root@697ee432545e: ~/recor ×   root@f6173595cc85: ~/ros2_w ×   root@a22ce8a0da61: ~/ros2_w ×   + ∨

[INFO] [1678765445.913243421] [rosbag2_storage]: Opened database 'rosbag2_2023_02_17-20_05_26_0.db3' for READ_ONLY.

Files: rosbag2_2023_02_17-20_05_26_0.db3
Bag size: 1.7 GiB
Storage id: sqlite3
Duration: 64.661s
Start: Feb 17 2023 20:05:26.323 (1676664326.323)
End: Feb 17 2023 20:06:30.985 (1676664390.985)
Messages: 970
Topic information: Topic: /zed/zed_node/right_raw/image_raw_color | Type: sensor_msgs/msg/Image | Count: 970 | Serializa
tion Format: cdr

root@697ee432545e:~/recordings/rosbag2_2023_02_17-20_05_26# ros2 bag play rosbag2_2023_02_17-20_05_26_0.db3

closing.

closing.
[INFO] [1678765488.416181397] [rosbag2_storage]: Opened database 'rosbag2_2023_02_17-20_05_26_0.db3' for READ_ONLY.
[INFO] [1678765488.623137698] [rosbag2_player]: Set rate to 1
[INFO] [1678765488.913059143] [rosbag2_player]: Adding keyboard callbacks.
[INFO] [1678765488.913884113] [rosbag2_player]: Press SPACE for Pause/Resume
[INFO] [1678765488.914377654] [rosbag2_player]: Press CURSOR_RIGHT for Play Next Message
[INFO] [1678765488.914580750] [rosbag2_player]: Press CURSOR_UP for Increase Rate 10%
[INFO] [1678765488.915282107] [rosbag2_player]: Press CURSOR_DOWN for Decrease Rate 10%

closing.

closing.
[INFO] [1678765488.936137943] [rosbag2_storage]: Opened database 'rosbag2_2023_02_17-20_05_26_0.db3' for READ_ONLY.

```
Windows PowerShell
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Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\kaush> docker run -it hw3 bash
root@f6173595cc85:/# cd root/ros2_ws/
colcon build
source /opt/ros/humble/setup.bash
source /root/ros2_ws/install/setup.bash
Starting >>> hw3
Finished <<< hw3 [24.0s]

Summary: 1 package finished [26.6s]
root@f6173595cc85:~/ros2_ws# ros2 run hw3 subscriber_bag
Downloading: "https://download.pytorch.org/models/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth" to /root/.cache/torch/hub/che
ckpoints/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth
['bottle', 'dining table', 'dining table']
['tv', 'tv', 'tv']
['tv', 'chair', 'chair']
['bottle', 'dining table', 'dining table']
['tv', 'tv', 'tv']
['tv', 'chair', 'chair']
```

```
['mouse']
['mouse']
['mouse']
['mouse']
['mouse']
['mouse']
['mouse']
['mouse']
['mouse']
['paintbrush']
['desk']
['binder']
['scale']
['desk']
['desk']
['desk']
['notebook']
['ballpoint']
['notebook']
['desk']
['printer']
['photocopier']
['desk']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['notebook']
['printer']
```

```
File "/opt/ros/humble/local/lib/python3.10/dist-packages/rclpy/executors.py", line 705, in spin_once
    handler, entity, node = self.wait_for_ready_callbacks(timeout_sec=timeout_sec)
File "/opt/ros/humble/local/lib/python3.10/dist-packages/rclpy/executors.py", line 691, in wait_for_ready_callbacks
    return next(self._cb_iter)
File "/opt/ros/humble/local/lib/python3.10/dist-packages/rclpy/executors.py", line 588, in _wait_for_ready_callbacks
    wait_set.wait(timeout_nsec)
KeyboardInterrupt
[ros2run]: Interrupt
root@c925c271602e:~/ros2_ws# ros2 run hw3 publisher
[INFO] [1678753384.275588198] [publisher]: Publishing: "1"
[INFO] [1678753386.602846327] [publisher]: Publishing: "2"
[INFO] [1678753388.161763685] [publisher]: Publishing: "3"
[INFO] [1678753390.159156467] [publisher]: Publishing: "4"
[INFO] [1678753392.157079629] [publisher]: Publishing: "5"
[INFO] [1678753394.349606268] [publisher]: Publishing: "6"
[INFO] [1678753396.189232774] [publisher]: Publishing: "7"
[INFO] [1678753398.185935607] [publisher]: Publishing: "8"
[INFO] [1678753400.170075953] [publisher]: Publishing: "9"
[INFO] [1678753402.159618379] [publisher]: Publishing: "10"
[INFO] [1678753404.186955468] [publisher]: Publishing: "11"
[INFO] [1678753406.187245190] [publisher]: Publishing: "12"
[INFO] [1678753408.177350149] [publisher]: Publishing: "13"
[INFO] [1678753410.172446443] [publisher]: Publishing: "14"
[INFO] [1678753412.177205787] [publisher]: Publishing: "15"
[INFO] [1678753414.283277363] [publisher]: Publishing: "16"
[INFO] [1678753416.162297129] [publisher]: Publishing: "17"
[INFO] [1678753418.169643810] [publisher]: Publishing: "18"
[INFO] [1678753420.173797573] [publisher]: Publishing: "19"
[INFO] [1678753422.169570377] [publisher]: Publishing: "20"
```

```
source /opt/ros/humble/setup.bash
source /root/ros2_ws/install/setup.bash
Starting >>> hw3
Finished <<< hw3 [1.62s]

Summary: 1 package finished [2.01s]
root@531271de219b:~/ros2_ws# ros2 run hw3 subscriber_vanilla
Downloading: "https://download.pytorch.org/models/resnet50-11ad3fa6.pth" to /root/.cache/torch/hub/checkpoints/resnet50-
11ad3fa6.pth
['Labrador retriever']
['peacock']
['great white shark']
['electric ray']
['eft']
['triceratops']
['king snake']
['tarantula']
['wallaby']
['chiton']
['dowitcher']
['bluetick']
['Saluki']
['Labrador retriever']
['minivan']
['German shepherd']
['keeshond']
['car mirror']
['coffee mug']
['digital clock']
```

```
Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows

PS C:\Users\kaush> docker run -it hw3 bash
root@a54d3d7689f9:/# cd root/ros2_ws/
colcon build
source /opt/ros/humble/setup.bash
source /root/ros2_ws/install/setup.bash
Starting >>> hw3
Finished <<< hw3 [1.96s]

Summary: 1 package finished [2.27s]
root@a54d3d7689f9:~/ros2_ws# ros2 run hw3 subscriber
Downloading: "https://download.pytorch.org/models/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth" to /root/.cache/torch/hub/che
ckpoints/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth
['dog', 'dog', 'cat']
['bird', 'bird', 'bird']
['surfboard', 'airplane', 'surfboard']
['carrot', 'broccoli', 'carrot']
['bird', 'bird', 'broccoli']
['dog', 'sheep', 'horse']
['dog', 'dog', 'chair']
['person', 'dog', 'apple']
['car', 'car', 'person']
['dog', 'chair', 'dog']
['dog']
['car', 'person', 'person']
['bowl', 'person', 'dining table']
['microwave', 'oven', 'clock']
```

```
colcon build
source /opt/ros/humble/setup.bash
source /root/ros2_ws/install/setup.bash
Starting >>> hw3
Finished <<< hw3 [2.08s]

Summary: 1 package finished [2.42s]
root@3dd992ca56a5:~/ros2_ws# Ros2 run hw3 subscriber bag
bash: Ros2: command not found
root@3dd992ca56a5:~/ros2_ws# ros2 run hw3 subscriber_bag
Downloading: "https://download.pytorch.org/models/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth" to /root/.cache/torch/hub/che
ckpoints/maskrcnn_resnet50_fpn_coco-bf2d0c1e.pth
['chair', 'sink', 'tv']
['chair', 'chair', 'toothbrush']
['tv', 'snowboard', 'knife']
['laptop', 'tv', 'tv']
['person', 'cell phone', 'person']
['keyboard', 'bottle', 'book']
['tv', 'laptop', 'laptop']
['tv', 'car', 'dining table']
['laptop', 'tv', 'tv']
['person', 'person', 'cell phone']
['keyboard', 'book', 'keyboard']
['chair', 'person', 'chair']
['laptop', 'tv', 'tv']
['person', 'person', 'cell phone']
['bottle', 'book', 'chair']
['person', 'fork', 'car']
['tv', 'tv', 'train']
```

```
colcon build
source /opt/ros/humble/setup.bash
source /root/ros2_ws/install/setup.bash
Starting >>> hw3
Finished <<< hw3 [1.92s]

Summary: 1 package finished [2.21s]
root@e2058ed94c93:~/ros2_ws# Ros2 run hw3 Subscriber bag vanilla
bash: Ros2: command not found
root@e2058ed94c93:~/ros2_ws# ros2 run hw3 subscriber_bag_vanilla
Downloading: "https://download.pytorch.org/models/resnet50-11ad3fa6.pth" to /root/.cache/torch/hub/checkpoints/resnet50-
11ad3fa6.pth
['Labrador retriever']
['peacock']
['great white shark']
['electric ray']
['eft']
['triceratops']
['tarantula']
['dowitcher']
['bluetick']
['Saluki']
['Labrador retriever']
['minivan']
['German shepherd']
['keeshond']
['car mirror']
['coffee mug']
['digital clock']
```