PDS1

Files for Miles

Getting comfy with Data Sets and Members

9 steps   45 minutes

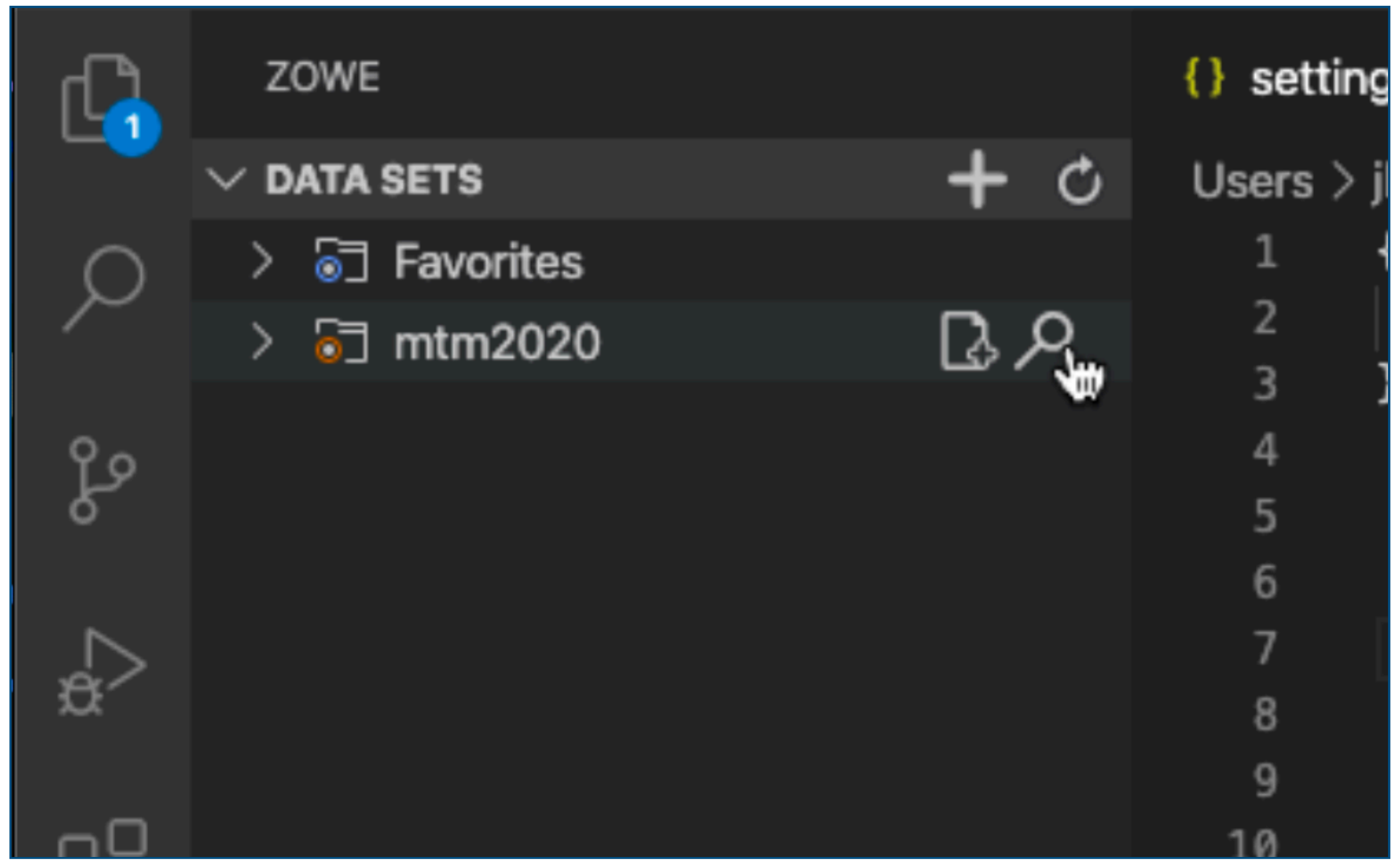
THE CHALLENGE

In z/OS, data is typically organized in structures called Data Sets. The concept is similar to the way you use files and folders on your personal computer, with a few very important differences.

In this challenge, you'll perform some basic operations around **Data Sets** and **Members**, and when you're done, you'll run a job to process some of those data set members.

BEFORE YOU BEGIN

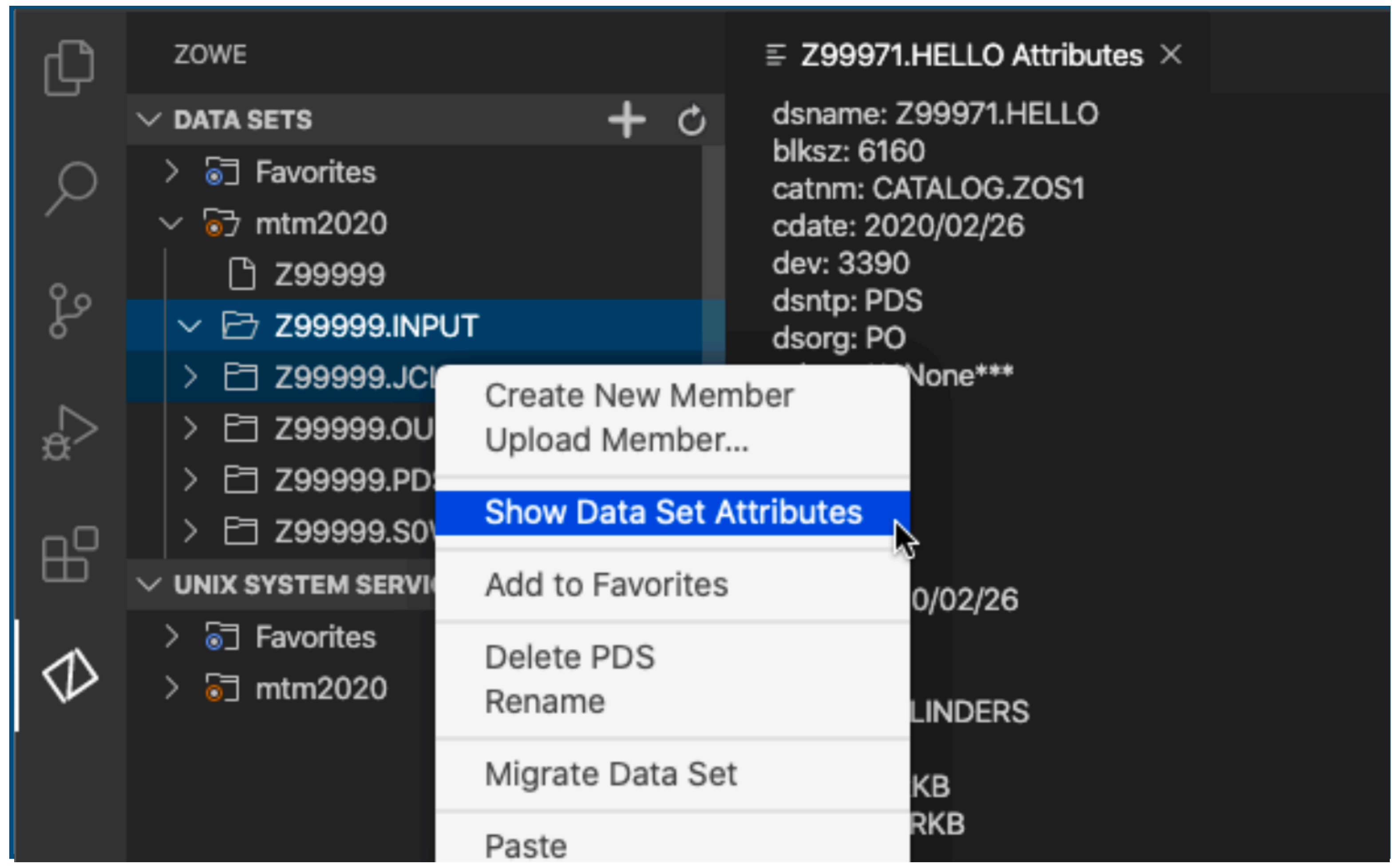
Make sure your Visual Studio Code environment is all set up and connected to the z/OS system. Other than that, nothing else is required!



1. SET THE HLQ FILTER

Click on the magnifying glass icon next to your connection profile under Data Sets. This will allow you to set your High Level Qualifier (HLQ) filter. It's a way of telling VS Code to only show you data sets that match this filter.

In the window that pops up, enter your userid, which should be something like Z12345.

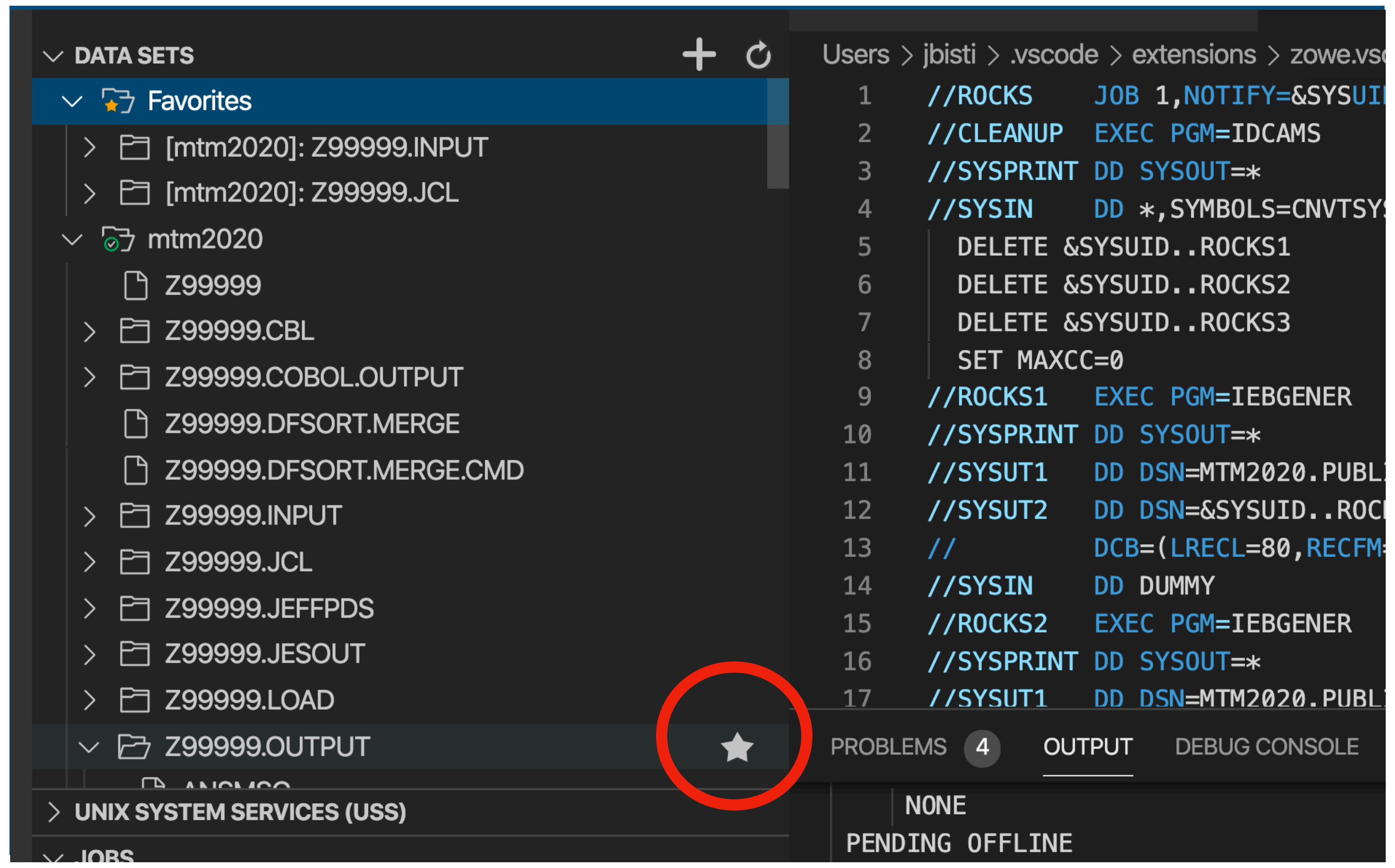


Z99971.HELLO Attributes

```
dsname: Z99971.HELLO
blksz: 6160
catnm: CATALOG.ZOS1
cdate: 2020/02/26
dev: 3390
dsntp: PDS
dsorg: PO
None***
0/02/26
LINDERS
KB
RKB
```

2. SHOW DATA ATTRIBUTES

Right-click on any data set (folder icon) and select Show Data Set Attributes. This will show you all there is to know about how the data set was created, including many fields that probably don't make much sense to you right now (and that's ok!)



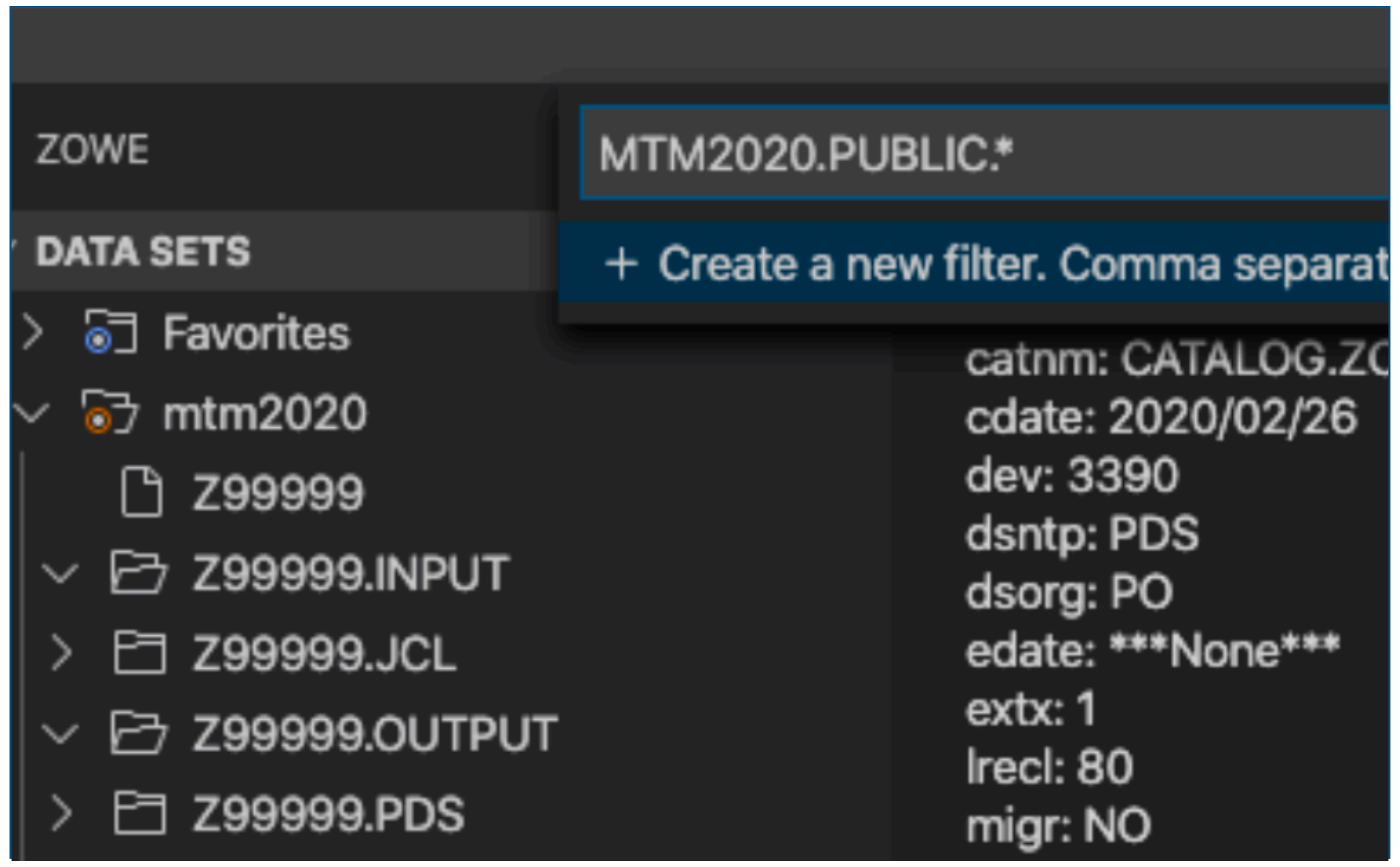
```
//ROCKS     JOB 1,NOTIFY=&SYSUI
//CLEANUP   EXEC PGM=IDCAMS
//SYSPRINT DD SYSOUT=*
//SYSIN     DD *,SYMBOLS=CNVTSY
  DELETE &SYSUID..ROCKS1
  DELETE &SYSUID..ROCKS2
  DELETE &SYSUID..ROCKS3
  SET MAXCC=0
//ROCKS1    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1    DD DSN=MTM2020.PUBL
//SYSUT2    DD DSN=&SYSUID..ROC
//          DCB=(LRECL=80,RECFM
//SYSIN     DD DUMMY
//ROCKS2    EXEC PGM=IEBGENER
//SYSPRINT DD SYSOUT=*
//SYSUT1    DD DSN=MTM2020.PUBL
```

```
  NONE
PENDING OFFLINE
```

3. PLAYING FAVORITES

When you hold your mouse over any data set or member, a Star icon shows up to the right of its name (shown here in the red circle). Clicking this lets you mark it as a Favorite, so it show up at the top of your Data Set view.

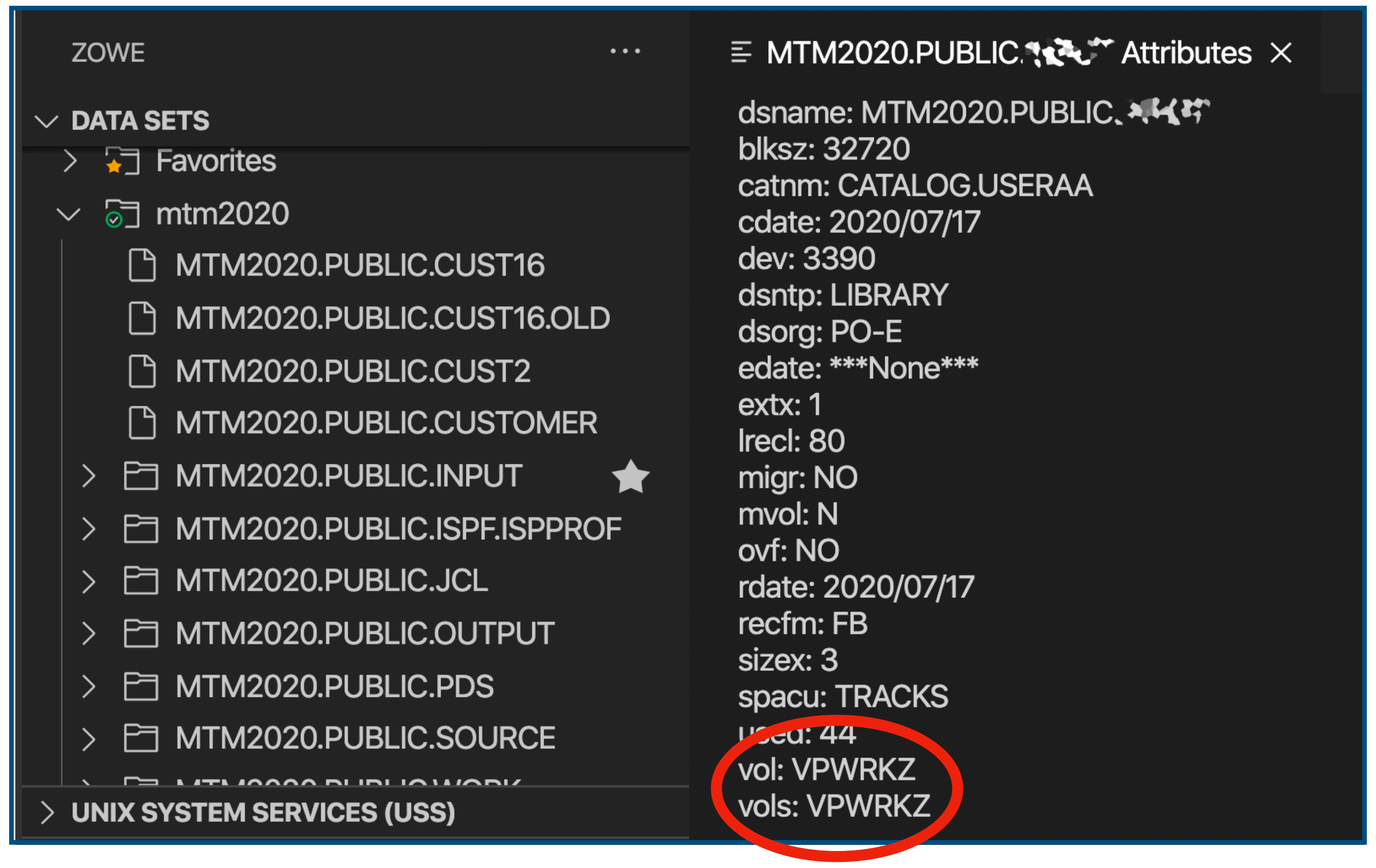
In the screenshot above, I've already marked my INPUT and JCL data sets as favorites, and I can click the star to mark Z99999.OUTPUT as a favorite as well. Try this with your WORK data set, as you'll be using it in upcoming challenges.



```
catnm: CATALOG.ZC
cdate: 2020/02/26
dev: 3390
dsntp: PDS
dsorg: PO
edate: ***None***
extx: 1
lrecl: 80
migr: NO
```

4. SWITCH THE HLQ FILTER

Use the HLQ filter again and set it to **MTM2020.PUBLIC.*** This is where a lot of the data sets we've pre-made for you reside. You'll be copying a lot of content from here, so if you find yourself using any of these data sets repeatedly (like MTM2020.PUBLIC.INPUT) you may want to mark those as favorites.

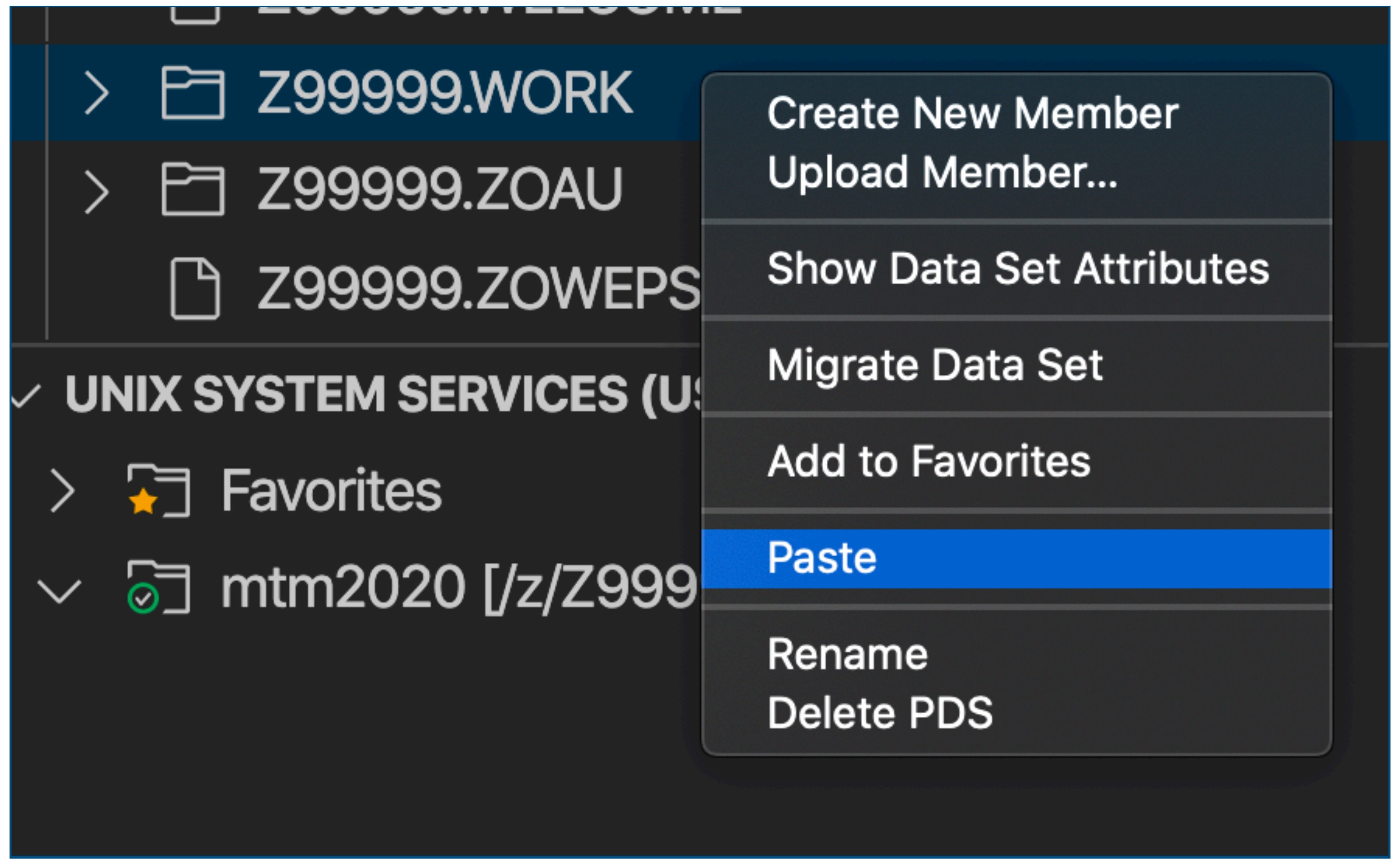


```
dsname: MTM2020.PUBLIC.[redacted]
blksz: 32720
catnm: CATALOG.USERAA
cdate: 2020/07/17
dev: 3390
dsntp: LIBRARY
dsorg: PO-E
edate: ***None***
extx: 1
lrecl: 80
migr: NO
mvol: N
ovf: NO
rdate: 2020/07/17
recfm: FB
sizex: 3
spacu: TRACKS
used: 44
vol: VPWRKZ
vols: VPWRKZ
```

5. FIND THE DATA SET

Inspect the data set attributes of the data sets you find in here and find the one with the 'vols' attribute of **VPWRKZ**. This means that the data for it is stored on a storage device with the name of **VPWRKZ**.

You may find other data on this volume, but there's only one MTM2020.PUBLIC data set on it. Within this data set, you should find a few other members, which you'll use in the upcoming steps.



6. COPY AND PASTE

Right-click on the **PDSPART1** data set member and select Copy. Then right-click on your **WORK** data set, which you favorited earlier, and select Paste. When prompted to give it a name, give it the same name it had before, **PDSPART1**.

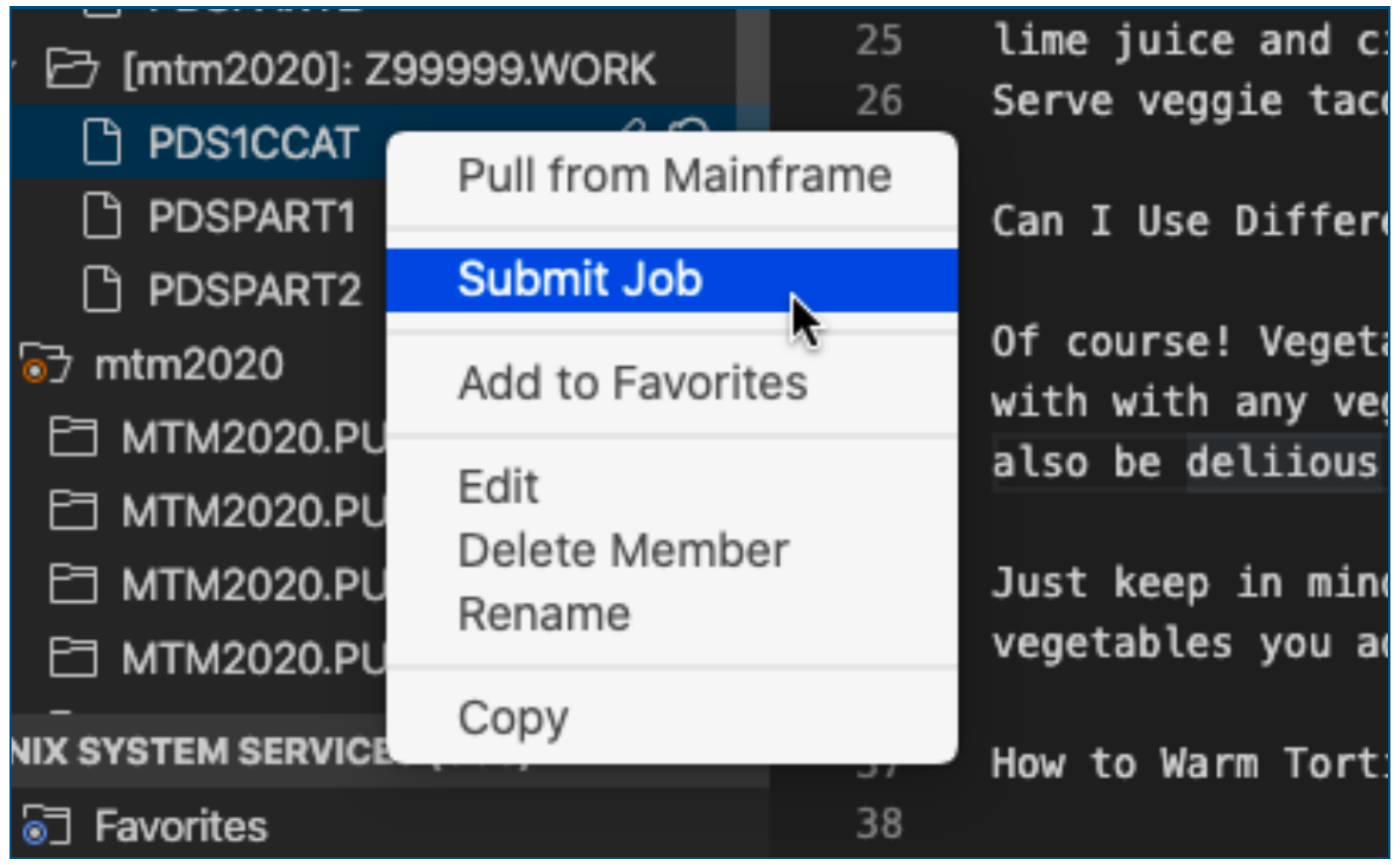
Do the same for **PDSPART2**, giving it the name **PDSPART2**.

Finally, look in the **MTM2020.PUBLIC.JCL** data set for **PDS1CCAT**. Copy that into your WORK data set. When you are done, you should have something similar to the screenshot in Step 7 in your WORK data set.

"THIS SEEMS KIND OF SIMPLE. AM I MISSING SOMETHING?

We're purposely starting out with the basics of data sets and members because it's very easy to make inaccurate assumptions about them which will wind up hurting you later on. While they're represented as folders and files in VS Code, a data set is actually a file with a record organization to it.

Some data sets contain sequential data, meaning the records in them are one right after the other, like a big list. Others have an index of data which points to individual records, which is what we're using here. These are called Partitioned Data Sets, hence the PDS. There are also application-specific data sets called VSAM. Each type is optimized to perform best for its specific purpose.

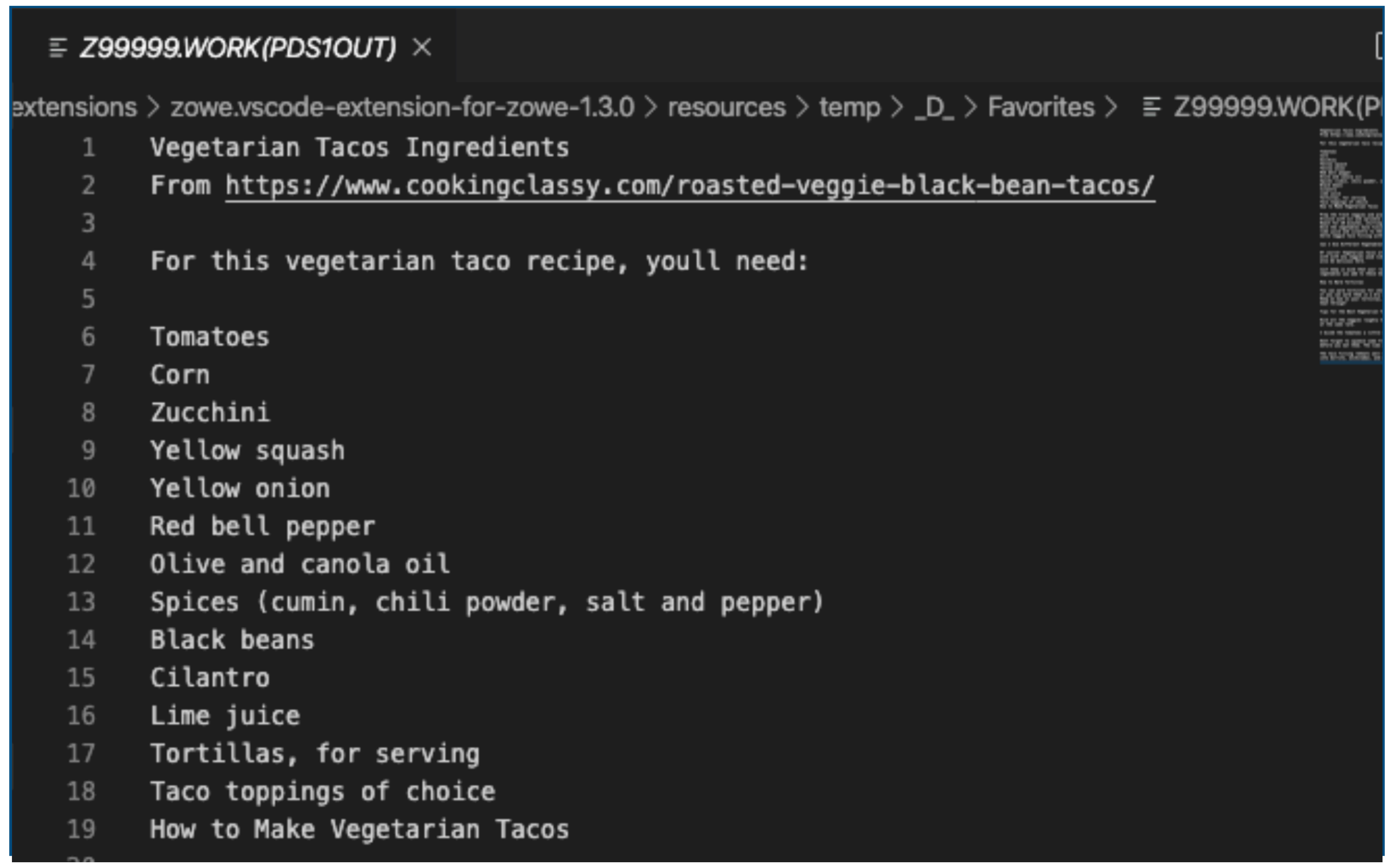


```
lime juice and c
Serve veggie tac

Can I Use Differ

Of course! Veget
with with any ve
also be deliious

Just keep in min
vegetables you a

How to Warm Tort
```

7. RUN THAT JOB

Right-click on the PDS1CCAT member from your own **ZXXXXX.WORK** data set (not the MTM2020 one) and select “Submit Job”. This will run the code within the member. This may take a few seconds.

After a few moments, collapse the WORK folder using the small arrow to the left of it, and then re-expand it. This will cause VS Code to refresh the contents of the PDS, where you should see a brand new member created, called **PDS1OUT**.

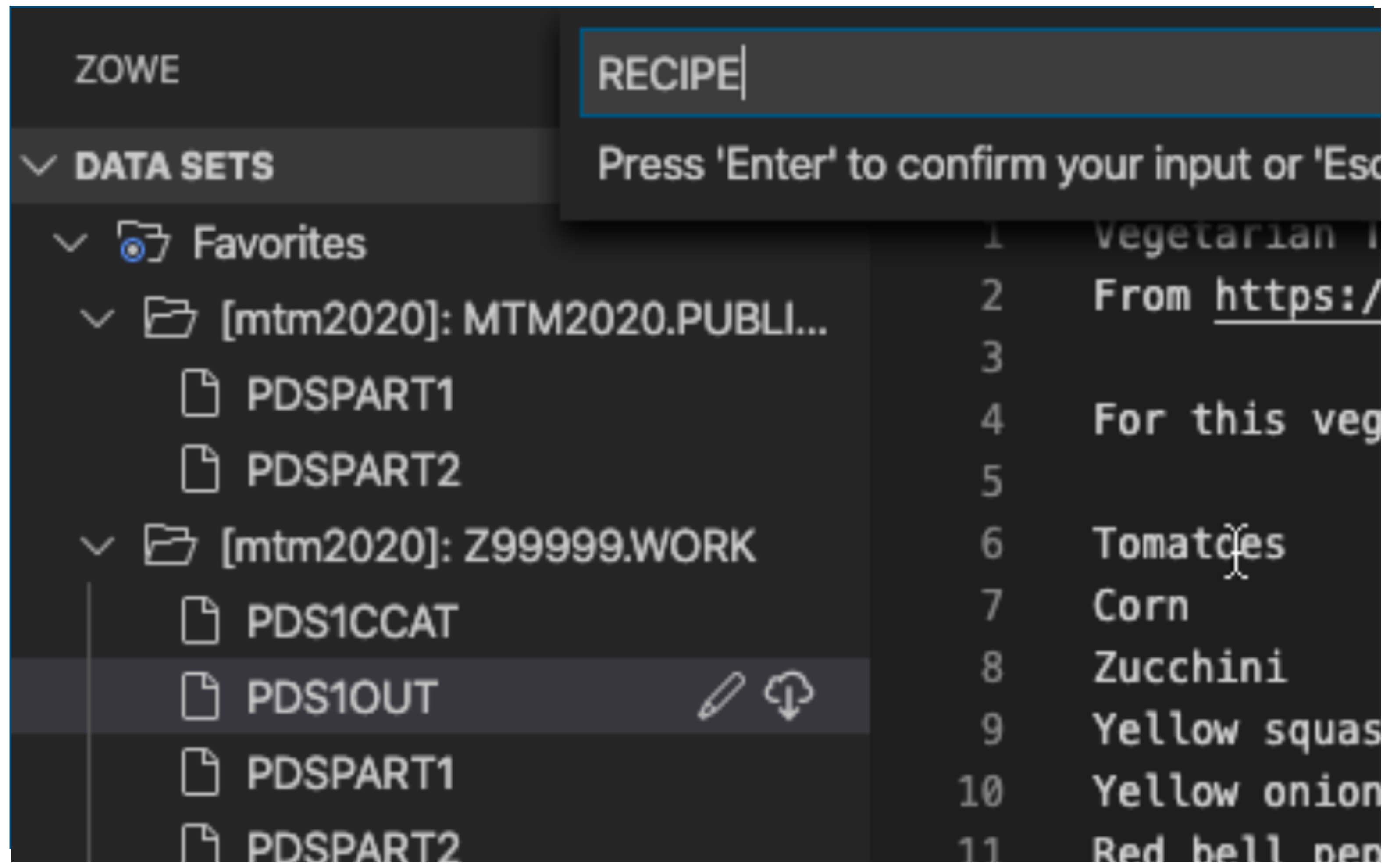

Z99999.WORK(PDS1OUT)
extensions > zowe.vscode-extension-for-zowe-1.3.0 > resources > temp > _D_ > Favorites > Z99999.WORK(P

```
Vegetarian Tacos Ingredients
From https://www.cookingclassy.com/roasted-veggie-black-bean-tacos/

For this vegetarian taco recipe, youll need:

Tomatoes
Corn
Zucchini
Yellow squash
Yellow onion
Red bell pepper
Olive and canola oil
Spices (cumin, chili powder, salt and pepper)
Black beans
Cilantro
Lime juice
Tortillas, for serving
Taco toppings of choice
How to Make Vegetarian Tacos
```

8. CHECK OUT THE OUTPUT

Click on the newly-created member, PDS1OUT. Was it what you expected in Step 6? The **PDS1CCAT** job used those two members as input and concatenated, or joined, them together.

Now that you know the purpose of the job you ran, now might be a good time to review it and see how that code found your data set members and took the steps necessary to build the output.



RECIPE
Press 'Enter' to confirm your input or 'Esc

```
Vegetarian
From https:/

For this veg

Tomatoes
Corn
Zucchini
Yellow squas
Yellow onion
Red bell pep
```

9. GIVE IT A NEW NAME

Right-click on the PDS1OUT member and select Rename. Give it the name of RECIPE. This will make it easier to find later, and is required for the system to mark this challenge as complete.

That’s it! If you’ve got a **ZXXXXX.WORK(RECIPE)** with instructions in it for making some tasty vegetarian tacos, go into MTM2020.PUBLIC.JCL and look for a member named CHK. Then right-click on it and select "Submit Job" to send it for validation.

FILE THAT ONE UNDER “FINISHED”

You’re a natural at this. We hope you found working with files on z/OS easy and intuitive. For more information about Data Sets on z/OS check out this reference.

Data Sets can be used to store just about anything on Z, including lists, source code, job output, and as you saw here, even a tasty recipe!

NEXT UP…

If PDS1 was a breeze, maybe you should follow that up with PDS2. No matter what you do on IBM Z, you’ll need a solid handle on working with data sets and members, so a solid foundation there will definitely come in handy.