

```
#1. Write a program that converts words present in a list into uppercase and stores them
# List of words
words = ["apple", "banana", "cherry", "date", "elderberry"]

# Convert words to uppercase and store in a set
uppercased_set = {word.upper() for word in words}

# Print the resulting set
print("Set with words in uppercase:")
print(uppercased_set)
```

```
➦ Set with words in uppercase:
{'ELDERBERRY', 'BANANA', 'APPLE', 'DATE', 'CHERRY'}
```

```
#2. Write a program to create a set containing 10 random numbers in the range 15 to 45.
#Count how many of these numbers are less than 30.
#Delete all numbers that are greater than 35.
import random

# Create a set of 10 random numbers between 15 and 45
random_numbers = {random.randint(15, 45) for _ in range(10)}

# Count how many numbers are less than 30
count_less_than_30 = sum(1 for num in random_numbers if num < 30)

# Delete all numbers greater than 35
random_numbers = {num for num in random_numbers if num <= 35}

# Print the results
print("Random Numbers:", random_numbers)
print(f"Count of numbers less than 30: {count_less_than_30}")
```

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➦ Random Numbers: {35, 17, 20, 22, 26, 28, 31}
Count of numbers less than 30: 5
```

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#3. Create an empty set. Write a program that adds five new names to this set,
#modifies one existing name and deletes two names from it.
# Step 1: Create an empty set
names_set = set()

# Step 2: Add five new names to the set
names_set.add("Alice")
names_set.add("Bob")
names_set.add("Charlie")
names_set.add("David")
names_set.add("Eva")

# Step 3: Modify one existing name (remove "Bob" and add "Robert")
names_set.remove("Bob") # Remove Bob
names_set.add("Robert") # Add Robert

# Step 4: Delete two names from the set
names_set.remove("Charlie")
names_set.remove("Eva")
```

```
# Print the final set
print("Final Set of Names:", names_set)
```

➞ Final Set of Names: {'Alice', 'Robert', 'David'}

#4. A set contains names which begin either with A or with B. Write a program to separate one containing names beginning with A and another with B.

# Set containing names

```
names_set = {"Alice", "Bob", "Anna", "Bill", "Charlie", "David", "Bruce"}
```

# Create two empty sets for names starting with 'A' and 'B'

```
names_starting_with_A = {name for name in names_set if name.startswith('A')}
```

```
names_starting_with_B = {name for name in names_set if name.startswith('B')}
```

# Print the resulting sets

```
print("Names starting with 'A':", names_starting_with_A)
```

```
print("Names starting with 'B':", names_starting_with_B)
```

➞ Names starting with 'A': {'Anna', 'Alice'}  
Names starting with 'B': {'Bob', 'Bruce', 'Bill'}

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