1. If Statement

```
fruit = "apple"
if fruit == "apple":
    print("This is an apple!")
```

```
This is an apple!
```

2. If-Else Statement

```
fruit = "orange"
if fruit == "apple":
    print("This is an apple!")
else:
    print("This is not an apple!")
```

```
This is not an apple!
```

3. If-Elif-Else Statement

```
fruit = "banana"
if fruit == "apple":
    print("This is an apple!")
elif fruit == "banana":
    print("This is a banana!")
else:
    print("This is some other fruit!")
```

```
This is a banana!
```

4. Control Structure

Control structures include if statements, loops, etc., which control the flow of the program. Here's an example using an if statement within a loop.

```
fruits = ["apple", "banana", "cherry"]
for fruit in fruits:
    if fruit == "banana":
        print("Found a banana!")
```

```
Found a banana!
```

5. For Loop

```
vegetables = ["carrot", "potato", "broccoli"]
for veggie in vegetables:
    print("I have a", veggie)
```

```
I have a carrot
I have a potato
I have a broccoli
```

6. While Loop

```
count = 3
while count > 0:
    print("Eating a snack")
    count -= 1
```

```
Eating a snack
Eating a snack
Eating a snack
```

7. Nested Loop

```
fruits = ["apple", "banana"]
toppings = ["chocolate", "whipped cream"]
for fruit in fruits:
    for topping in toppings:
        print(f"{fruit} with {topping}")
```

```
apple with chocolate
apple with whipped cream
banana with chocolate
banana with whipped cream
```

8. Break, Continue & Pass

```
fruits = ["apple", "orange", "banana", "grape"]
for fruit in fruits:
    if fruit == "orange":
        continue  # Skip "orange"
    elif fruit == "banana":
        break    # Stop the loop at "banana"
    else:
        pass    # Do nothing for other fruits
    print(fruit)
```

```
apple
```

9. Input and Output

```
# Input
fruit = input("Enter your favorite fruit: ")
# Output
print(f"Your favorite fruit is {fruit}")
```

```
Enter your favorite fruit: Mango
Your favorite fruit is Mango
```

10. Introduction to Lists

```
fruits = ["apple", "banana", "cherry"]
print(fruits)
```

```
['apple', 'banana', 'cherry']
```

+ Code + Text

11. List Methods and Slicing

```
# Adding, removing, slicing a list of fruits
fruits = ["apple", "banana", "cherry"]
fruits.append("orange")
fruits.remove("banana")
print(fruits[1:])
```

```
['cherry', 'orange']
```

12. Introduction to Dictionaries & Dictionary Methods

```
# Dictionary of fruit and their colors
fruit_colors = {"apple": "red", "banana": "yellow", "cherry": "red"}
print(fruit_colors.get("apple"))
```

```
red
```

13. Introduction to Set & Set Methods

```
# Unique set of food items
food_set = {"apple", "banana", "apple", "grape"}
food_set.add("orange")
```

```
food_set.discard("banana")
print(food_set)
```

```
{'apple', 'orange', 'grape'}
```

14. Introduction to Map & Map Methods

```
# Mapping food items to uppercase
foods = ["apple", "banana", "cherry"]
uppercased_foods = list(map(str.upper, foods))
print(uppercased_foods)
```

```
['APPLE', 'BANANA', 'CHERRY']
```