is precise for applications like writing checks.

5. INTEGRATION WITH INPUT/OUTPUT SYSTEM

The code snippet mentions some integration with an input/output system:

Input: It suggests that the code would take a numerical input from a user interface element (like a text box).

Output: Similarly, it indicates that the resulting word representation would be displayed in another UI element.

However, the specifics of how this is done (e.g., `Objects("Input").value`) are not provided in the code, implying that it was designed to work within a specific environment (like a web application) that handles user input and output.

CONCLUSION

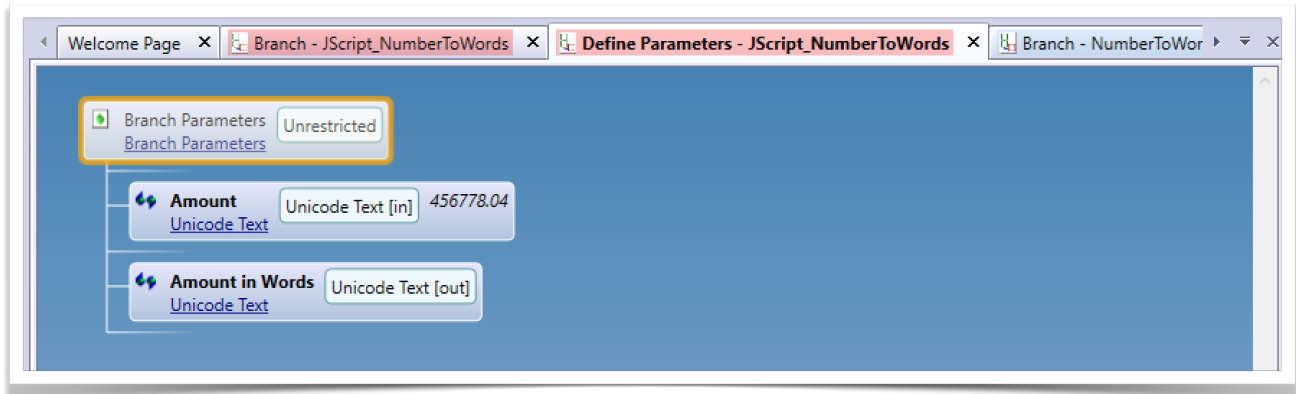
This code is particularly useful in contexts where numerical values need to be explicitly written out in words, such as in check writing, to prevent fraud and ensure clarity in financial documents. The structure of the code, with its modular functions and clear use of arrays for word representation, makes it a robust solution for this problem.

TARGET BRANCH FILE

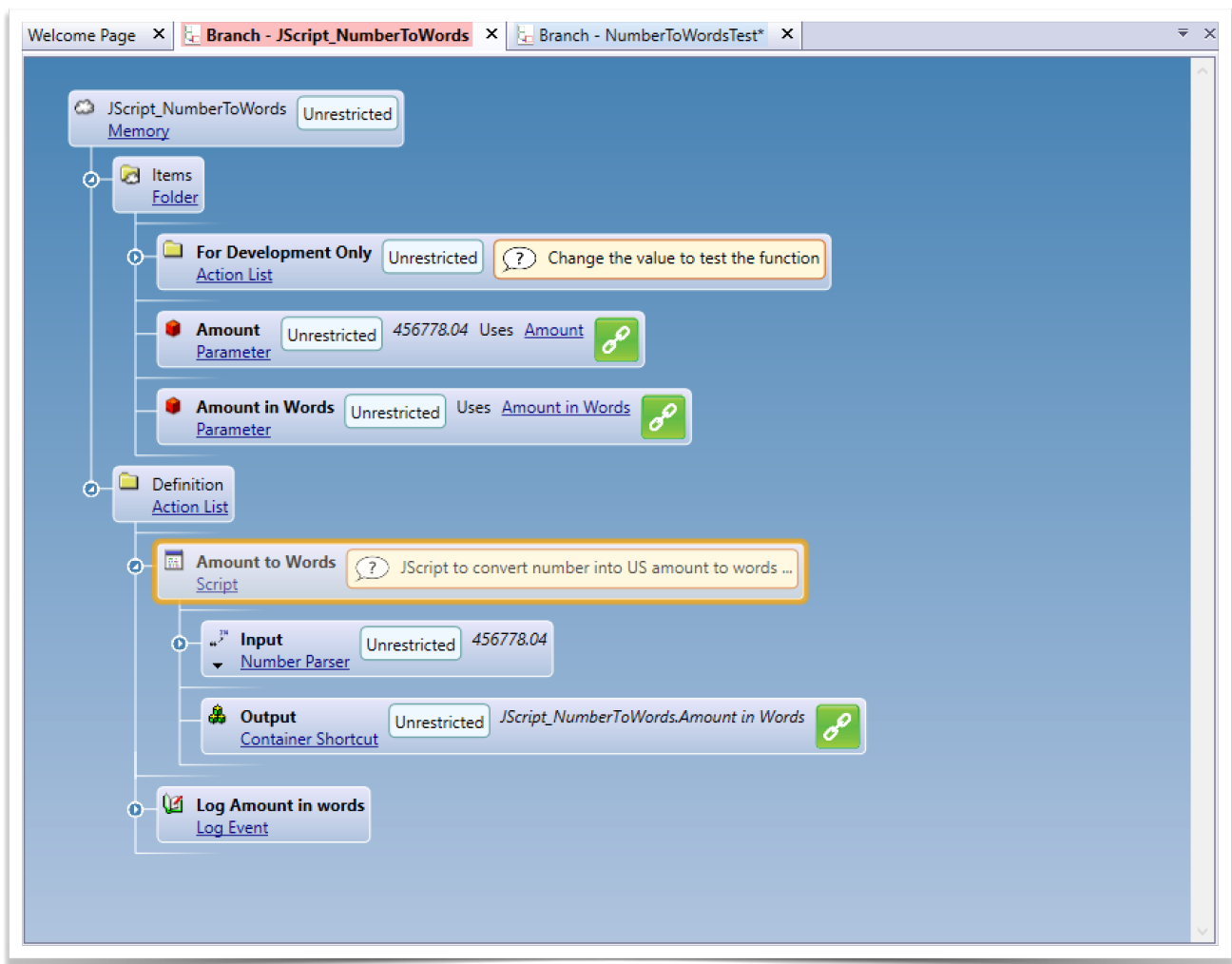
The following Transform target branch file **JScript_NumberToWords** can be called by your check design branch. It has 2 parameters.

Amount - Unicode Text [in]

Amount in Words - Unicode Text [out]

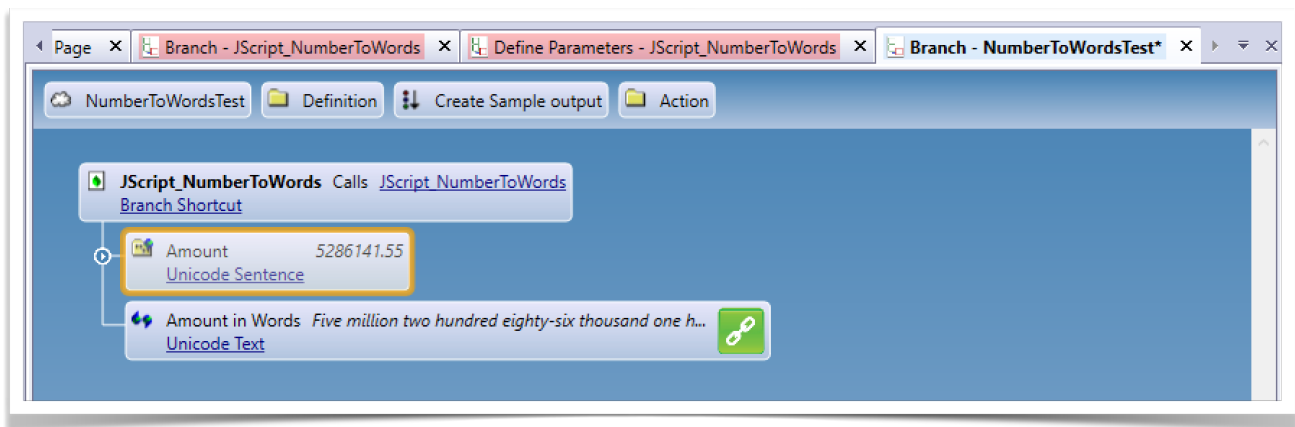


BRANCH DESIGN



CLIENT BRANCH

To call the target **JScript_NumberToWords** branch use a Branch shortcut from your Client branch, mapping the parameters.



SAMPLE OUTPUT

Here are examples of large numbers converted to words for check printing, using the **JScript_NumberToWords** branch file.

```

1258963.48=One million two hundred fifty-eight thousand nine hundred sixty-three and 48/100
6474942.34=Six million four hundred seventy-four thousand nine hundred forty-two and 34/100
2633537.44=Two million six hundred thirty-three thousand five hundred thirty-seven and 44/100
5601471.97=Five million six hundred one thousand four hundred seventy-one and 97/100
6773646.90=Six million seven hundred seventy-three thousand six hundred forty-six and 90/100
2760174.25=Two million seven hundred sixty thousand one hundred seventy-four and 25/100
1644273.33=One million six hundred forty-four thousand two hundred seventy-three and 33/100
158904.04=One hundred fifty-eight thousand nine hundred four and 04/100
4516415.43=Four million five hundred sixteen thousand four hundred fifteen and 43/100
3024535.20=Three million twenty-four thousand five hundred thirty-five and 20/100
8359117.62=Eight million three hundred fifty-nine thousand one hundred seventeen and 62/100
1488764.64=One million four hundred eighty-eight thousand seven hundred sixty-four and 64/100
8920583.89=Eight million nine hundred twenty thousand five hundred eighty-three and 89/100
3315749.65=Three million three hundred fifteen thousand seven hundred forty-nine and 65/100
8821130.08=Eight million eight hundred twenty-one thousand one hundred thirty and 08/100
8334186.82=Eight million three hundred thirty-four thousand one hundred eighty-six and 82/100
2998616.02=Two million nine hundred ninety-eight thousand six hundred sixteen and 02/100
4364132.35=Four million three hundred sixty-four thousand one hundred thirty-two and 35/100
9252182.35=Nine million two hundred fifty-two thousand one hundred eighty-two and 35/100
8984781.09=Eight million nine hundred eighty-four thousand seven hundred eighty-one and 09/100

```

APPENDIX B



FAQ

Before you start your Transform check design, here are some critical design and production specifications for checks you should ask the stakeholders.

CHECK PAPER STOCK

Ask the question does the check stock have the MICR line pre-printed or do you need to add it in Transform.

MICR FONT

The font used for the MICR line must be E-13B, a special font designed for magnetic and optical character recognition systems used in the US, Canada, and other countries. Ask the question do they already have a MICR True Type Font, then make sure it is installed on the Transform Designer and Runtime server Windows Font library, ensuring it is installed for all users.

MICR LINE

Do they have a MICR gauge so that you can verify printed output to ensure it is in the correct position, and character spacing.

CLEAR BAND

There must be a clear band of 5/8" above the MICR line, free of any printing except the MICR characters. Any encroachment into this area can cause the check to be rejected, make sure the check design allows for the clear band.

CHECK SIZE

Adhering to standard check sizes is crucial.

Business Checks: Minimum 7³/₄" x 2³/₄", maximum 8³/₄" x 3 2/3"15.

PAPER SPECIFICATIONS

Ask if the check base stock meets the following:

- Weight: Minimum 24 lb., maximum 44 lb.
- Grain Direction: Should run horizontally across the document.
- Duplexing: Not recommended for MICR printing to avoid rejection.

CHECK LAYOUT

While specific layouts can vary, ask if the following essential check elements are in the data file:

- Account Title & Address
- Payee

- Legal Amount of Check in Words
- Drawee Institute
- Check or Serial Number
- Fractional Routing Transit Number
- Date
- Convenience Amount of Check in Numerics
- Signature(s)

LEGAL AMOUNT

Ask the question if the source data contains the Amount written in words. If not you can use the JavaScript or Transform branch resource provided.

PRINTER CONSIDERATIONS

Ask if they already have a printer they want to use for check production, ensuring you record the following details.

- Windows print driver
- Check Stock Compatibility
- Print Volume and Speed
- Accessibility and Security
- Printer Type (Inkjet or Laser)
- Printer Size
- MICR Ink/Toner for blank check stock

TRANSFORM ACADEMY

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