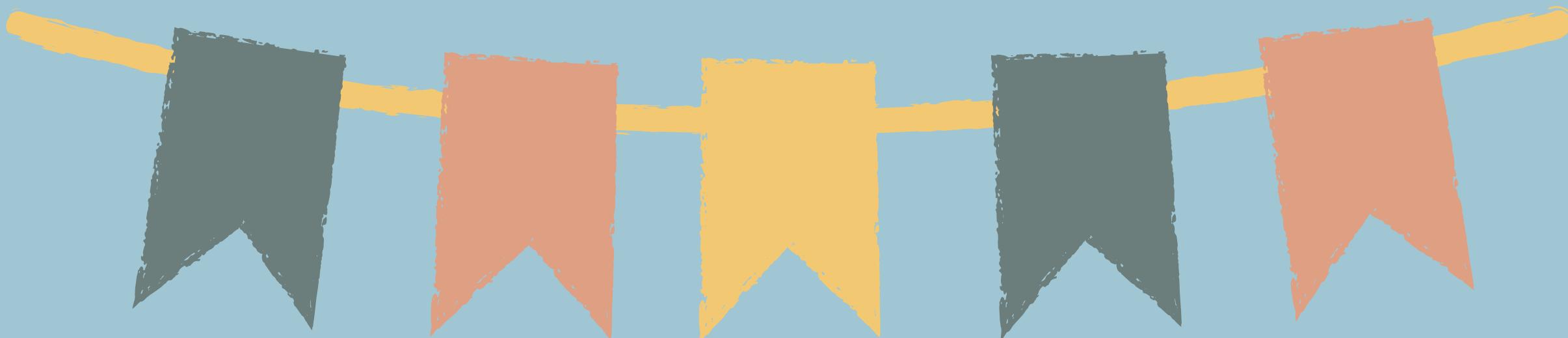
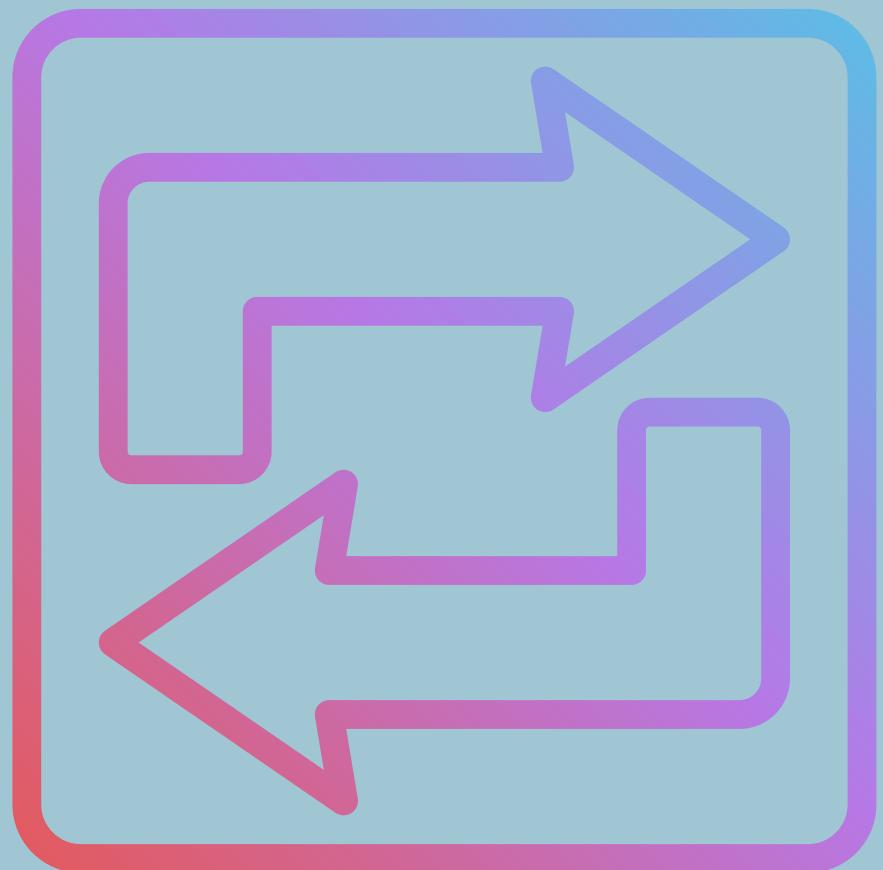


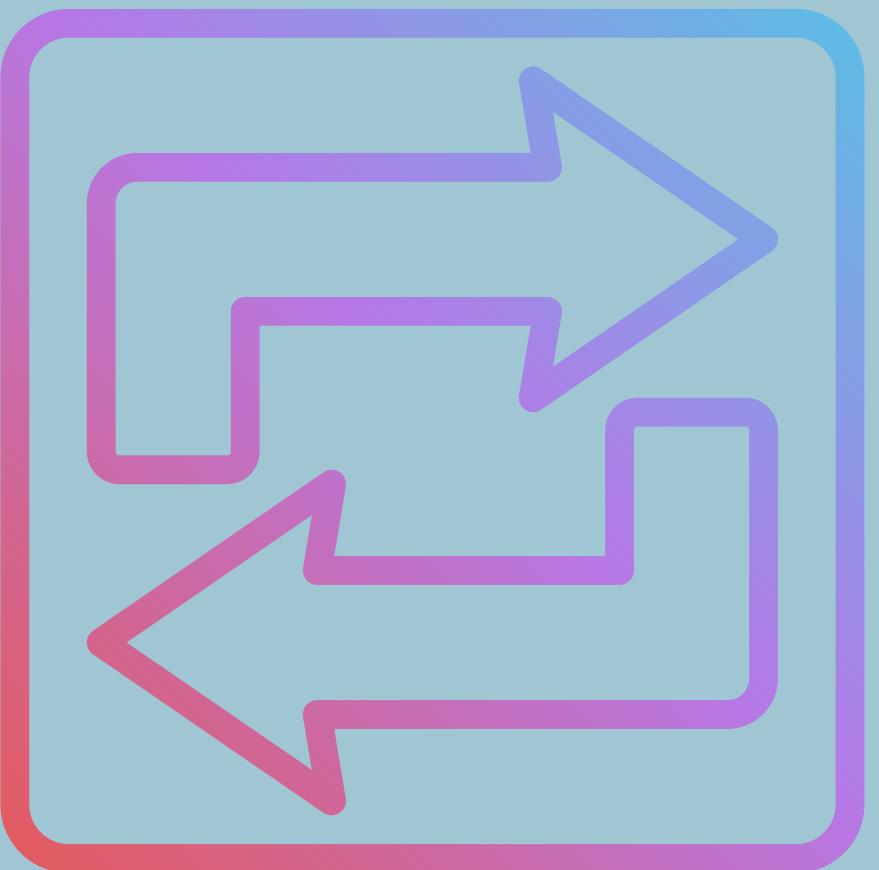
# Iteration Statements



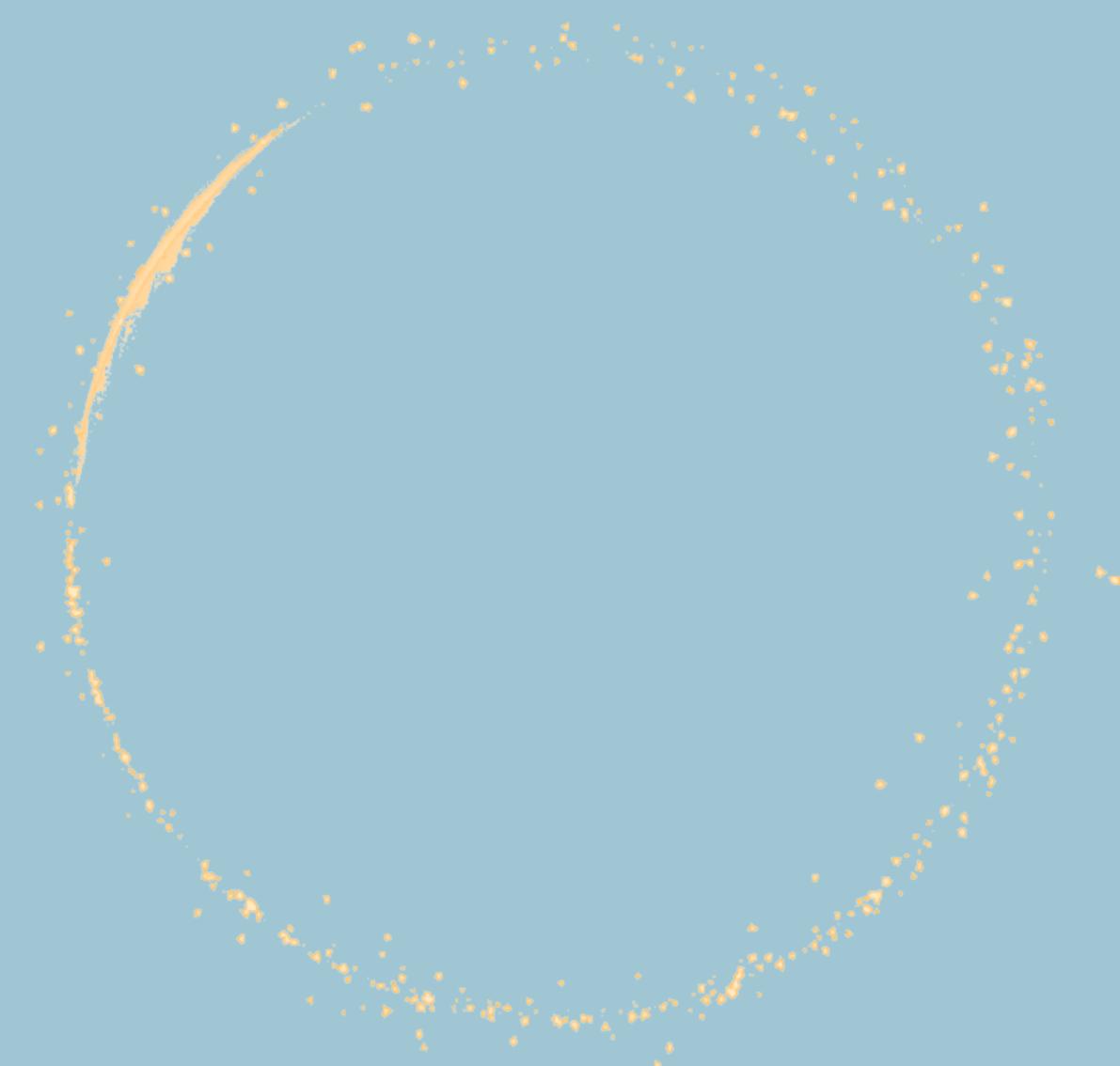
# Repeat



# Loop



# Loop



# Types of Loops

**while**



**do-while**



**for**



**foreach**



# Condition

Every loop will have a condition



# Condition

A condition will evaluate to true or false



# Condition

If true, the scope of the loop will execute

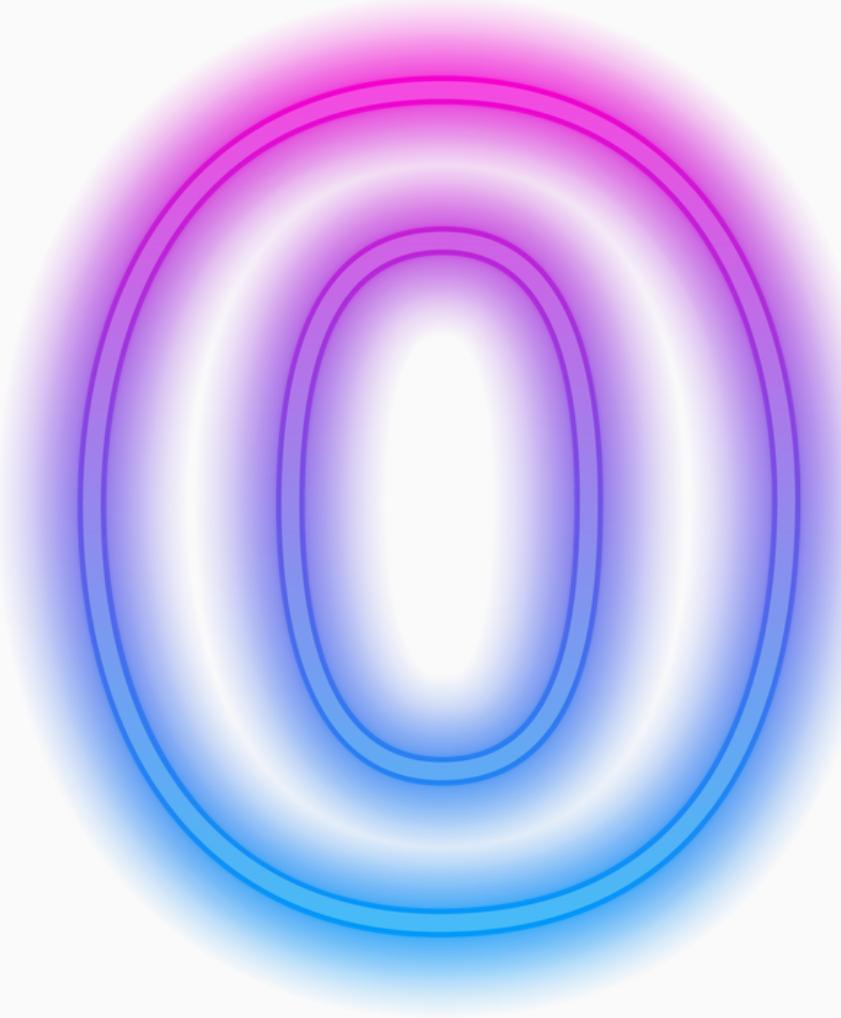


# Condition

If false, the scope of the loop will NOT execute

# while Loop

Executes 0 or more times



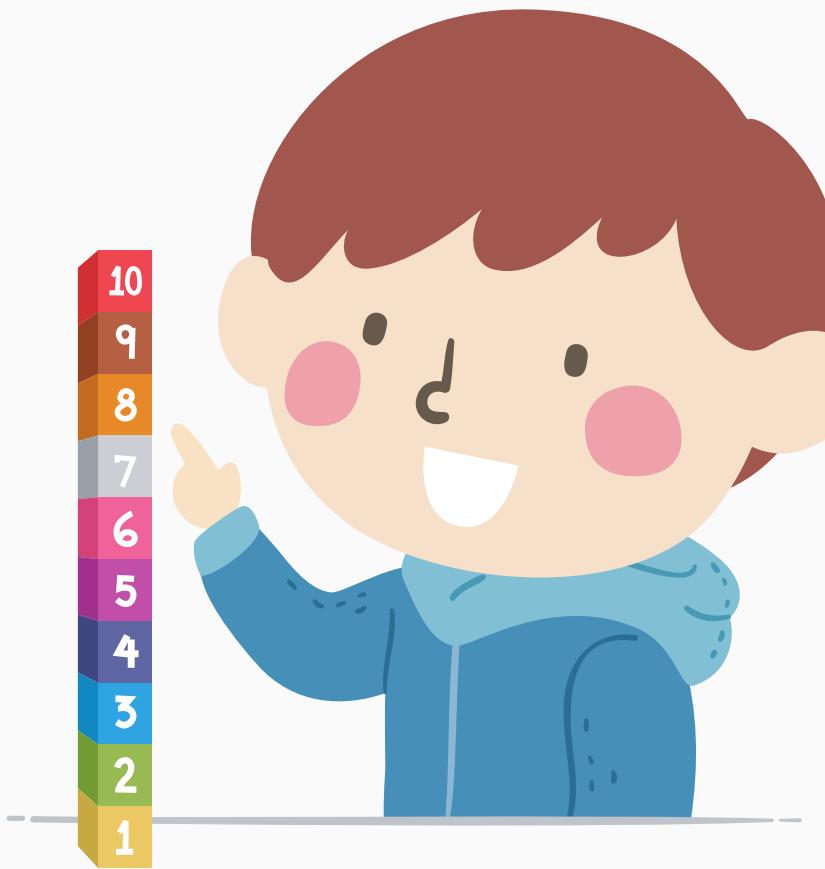


# Do-While Loop

Executes 1 or more times

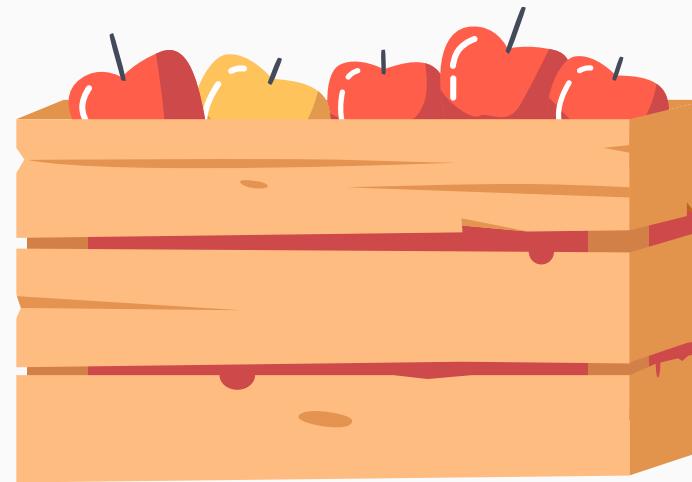
# For

Executes a specified amount of times



# Foreach

Executes once for every element in the collection



# Exit strategy

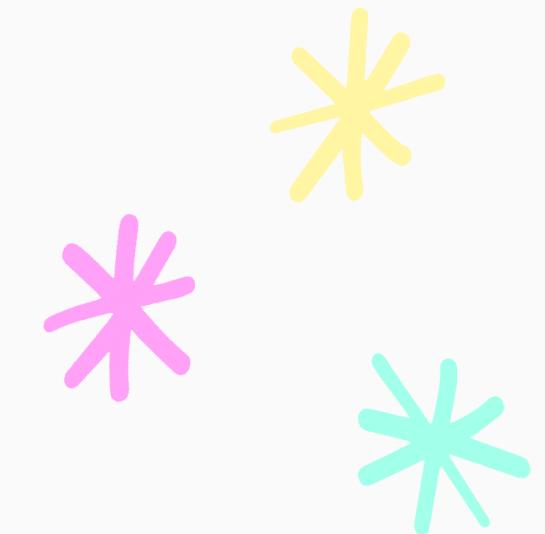
A condition must become false in order to exit out  
of the loop





# INFINITE LOOP

If there is no exit strategy, the loop will repeat continuously. Forever.



# Syntax



# While Syntax

```
while (true)
{
    // do something here until condition is false
}
```

# Do-While Syntax

```
var i = 0;  
do  
{  
    // Increment i each execution  
    i++;  
} while (i < 10);
```

# Foreach Syntax

```
foreach(var item in collection)
{
    // Code to be executed
}
```

# For Syntax

```
for(int i = 0; i < 5; i++)  
{  
    Console.WriteLine(i);  
}  
|
```

# Breaking down the for loop



```
1           2           3           4
for (initializer; conditional; increment)
{
    //body of the loop
}
```



```
1           2           3           4
for (initializer; conditional; increment)
{
    //body of the loop
}
```

# Demo

While Loop: Write out numbers 1 through 10

Do-While Loop: Write out numbers 1 through 10

Foreach Loop: Write out all names in the collection

For Loop: Write out all names in the collection

# FOR EXERCISE

```
List<int> myList = new List<int>();
```



```
myList.Add(7);
```



Add() is a method that can  
add a number to the list

This is a list that can hold  
a collection of integers

# FOR EXERCISE

Collections used 0-based indexing

```
List<string> myList = new List<string>() { "hi", "hello", "what's up";
```

```
myList[0] = "see ya";
```

```
// this will reassign "see ya" to index 0
```



# EXERCISE BONUS

Research TryParse() method and  
implement it within your program

# FOR VS. FOREACH

## For loop:

- When you need to access elements by their index
- If you need to modify the collection itself (like adding or removing elements)

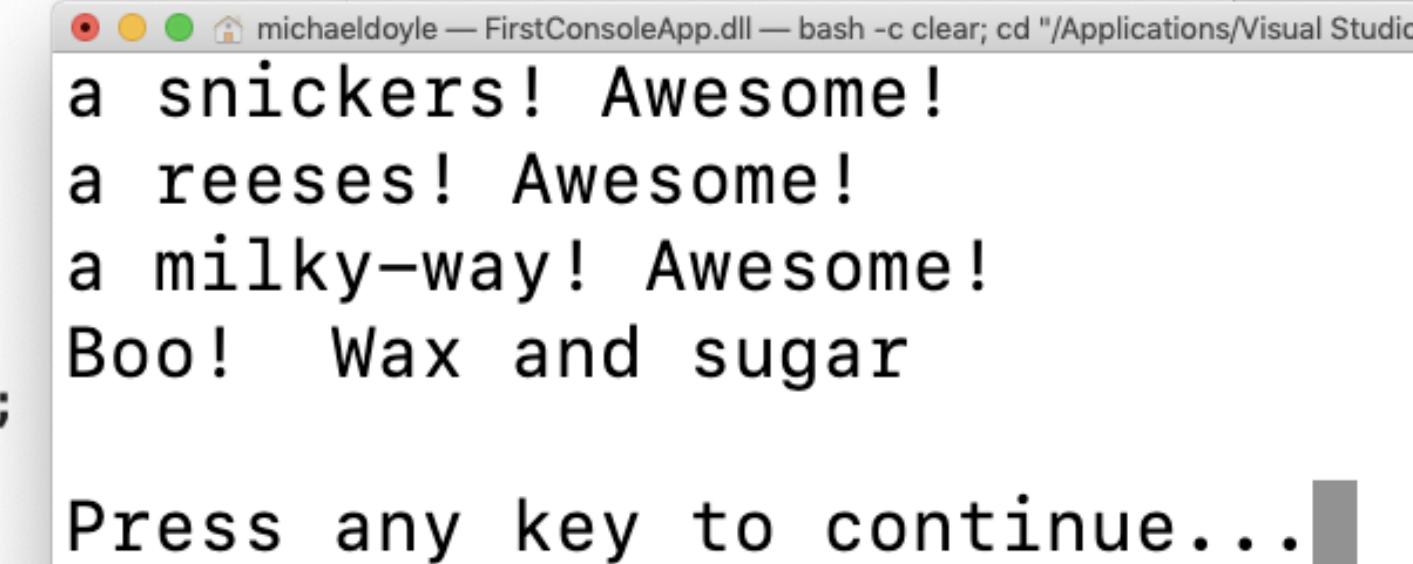
## Foreach loop:

- To read data without needing the index
- Convenience and readability

```
namespace FirstConsoleApp
{
    class Program
    {
        static void Main(string[] args)
        {

            var ourCandyBag = new string[] { "snickers", "reeses", "milky-way", "candy-corn" };

            foreach(var pieceOfCandy in ourCandyBag) → collection of items
            {
                if(pieceOfCandy == "candy-corn")
                {
                    Console.WriteLine($"Boo! Wax and sugar");
                }
                else
                {
                    Console.WriteLine($"a {pieceOfCandy}! Awesome!");
                }
            }
        }
    }
}
```



```
michaeldoyle — FirstConsoleApp.dll — bash -c clear; cd "/Applications/Visual Studio.

a snickers! Awesome!
a reeses! Awesome!
a milky-way! Awesome!
Boo! Wax and sugar

Press any key to continue...
```

**Write  
your topic  
or idea**

**Add a main point**

Briefly elaborate on what you want to discuss.

---

**Add a main point**

Briefly elaborate on what you want to discuss.

# While Syntax



## Add a main point

Briefly elaborate on  
what you want to discuss.



## Add a main point

Briefly elaborate on  
what you want to discuss.



## Add a main point

Briefly elaborate on  
what you want to discuss.

Use this for a  
photo caption.



# Write your topic or idea

Briefly elaborate on what you want to discuss.

# Write your topic or idea



Briefly elaborate on what you want to discuss.



# Add a section header

# Write your topic or idea

01

**Add a  
main point**

Briefly elaborate  
on what you  
want to discuss.

02

**Add a  
main point**

Briefly elaborate  
on what you  
want to discuss.

03

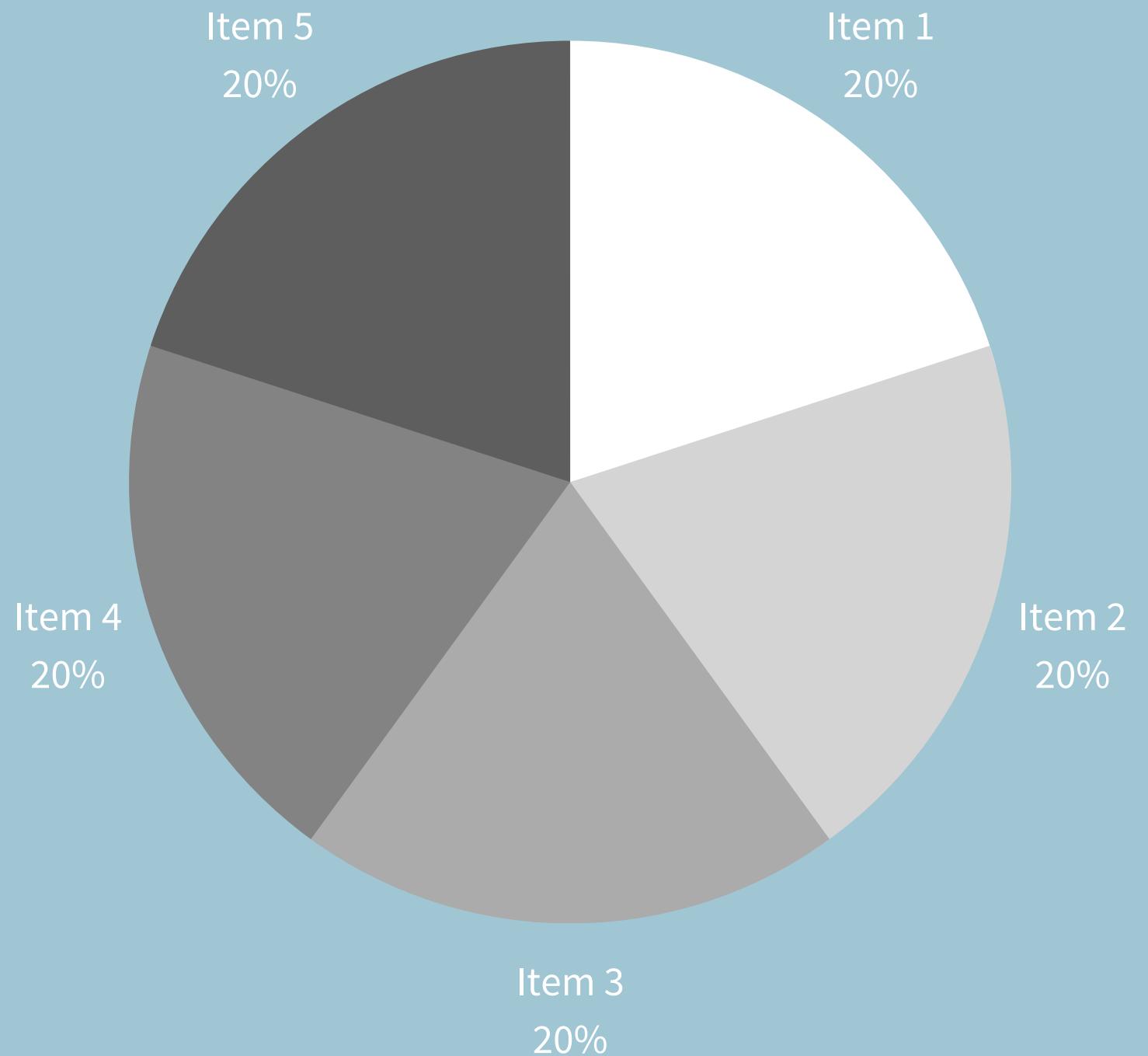
**Add a  
main point**

Briefly elaborate  
on what you  
want to discuss.

04

**Add a  
main point**

Briefly elaborate  
on what you  
want to discuss.



# Write your topic or idea

Briefly elaborate on  
what you want to discuss.

**01**

**Add a main point**

Briefly elaborate on what you want to discuss.

**02**

**Add a main point**

Briefly elaborate on what you want to discuss.

**Write  
your topic  
or idea**

# HEADLINE

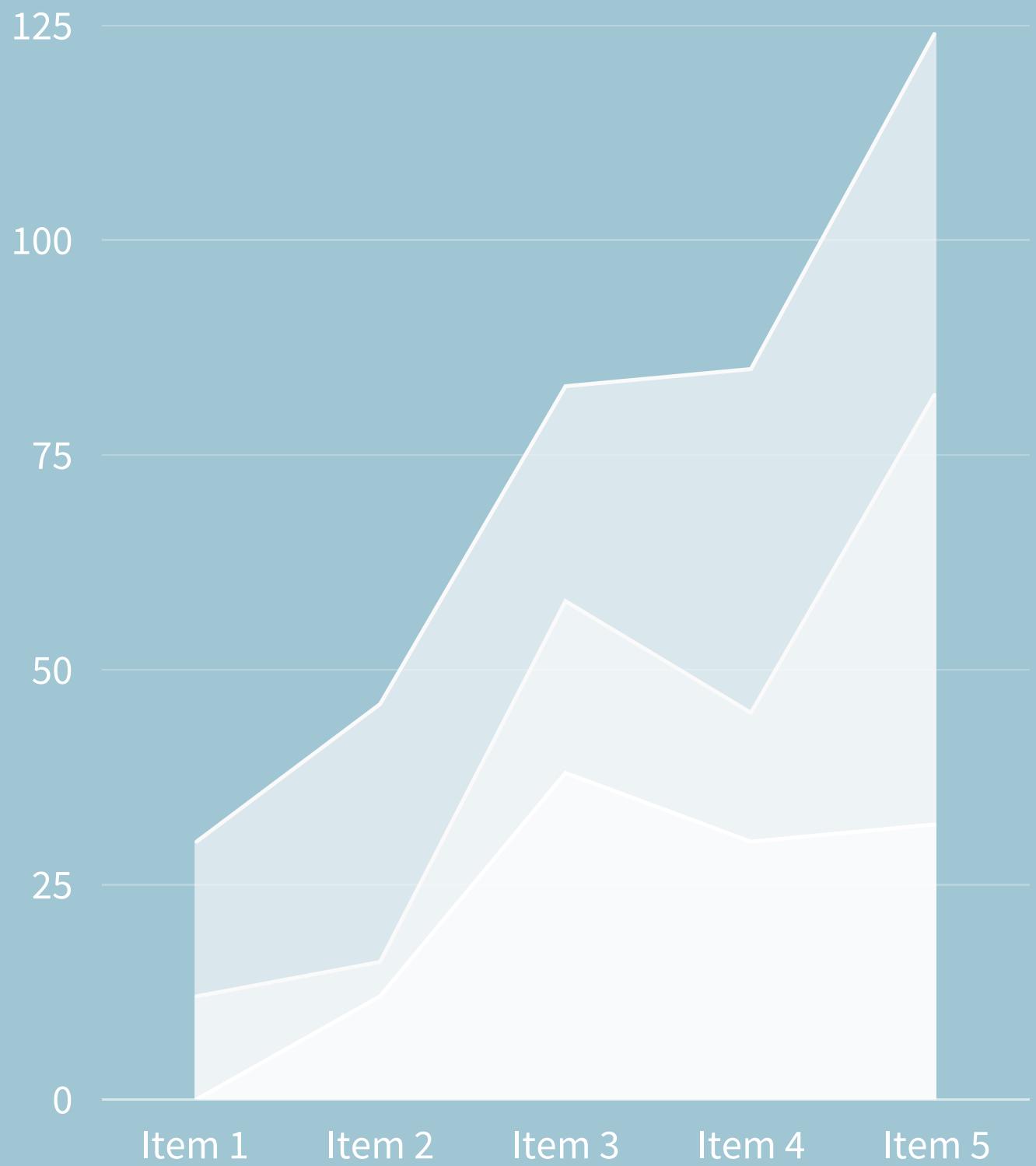


# HEADLINE



# Write your topic or idea

Briefly elaborate on  
what you want to discuss.





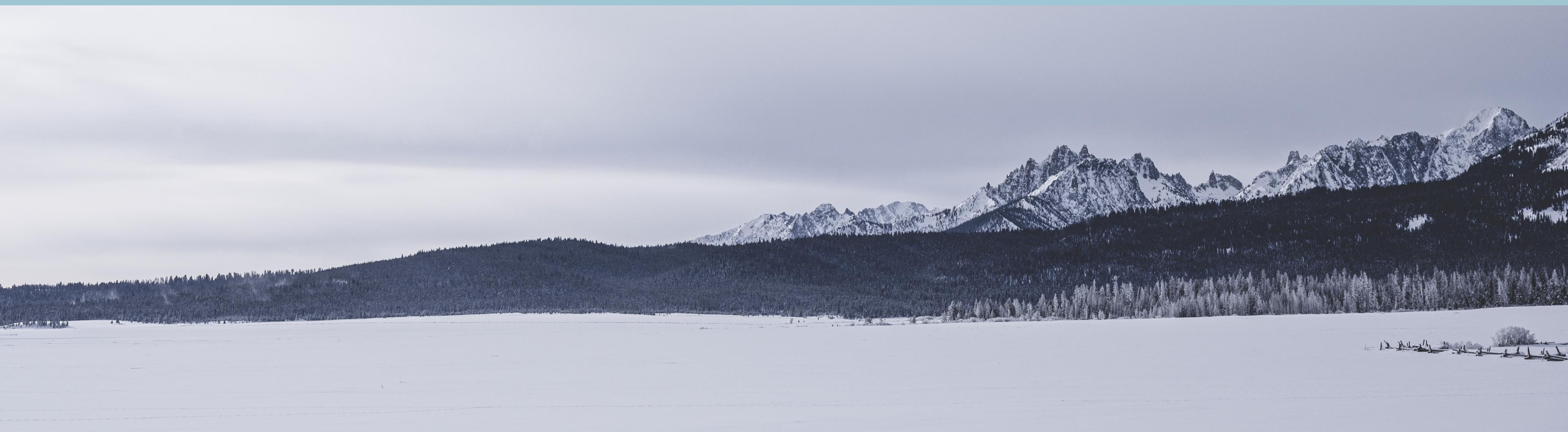
# Add a section header

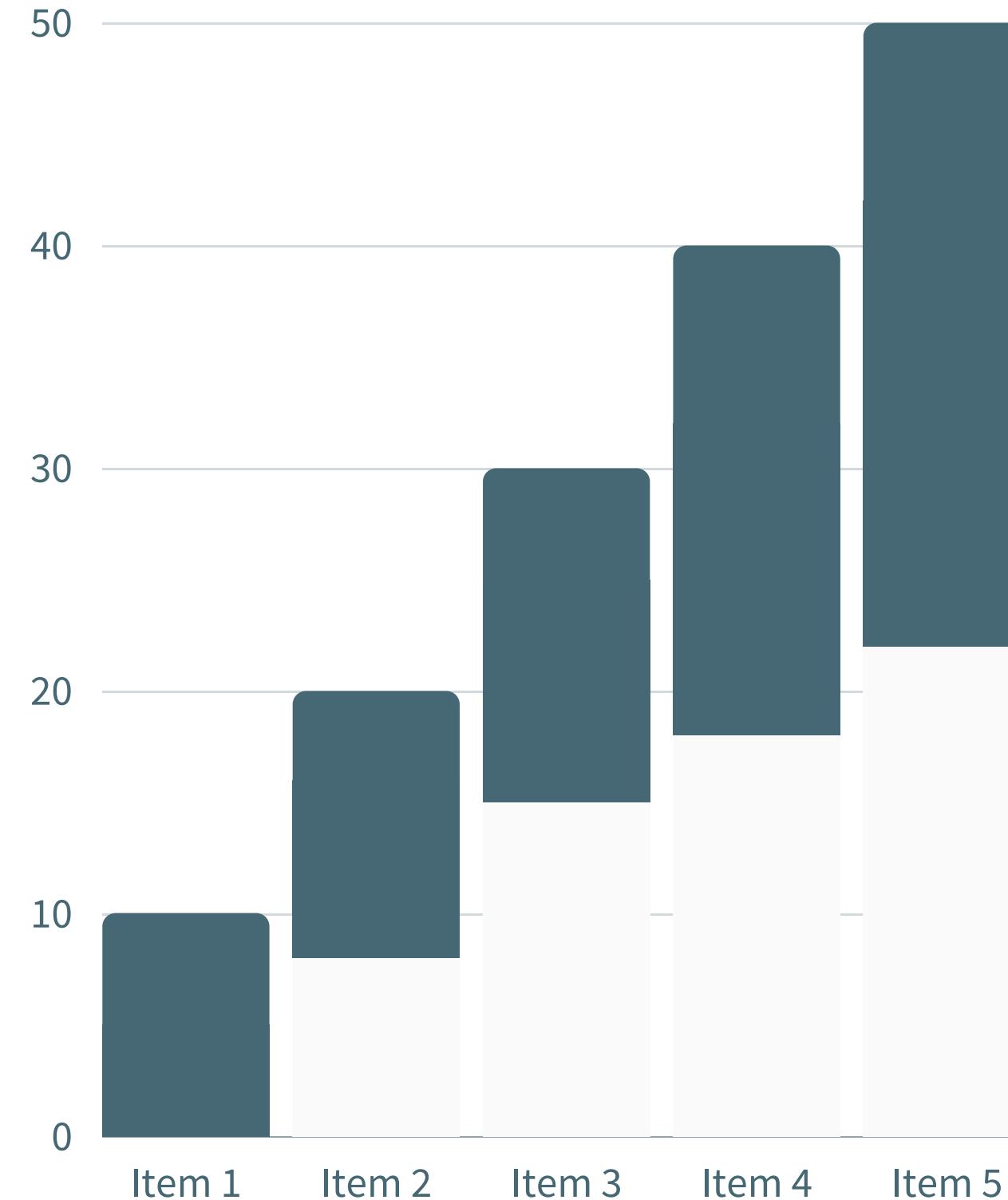
Use this for a  
photo caption.



# Write your topic or idea

Use this for a photo caption.





**Write your  
topic or idea**

Briefly elaborate on  
what you want to discuss.



Use this for a photo caption.

**Write  
your topic  
or idea**



**2 out of 6**

Briefly elaborate on  
what you want to discuss.



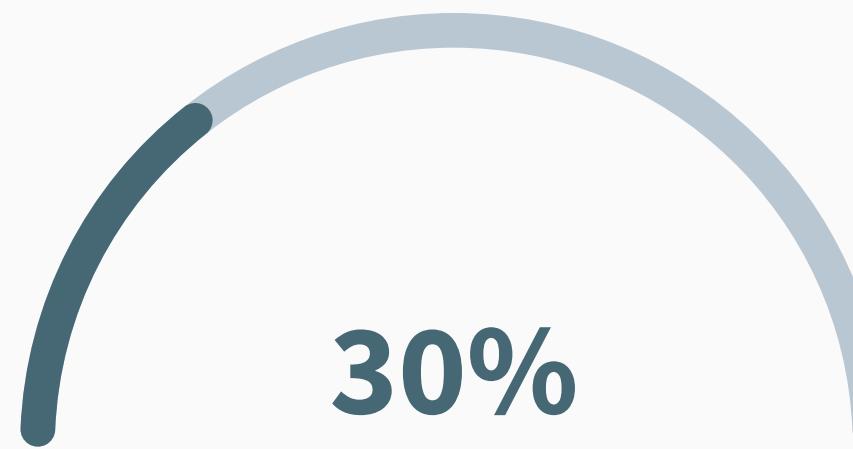
**5 out of 6**

Briefly elaborate on  
what you want to discuss.

**Write your topic  
or idea**

# Write your topic or idea

Briefly elaborate on what you want to discuss.



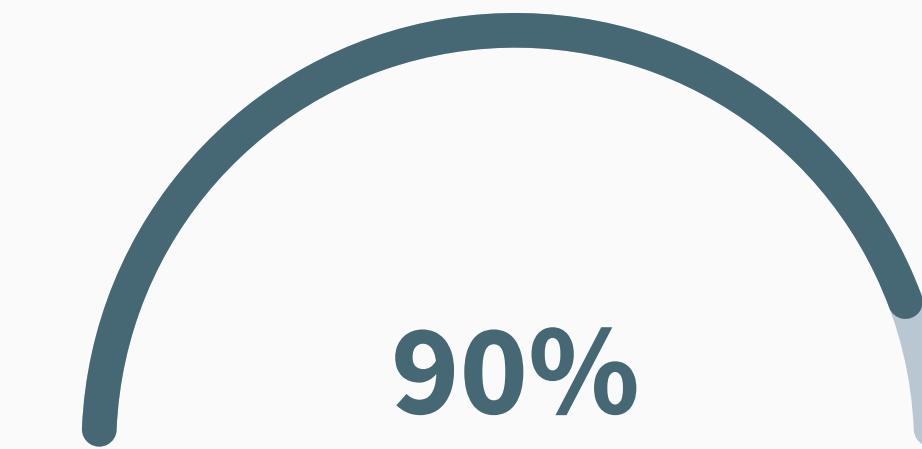
**30%**

**Add a  
main point**



**60%**

**Add a  
main point**



**90%**

**Add a  
main point**

# Write your topic or idea

Briefly elaborate on  
what you want to discuss.



# Write your topic or idea

**Add a main  
point**

Briefly elaborate  
on what you  
want to discuss.

---

**Add a main  
point**

Briefly elaborate  
on what you  
want to discuss.

---

**Add a main  
point**

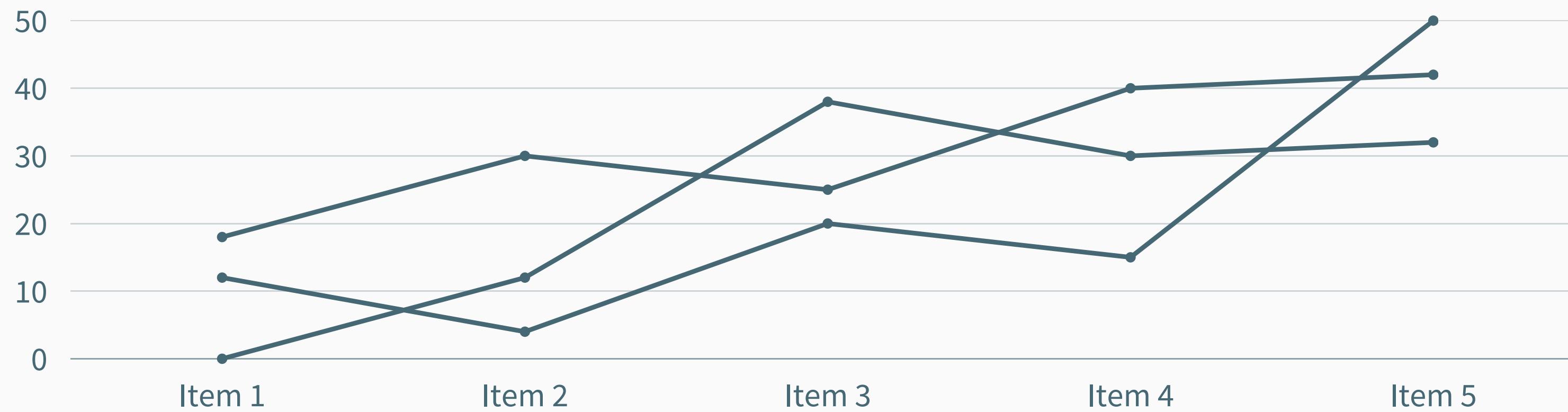
Briefly elaborate  
on what you  
want to discuss.

**Add a main  
point**

Briefly elaborate  
on what you  
want to discuss.

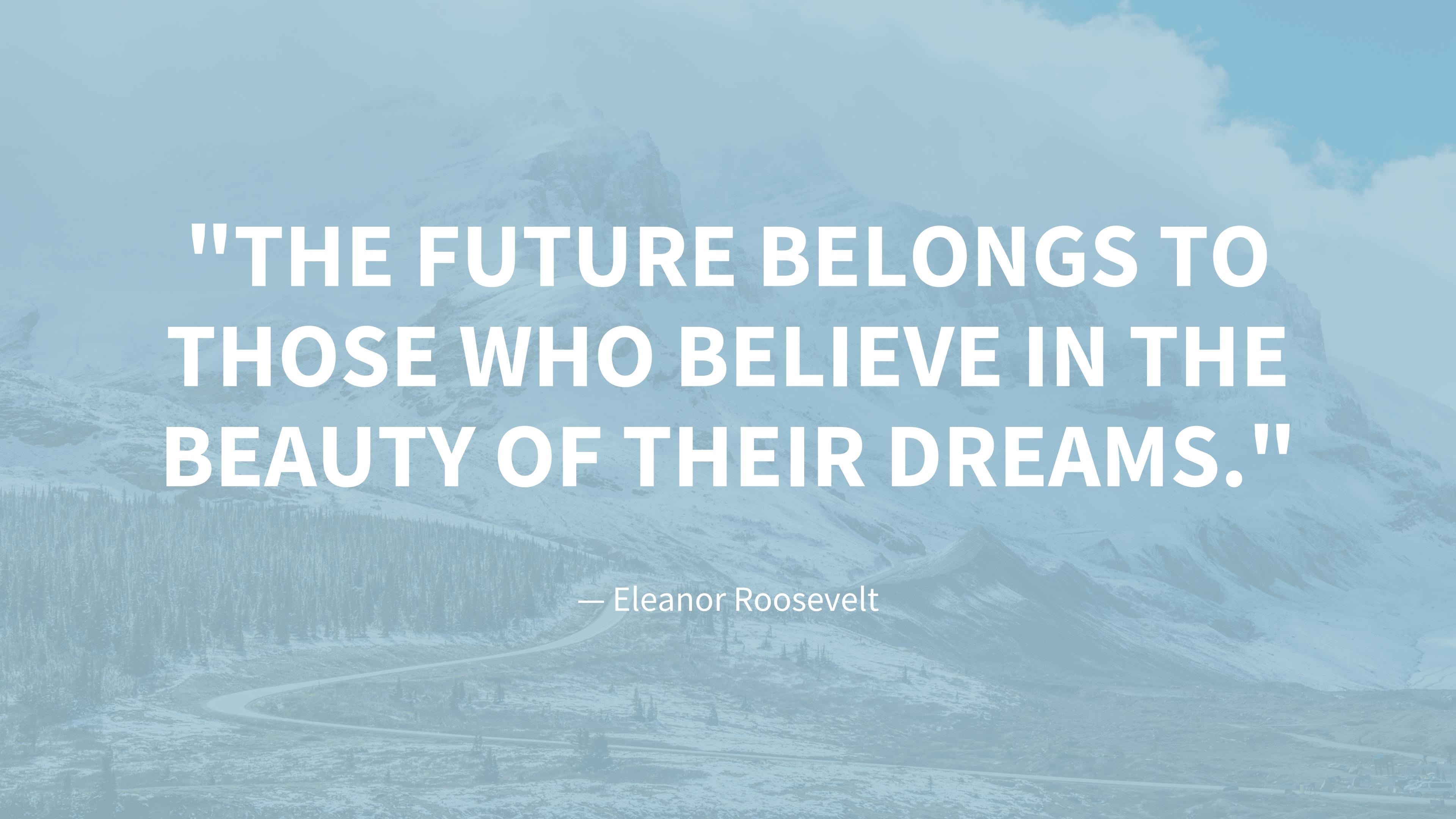
# Write your topic or idea

Briefly elaborate on what you want to discuss.





Add a  
section  
header

A scenic mountain landscape with a winding road and a forest in the foreground.

**"THE FUTURE BELONGS TO  
THOSE WHO BELIEVE IN THE  
BEAUTY OF THEIR DREAMS."**

— Eleanor Roosevelt

# Free Resource

Use these elements  
in your Canva presentation.

