CODE.

Create a set of integers and print out the size of the set.
Example:

```
my_set = {1, 2, 3, 4, 5}
```

output:
```
Size of the set: 5
```

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Task2:

Write a program that takes in two sets of integers and prints out the intersection and union of the sets.

Example:
```
set1 = {1, 2, 3, 4, 5}
set2 = {4, 5, 6, 7, 8}
```
output:
```
Intersection of the sets: {4, 5}
Union of the sets: {1, 2, 3, 4, 5, 6, 7, 8}
```

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Task3:

Create a set of strings and print out all the strings in the set.
Examples:
```
mySet = {"apple", "banana", "orange", "pear"}
```

output:
```
apple
banana
orange
pear
```

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Task4:

Create two sets of strings and print out the difference between them   (i.e., the items that are in the first set but not the second).
Example:

```
set1 = {"apple", "banana", "orange", "pear"}
```

```
set2 = {"banana", "pear"}
```

```
Difference between the sets: {'apple', 'orange'}
```

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Task5:

Write a program that takes in a list of integers and removes any duplicates in the list.

Example:
```
my_list = [1, 2, 3, 3, 4, 4, 5, 6, 6, 6]
```
output:
```
Original list: [1, 2, 3, 3, 4, 4, 5, 6, 6, 6]
List with duplicates removed: [1, 2, 3, 4, 5, 6]
```

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Task6:

Create a set of integers and use check if a specific integer is in the set.

Example:
```
intSet = {1, 2, 3, 4, 5};
```
output:


```
C:/Users/hp/dart-sdk/bin/dart.e

enter a number to search

5

Set contains 5: true
```


Task 8:

Write a program that takes in a list of strings and returns a map where the keys are the strings and the values are the lengths of the strings.

```
enter a size of list:
2
enter the strings:
ziad
youssef
{ziad: 4, youssef: 7}
```

Task 9 :

Create a map that maps strings to booleans and check if a specific key is in the map.

Example 1 :

```
Map<String, bool> map = {'apple': true, 'banana': true, 'orange': false};

// C:/Users/hp/dart-sdk/bin/dart.exe --enable-asserts G:
// enter a word for search:
// ziad
// The map does not contain the key "ziad"
//
```

Example 2 :

// take the strings and Booleans from users

```
enter a size of map:
2
enter a string 1
ahmed
enter a bool 1
true
enter a string 2
ziad
enter a bool 2
false
enter a word for search:
ziad
The map contains the key "ziad"
```

Task 10 :

   Create a map that maps strings to lists of integers and print out the contents of the map using foreach.

Example:

Output:

//hint: map contains strings 'even' 'odd' 'prime' as keys and list<int> as values

```
even: [2, 4, 6, 8]

odd: [1, 3, 5, 7, 9]

prime: [2, 3, 5, 7]
```

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   Write a program that takes in a list of strings and create a map where the keys are the first letters of the strings and the values are lists of the strings that start with that letter.

```
List<String> strings = [
  'apple', 'banana', 'avocado', 'kiwi', 'pear'
];
```

Output:

```
{a: [apple, avocado], b: [banana], k: [kiwi], p: [pear]}
```

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