Centre for Genomic Research

UKRI Natural Environment Research Council

NEOF NERC ENVIRONMENTAL OMICS FACILITY

Python for Bioinformatics

Structures & Concepts

University of Liverpool

The University Of Sheffield.

Map

Data Structures:

Lists

Set

Dictionary

Index positions

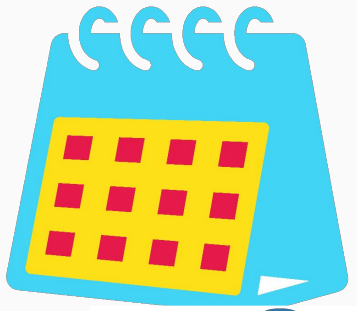
Calendar

Morning 1: Foundations of Python

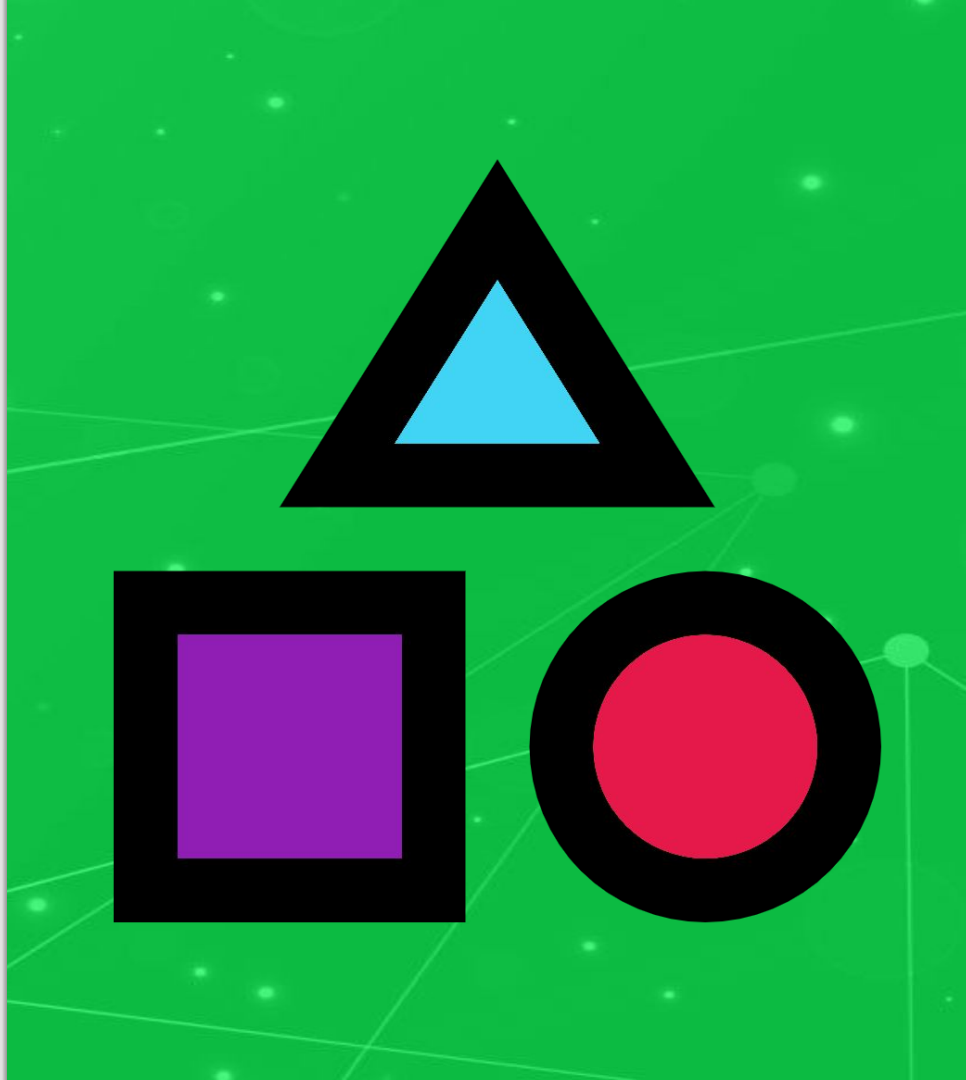
Afternoon 1: **Data Structures, Conditions, & Loops**

Morning 2: Reading & Manipulating DNA Data

Afternoon 2: Reading and Writing Files



Data Structures



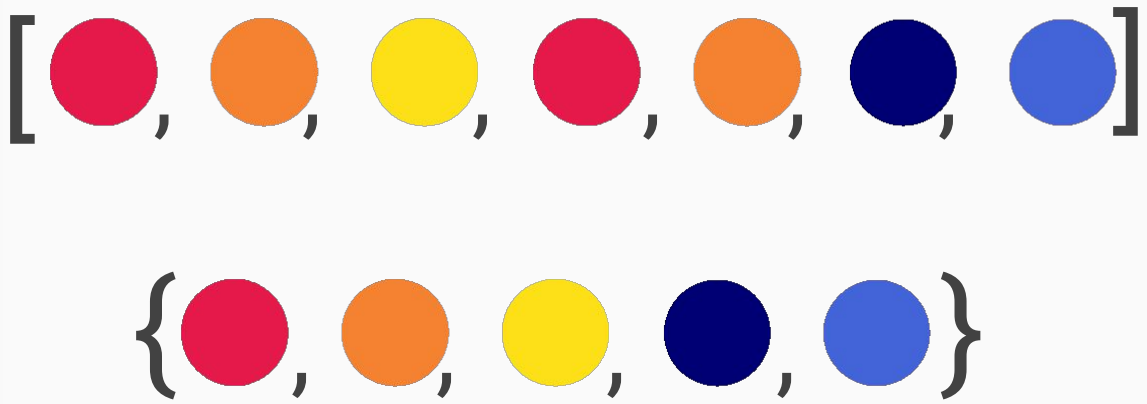
Data Structures

Lists [ ]

Data Structures

Lists [ ]

Set { }

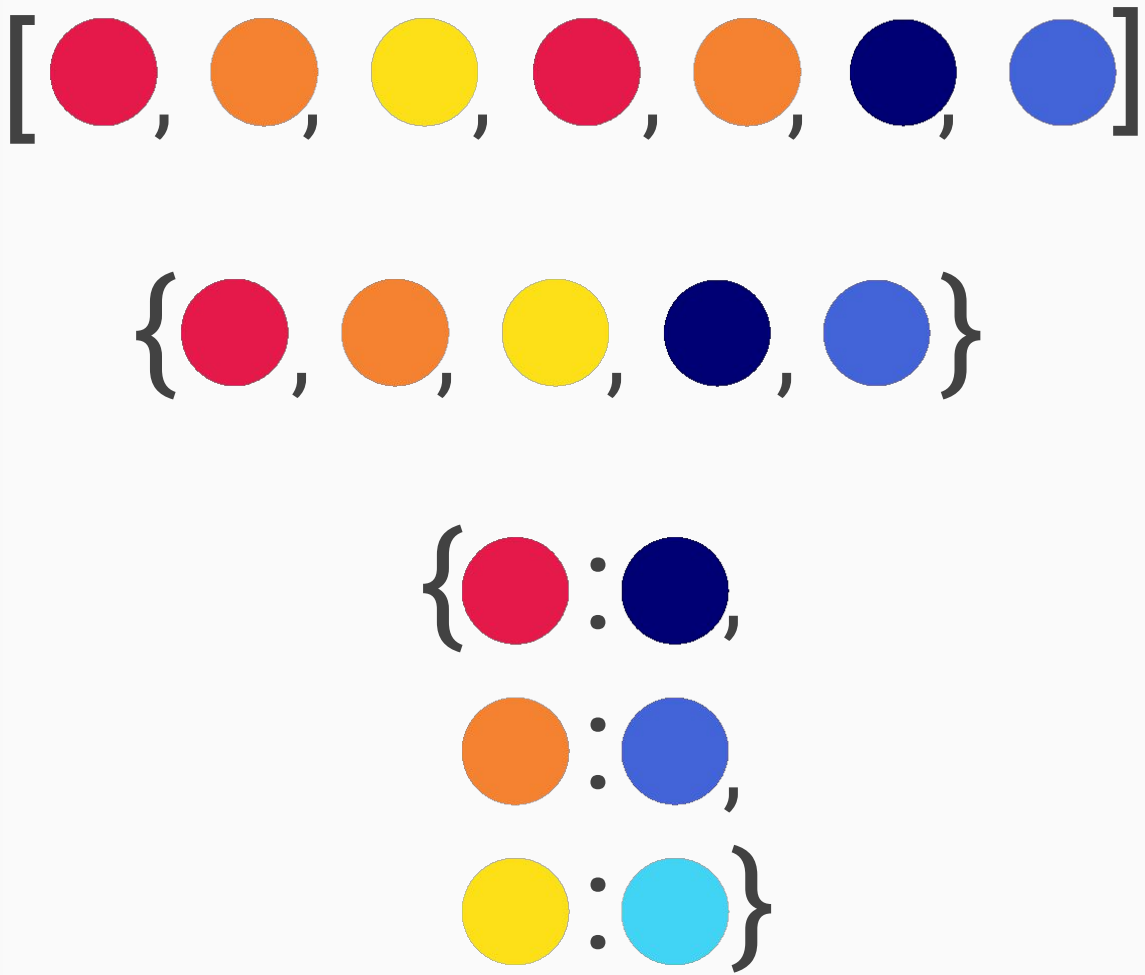


Data Structures

Lists [ ]

Set { }

Dictionary { key : value}



Index Positions

Every item in the list

has an index

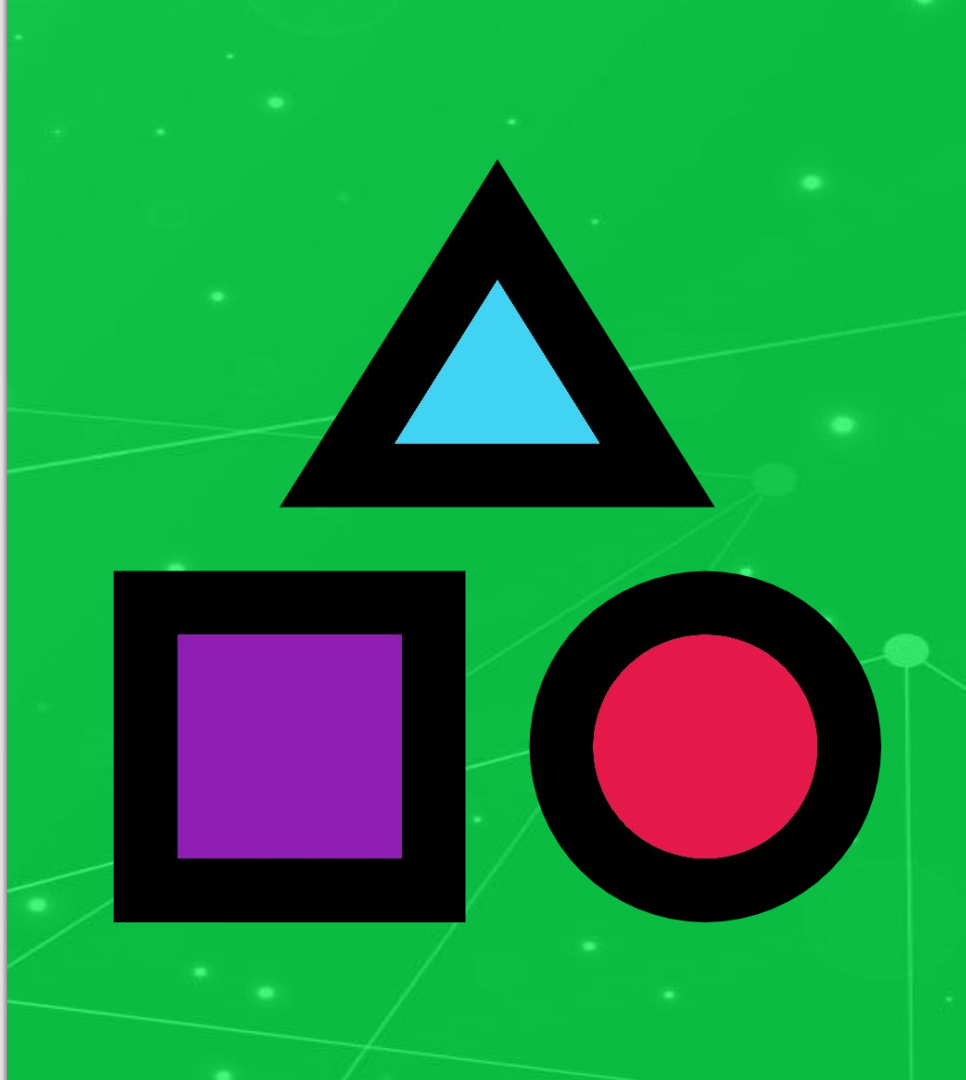
(start from zero!)

List[0] =

List[2] =

List[5] =

Conditions



Conditions

TRUE or FALSE

==

!=

>

<

"GATC" == "GATC"

"GATC" != "GATC"

7 > 5

9 < 4

Conditions

TRUE or FALSE

==

!=

>

<

"GATC" == "GATC"

"GATC" != "GATC"

7 > 5

9 < 4

Conditions

TRUE or FALSE

==

!=

>

<

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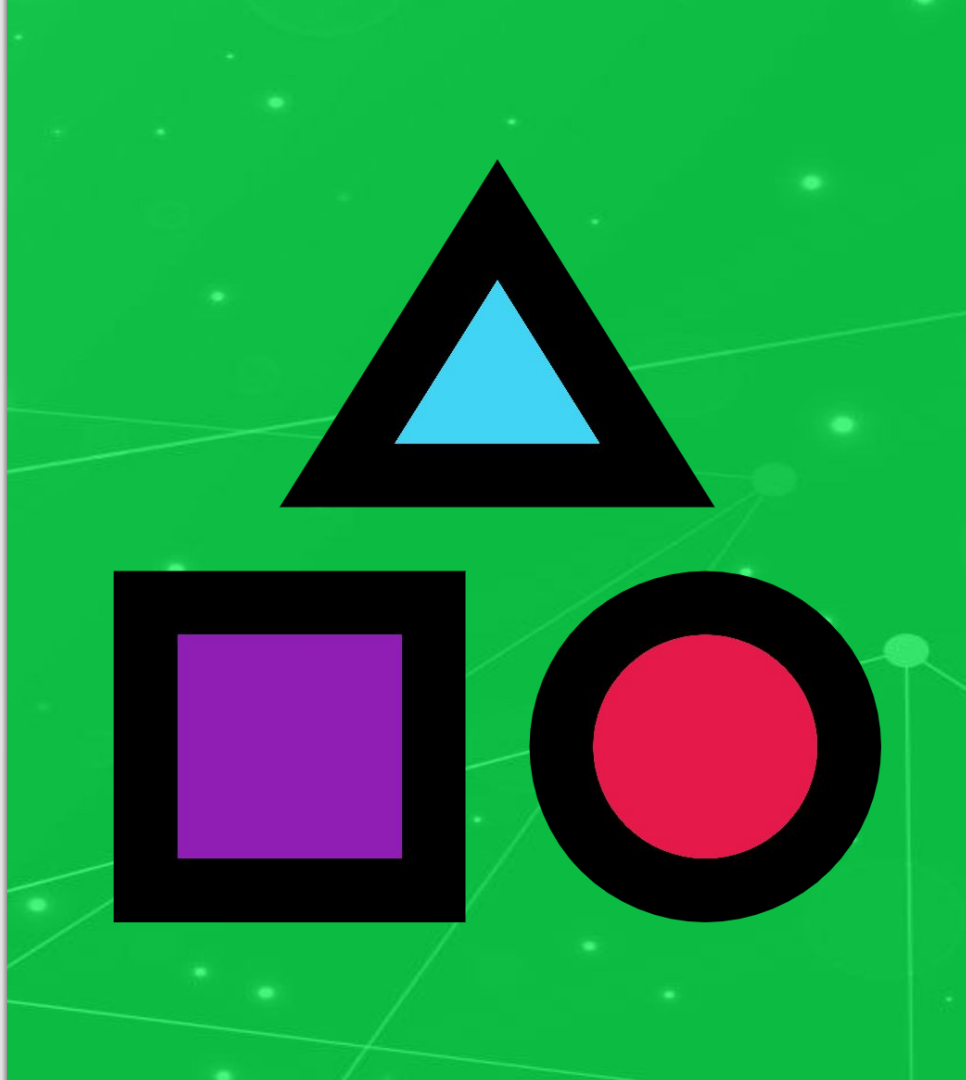
Loops



Loops

Recycle code

Apply a process over-and-over

Repeat until…..

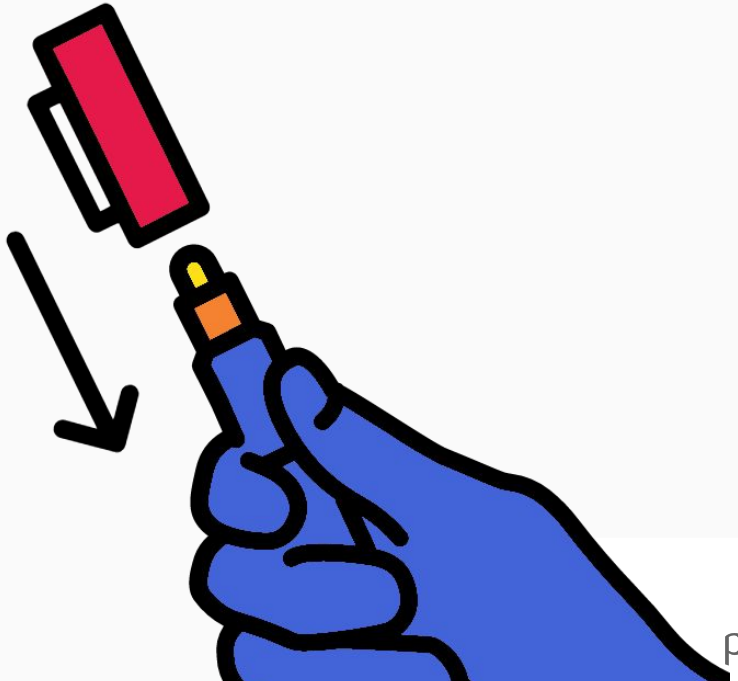
Recap

Data Structures

Index positions

Conditions

Loops



Questions?